THE RELATIONSHIP OF FAMILY FUNCTIONING TO THE SELF-CONCEPT
OF ADOLESCENTS WITH CYSTIC FIBROSIS

By

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Abstract

A descriptive correlational study investigated the possible relationship between family functioning and the self-concept development of adolescents with cystic fibrosis (CF). Twenty-two adolescents ranging from 13 to 19 years of age and members of their families volunteered to participate. The adolescents completed the Offer Self-Image Questionnaire (OSIQ) and the Family Assessment Device (FAD). Thirty-four family members completed the FAD. Mean standard scores for the study population were compared to normative values for the OSIQ and the FAD. The Spearman rho correlation procedure was used to investigate relationships between scales of the two measures.

Findings for the self-concept measure (OSIQ) revealed that the mean scores for the adolescents with CF were better than normative values with two exceptions; the mean score was lower than normative values on the Sexual Attitudes Scale for males and females ranging from 13 to 15 years of age and on the Body and Self-Image Scale for males 13 to 19 years and females 13 to 15 years of age. On the family functioning measure (FAD) the mean scores for adolescents and their family members were lower than suggested healthy cutoff scores (Epstein, Baldwin, & Bishop, 1983) with the exception of a higher score on the Roles Scale. However, scores of the sample were
similar to FAD scores generated from a random sample considered by the authors of the FAD to be descriptive of the general family population (Miller, Bishop, Epstein, & Keitner, 1985). A positive relationship between well developed adolescent self-concept and positive family functioning was not indicated; most correlations between the OSIQ and FAD scales were negative.

Health care for adolescents with CF should include addressing their sexual and body and self-image concerns and promoting healthy family functioning. Further investigation of self-concept and family functioning for adolescents with CF is warranted.
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CHAPTER 1
Introduction to the Study

Background and Significance of the Problem

Adolescence is a time of many changes. The adolescent undergoes a tumultuous inner organization of needs, abilities, self-perceptions, and sociopolitical perspectives which gradually combine to form an autonomous identity (Atwater, 1983; Erikson, 1968; Freud, 1905; Marcia, 1967). According to Marcia this identity formation is the salient developmental task of adolescence (Marcia, 1976).

Erikson (1968) views adolescence as a stressful time for adolescents and their families. Parent-adolescent conflicts emerge as adolescents experiment with new behaviors associated with independence and sexuality that challenge parental authority (Howe, 1986). These conflicts function to motivate adolescents and their parents to establish separate life-styles (Marcia, 1976).

Offer, Ostrov, and Howard (1981b) have different ideas about adolescent development. They view normal adolescent identity development with the organizational construct of the self-concept. In this context self-concept refers to "the phenomenal view of the total self relating to the internal and external environment" (p. 10). Adolescents and their parents usually congenially adapt to adolescent developmental changes. However,
some adolescents with disabilities such as cystic fibrosis (CF) may experience difficulties in their development of a self-concept (Offer et al., 1981b).

Offer et al. (1981b) suggest that self-evaluation and organization of the self-concept is a stressful adjustment for adolescents with CF. According to Offer et al. (1981b), adolescents with CF have more concerns than normal cohorts about their Sexual and Social Selves (Offer et al., 1981b).

Others suggest that high levels of stress may negatively affect the development of a self-concept in adolescents with CF even more than the disease itself (Bedell, Giordani, & Amour, 1977; Dorner, 1975). This stress occurs as the adolescents attempt to meet developmental tasks which to them appear overwhelming (Bedell et al., 1977). According to Bedell et al. (1977), some areas of the adolescents' self-concepts fail to develop normally because CF limits the abilities of the adolescents. Dorner (1975) concurs with Bedell et al. and blames the physical limitations of CF as the reason for adolescents' difficulties in development of their self-concepts. Dorner claims that the growth delays, respiratory problems, and treatment regimes associated with CF are variables that normal adolescents do not encounter in their development of a self-concept. Thus, according to Dorner, the difficulties adolescents with CF encounter in the development of a self-concept stem
from their experience with CF.

Some researchers say adolescents with CF experience difficulties in the development of self-concept (Bedell et al., 1977; Boyle, di Sant' Agnese, Sack, Millican, & Kulczycki, 1976; Dorner, 1975; Steinhausen & Schindler, 1981; Travis, 1976). However, others claim that these adolescents cope surprisingly well with the demands of their debilitating disease (Cowan, Corey, Simmons, Robertson, & Levison, 1984; Landon, Rosenfeld, Northcraft, & Lewiston, 1980; Lewiston, 1980; Smith, Gad, & O'Grady 1983). Though these views appear divergent two common themes occur. The first is the importance of family functioning on adolescents' self-concept development (Epstein, Baldwin, & Bishop, 1983; Offer et al., 1981b; Smith et al., 1983). The second theme is the ability of adolescents with CF and their families to adapt to the stressful experiences arising from their daily experiences with a debilitating disease (Bedell et al., 1977; DeWet & Cywes, 1984; Epstein et al., 1983; Landon et al., 1980; Lewiston, 1980; Smith et al., 1983).

A mediating variable on the amount of stress experienced by adolescents with CF may be the social support they perceive from their families (Smith, et al., 1983). How a family functions may be particularly important because the treatment for CF demands heavy parental involvement. Families face a dilemma in
attempting to balance the adolescent's need for autonomy with the demands of treatment which include physiotherapy, dietary, and medication regimes (Burton, 1973). Sometimes the disease may be well controlled by strict adherence to treatment regimes, but the personality of the adolescent may be damaged (Docter, 1973).

The functioning of this population of adolescents with CF and their families is worthy of investigation. The close contact adolescents with CF have with their parents may amplify the already important effect of the family on the development of the adolescent's self-concept (DeWet & Cywes, 1984; Offer et al., 1981b). According to Epstein et al. (1983), families who are reasonable and flexible are more likely to cope with the demands of adolescent development.

While the researcher was the head nurse on the adolescent unit of British Columbia Children's Hospital (BCCH), she observed that caring cohesive families promoted the development of self-concept in adolescents with CF. Families who balanced empathic support with the promotion of independence appeared to positively influence the self-concept development of their adolescents. Adolescents from these families appeared to be happier, more confident, and less anxious than cohorts with CF from disrupted families. Perhaps the
adolescents from the caring cohesive families felt support when they needed it, yet were encouraged to be independent. Thus, these adolescents were able to try new roles associated with self-concept development (e.g., testing physical and sexual capabilities), while their needs were supported by understanding parents and other family members.

The relationship of family functioning to the development of self-concept in adolescents with CF is not yet understood. If a relationship can be demonstrated between the two variables it would give direction to nursing practice. Nurses could assess for signs of diminished self-concept development in adolescents with CF and for difficulties in the functioning of families of adolescents with CF. Interventions could be planned to help the adolescents and their families to balance the needs of treatment with the developmental needs of the adolescent. Other interventions for adolescents and families could include: the education of adolescents and parents about normal growth and development, the promotion of respective support groups for these adolescents and their parents, and appropriate referral of the adolescents and/or their family members to other health care professionals if warranted. The variable of family functioning as it relates to the development of self-concept in adolescents with CF was investigated in this study.
Problem Statement

Family functioning may impact on the development of self-concept in adolescents with CF. In order to investigate this problem it must be determined whether a relationship exists between family functioning and the self-concept development of adolescents with CF.

Purpose

The purpose of this study was threefold: to describe the self-concept of adolescents with CF who attended the CF Clinic at BCCH; to describe how the families of these adolescents function; and to determine if a relationship exists between family functioning and the development of self-concept in adolescents with CF.

Definition of Terms in the Study

Cystic Fibrosis - is a multisystem genetic autosomal recessive disease with an incidence of 1:1500 in the Caucasian population. Progressive pulmonary and gastrointestinal problems characterize this disease. Exocrine glands produce tenacious mucus which obstructs organ passages (e.g., bronchi and the biliary tract). Eccrine glands produce sweat with elevated sodium and chloride levels (Strauss & Wellich, 1981).

Adolescence - is a developmental stage between childhood and adulthood (13-19 years inclusive).

Self-concept - is the subjective psychological world of the individual as relating to the internal and
external environment, including the five domains of social roles, psychological identity formation, sexuality, family identifications, and coping abilities (Offer et al., 1981b).

**Family functioning** - refers to the family's operating style. It is a complex phenomenon operating on transactional systemic properties. The family system functions as a whole, but can be simplified by the evaluation of roles, communication, problem solving, affective responsiveness and involvement, behavior control, and general functioning (Epstein et al., 1983).

**Family** - refers to a group of individuals who share accommodation and goals. A family must include at least one natural or adopted parent and one child.

**Assumptions**

The researcher approached this study with the assumption that subjects answered the questionnaires in an honest manner. The organizational construct for adolescent self-concept that was used in this study includes the following two assumptions: first, that the psychological awareness of the adolescent is sufficient to provide self description; and second, that though normal adolescents may lag behind in several areas of
the self-concept, other self-concept areas may be well developed (Offer et al., 1981b).

Limitations

The researcher acknowledges the following limitations of the study:

1. Subjects all attended the CF Clinic at BCCH and therefore may not have been truly representative of the overall population of adolescents with CF and their families.

2. The 22 families who responded to the study were self-appointed and were not representative of the overall CF Clinic population.

3. The size of the sample in this study was small, which limited confidence in results. Only 38 families were available for study. In an association seeking study large numbers improve predictive values (Wylie, 1979).

4. The structured format of the data collection instruments may have omitted salient aspects of the subjects' family functioning and/or the self-concept of the adolescents with CF.

5. Self-appointed subjects may have responded in a socially desirable way because they knew the researcher.

6. Subjects' responses may also have been biased due to their enthusiasm in the fight against CF.
CHAPTER 2
Literature Review

Overview

The following literature review focuses on the major concepts which are self-concept, adolescence, chronic illness, and family functioning. The review is divided into four sections: the development of adolescent self-concept, self-concept as an organizational construct, the effect of chronic illness on self-concept, and family functioning in relation to chronic illness.

The Development of Adolescent Self-Concept

Historically, the term self-concept has been viewed as similar to other terms such as self-esteem, self-image, and self-acceptance. Self-concept and self-image were often used interchangeably to describe the personality adjustment of the individual. Abramowitz, Peterson, and Schulenberg (1984) differentiate between self-concept and self-esteem in the following way. "Self-concept differs from self-esteem since the former is more multidimensional, while self-esteem indicates a unidimensional, global measure of self-acceptance" (pp. 20-21).

The seminal works of Sigmund Freud (1905) describe stages of human personality or self-concept development (DeLevita, 1983). Freud (1905) and the psychoanalysts believe that self-concept development progresses in
predictable chronological stages toward maturity (Blos, 1967; Erikson, 1968; Freud, 1958). Each developmental stage involves the resolution of a particular conflict such as adolescents' struggle for autonomy (Freud, 1958), or the accomplishment of a sense of autonomous identity (Erikson, 1968; Marcia, 1976). Resolution of the conflict implies developmental task accomplishment, and represents a more mature manifestation of basic instinctual and environmental forces (Freud, 1958). Resolution of this struggle for autonomy in the adolescent results in increased cognitive and emotional abilities (Adelson & Doehrman, 1980). Self-concept development is determined by past and present developmental tasks (Rothman, 1978). Thus, adolescents who resolve earlier developmental conflicts and related tasks are more likely to resolve the identity conflict of adolescence and develop healthy self-concepts (Erikson, 1968; Marcia, 1967).

Psychoanalysts stress the importance of family interaction on the developing child's self-concept (Erikson, 1968; Freud, 1958; Freud, 1905). They focus on the impact of the family on the child's socialization, especially regarding the resolution of developmental conflicts. Psychoanalysts claim that adolescent-parent conflict is a developmental mechanism similar to mechanisms of other stages as described by Piaget (1935). For example, toddlers balance their
explorations with proximity to mother. In a similar way, adolescents balance their quest for independence with familial support.

The adolescent's need for autonomous self-concept development and fluctuations in responsibility sometimes produce adolescent-family conflict (DeLevita, 1983; Howe, 1986). According to Marcia (1967), resolution of adolescent-family conflict is necessary for the adolescent's development of an autonomous self-concept. The adolescent "must incorporate new abilities into a consistent unity" (Manaster, 1977) and this demands change that may be difficult for the adolescent and family to accept. Increased adolescent physical, mental, and sexual abilities call for new freedom, but "the adolescent does not reliably display responsible adult behavior", thus frustrating adolescent-family relationships (Howe, 1986, p. 304). The way that adolescents and their families overcome developmental conflicts influences the quality of self-concept development for the adolescent (Erikson, 1968; Offer et al., 1981b).

Erikson (1968) and Freud (1958) emphasize the importance of adolescence as a time of tumultuous adjustment for the individual and family. However, historical scrutiny reveals that the foundations for Erikson and Freud's descriptions of adolescent self-concept development are shaky. They base their ideas
about adolescent self-concept development on descriptive observations of psychiatric patients (DeLevita, 1983). Consequently, they neither describe what the development of a normal adolescent self-concept is like nor how it might be measured.

**Self-Concept as an Organizational Construct**

Daniel Offer (1969), an adolescent psychiatrist from Chicago, Illinois, found it difficult to accept the prevailing psychoanalytic ideas regarding development of a self-concept in adolescence. As indicated earlier, theorists believed that turmoil was necessary to motivate the adolescent and family to move away from each other in order to meet the emerging physical, emotional, vocational and sexual needs of the adolescent (Erikson, 1968; Freud, 1958; Marcia, 1967). The achievement of an autonomous identity, the salient developmental task of adolescence, depends on the adolescent's separation from the family's control. Adolescents who did not experience turmoil were thought to have a poorly developed self-concept. Though Offer (1969) thought adolescence required change of the adolescent and family, he believed that most adolescents and their families experienced adolescence as a relatively tranquil time in which all family members adapted to the adolescent's new abilities and to the changing roles of family members (Offer et al., 1981b).

Offer (1969) wanted to test his ideas about
adolescence but no instrument for the discernment of average, or normal adolescents existed (Offer et al., 1981b). Offer (1969) decided to devise a self-concept questionnaire.

The Offer Self-Image Questionnaire (OSIQ) (Offer et al., 1981b) describes five Selves, or domains, as representative of the eleven content areas of the self-concept (scales). The five Selves are: Psychological, Social, Familial, Sexual, and Coping Selves (p.1). Selection of the items for the eleven scales reflects the adaptation (Murray, 1938; Coleman, 1961; Silber, Hamburg, Coelho, Murphey, Rosenberg, & Pearlin, 1961), and psychoanalytic underpinnings of Offer's framework for adolescent self-concept (Erikson, 1950; Freud, 1958; Rauch & Sweet, 1961). This duality of approach to the measurement of adolescent self-concept as evident in the OSIQ allows for the evaluation of the adolescent from a broad perspective. Therefore, the OSIQ is a popular method for the assessment of adolescent self-concept. The provision of normal reference groups' scores from a large number of adolescents (N=15,000) allows for intergroup comparisons of adolescent self-concept (Offer et al., 1981b). Studies that have used the OSIQ have investigated many variables related to adolescent self-concept. Two particular studies, Balk (1983) and Brennan and O’Loidean (1980), found the OSIQ useful in the assessment of groups of adolescents.
Balk (1983) administered the OSIQ to adolescents (N=33) who had recently experienced the death of a sibling. The subjects all had scores within the normal range of the OSIQ. The subjects also had a mean score on the Moral Scale almost two standard deviations above the normal score of 50 (p. 151). Therefore, Balk concluded that his subjects had gained moral insight as part of their adaptation to the death of their siblings.

Brennan and O'Loidean (1980) compared adolescents with psychiatric diagnoses such as schizophrenia, depression, and adjustment reactions (psychiatric adolescents) (N=115) to reportedly normal adolescents (N=845) from a highschool population. The scores of the psychiatric adolescents were statistically significantly different from the scores of the highschool population (values ranged from p < .01 to <.001) (p. 15). These differences occurred on all OSIQ scales except Body and Self-Image. The authors concluded that the OSIQ can discriminate between psychiatric and normal adolescent populations.

Self-Concept and Cystic Fibrosis

Debate exists over the quality of self-concept development in adolescents with CF. Some findings indicate that adolescents with CF experience difficulties with development of self-concept (Boyle et al., 1976; Daniel, 1977; Offer et al., 1981b; Steinhausen & Shindler, 1981) while others claim
that adolescents with CF develop normal self-concepts (Cowan et al., 1984; Landon et al., 1980; Lewis & Khaw, 1982; Lewision, 1980; Smith et al., 1983).

Offer et al. (1981b) compared the OSIQ scores of physically ill adolescents with severe acne, kidney disease, growth delays, and CF to those with psychiatric diagnoses such as adjustment reactions, schizophrenia, and depression. Both of these groups were also compared with delinquent and normal adolescents. Findings revealed that physically ill adolescents, including those with CF, had significantly more concerns than normal cohorts about their Body and Self-Image ($p < .05$) (p.77). Also Offer et al. describe the physically ill adolescents as having more sexually conservative attitudes than normal cohorts ($p < .05$). These findings were interpreted by Offer et al. to indicate that adolescents with physical illnesses experience difficulties with self-concept development but they adjust to and/or overcome these difficulties and adapt as well as possible considering their disabilities.

Other authors also claim that adolescents with CF experience difficulties with their development of a self-concept. These authors tend to focus on the worries and problems of this population without accounting for the strengths of the adolescents (Boyle et al., 1976; Daniel, 1977; Steinhausen & Schindler, 1981; Travis, 1976). However, in contrast, the second
group of authors comment that the adaptive capacities of adolescents with CF are exceptional as many seem to cope with the serious disabilities caused by their disease (Cowan et al., 1984; Landon et al., 1980; Lewis & Khaw, 1982; Smith et al., 1983). Though these views appear divergent, two themes arise from these works. All agree that adolescents with CF face difficulties in the development of their self-concept and that adaptation to the limitations of CF is possible.

Travis (1976) describes the results of interviews with chronically ill children and their families in a book. She notes that adolescents with CF struggle with the symptoms of a debilitating disease with varying degrees of success. She emphasizes the impact of disease induced stress on many areas of adolescent development, suggesting that the illness and related dependency deprive adolescents of normal experiences. Consequently, a strain on adolescent self-concept develops and difficulties in the development of self-concept may result. Travis describes the dependency adolescents with CF have on their parents for physical, emotional, and financial support. Dependency inhibits the adolescent's normal motivation to become autonomous and consolidates family relationships that should be ready for disengagement. Travis (1976) stresses the importance of the role of health care professionals in helping these adolescents to live as
normally as possible so that the impact of disease related stress can be reduced.

Daniel's (1977) views result from his descriptive study of adolescents with CF (N=12). Daniel's conclusions parallel those of Travis but Daniel adds that adolescents with CF lack practice with the self-concept area of coping abilities. Daniel says this results from the adolescent's dependency on parents and parents' reluctance to let the adolescents experiment with new behaviors and roles.

Boyle et al. (1976) identify borderline adjustment in adolescents with CF (N=27). These adjustment difficulties in the self-concept areas of body and self-image, and interpersonal abilities were determined with a psychiatric interview and three projective tests. These were the Rorschach Test, the Thematic Apperception Test, and the Draw-a-Person Test (p. 324).

In the psychiatric interviews, 49% of subjects reported problems with daily coping, 48% reported interpersonal and family communication difficulties, and 70% expressed body and self-image concerns. High numbers identified anxiety and depression as common for them (p. 325). On the three projective tests the results of the subjects were considered to indicate twice as many difficulties with development of a self-concept as normal cohorts. Unfortunately, results
except for those just described are in the form of detailed case histories. Therefore analytic data does not support the authors' recommendations. They recommend that open communication between adolescents with CF and health care professionals and between the adolescents themselves could improve the development of self-concept in adolescents with CF. Boyle et al. (1976) claim that these types of communication could positively influence development of self-concept by enhancing the coping abilities of the adolescents.

Steinhausen and Schindler (1981) studied male and female adolescents with CF (N=36) for suspected difficulties in development of self-concept and other areas of psychological health such as interpersonal skills. Results of psychiatric interviews found the CF subjects to be 45% more emotionally upset than normal cohorts. Subjects reported self-concept difficulties in coping and adjustment to the changes of adolescence. Steinhausen and Schindler related the self-concept difficulties of the subjects to physical disturbances such as lung function ($p = .05$) (p. 76). Also, the authors reported difficulties with family functioning difficulties (p. 77) which are described in the next section of this review.

A number of authors suggest that adolescents with CF experience normal self-concept development and have remarkable adaptive capacities considering the serious
nature of their disabilities (Cowan et al., 1984; Landon et al., 1980; Lewis & Khaw, 1982; Lewiston, 1980; Smith et al., 1983). They maintain that adolescents with CF successfully adapt to the many limitations and stresses of CF including: reduced life expectancy, growth delays, obvious physical differences from peers, hospitalizations, daily physiotherapy, medication, and dietary regimes. This group of authors describe the concerns of adolescents with CF as "very reasonable considering the amount of disability the adolescents with CF encounter" (Lewiston, 1980, p. 266).

A positive theme uniting these works is emphasis on the adaptive coping capacities of the adolescents. These authors recommend that health care professionals can promote the coping abilities and self-concept development of adolescents with CF, with measures such as: education about growth and development, formation of patient support groups, and provision of social support structures (e.g., adolescent clinics).

Smith et al., (1983) studied the self-concepts and perceptions of social support in a group of adolescents with CF (N=26). They investigated these with the Tennessee Self-Concept Questionnaire (TSC), a social support questionnaire, and a stress questionnaire. The latter two were devised by the authors (p. 231).

Smith et al. (1983) claim that their sample of adolescents had normal self-concept development and
generally healthy interpersonal relationships. Mean scores for subjects on the TSC were within the 30th percentile of normal overall. In addition, subjects were within the 90th percentile of normal scores on the General Maladjustment Scale of the TSC. Smith et al. interpret these scores to indicate that the subjects adapted to the stress of CF and developed healthy self-concepts. These authors also found that the adolescents adapted to stress more easily, as demonstrated by their superior score on the stress questionnaire, and had better TSC scores if they perceived positive social support from their families, friends, and health care professionals. Though adolescents with CF appear adaptable, Smith et al. remind others who work with adolescents with CF not to overlook the difficulties these adolescents regularly face from their debilitating disease. The adolescents still may need health care support in adapting to difficult experiences such as growth delays or recurrent hospitalizations.

Smith et al.'s (1983) views parallel those of others who claim that adolescents with CF have exceptional adaptive capacities which enable them to overcome the many limitations and stresses associated with CF (Landon et al., 1980; Lewis & Khaw, 1982; Lewiston, 1980). These authors do not think adolescents with CF always adjust easily to their problems.
However, these authors' positive comments about the self-concept development of adolescents with CF reflect optimism about the adaptive capacities of the adolescents. Furthermore, the authors stress that episodic and ongoing support from health care professionals, empathic listening, and group discussions can promote development of a self-concept in these adolescents.

**Family Functioning**

Each family's structure and functioning patterns are unique. These complex patterns of functioning influence children throughout their childhood years in subtle and complex ways (Olsen, Sprenkle, & Russell, 1979). In the past decade a plethora of concepts have emerged to describe variables of family functioning. The number of variables involved make it difficult to isolate and describe family functioning. However, recent improvements in assessment tools indicate a promising direction for the evaluation of family functioning (Epstein et al., 1983).

Interest in the functioning of families with a chronically ill member is relatively new (Epstein et al., 1983). However, findings from a review of research (DeWet & Cwyes, 1984) and a study (Lewis & Khaw, 1982) provide insight into family functioning and CF.

DeWet & Cwyes (1984) describe the psychosocial impact of CF under the following headings: parental
responses to CF, marital relationships in families with CF, and especially the effect of CF on family functioning (pp. 526 - 528). Respectively their conclusions were that: mothers were more involved in treatment than fathers and both parents felt guilty about passing the disease to offspring, the separation/divorce rate was no higher for parents of CF children than for the general population, and family functioning was minimally impaired by restricted time, finances, and communication (p. 528). The authors conclude "that patients with CF and their families are subject to major stresses, yet many function without observable dysfunction" (p. 526). Furthermore, DeWet and Cwyes emphasize that the coping mechanisms of the families need to be developed to prevent dysfunction which may result from living with the stresses of CF (p. 530).

Lewis and Khaw (1982) investigated family functioning as a mediating variable in the self-concept development and behavior of adolescents with CF (N=31). Mothers of the adolescents completed the Family Assessment of Cohesiveness and Enmeshment Scale, (FACES 11) a family functioning questionnaire (Olson et al., 1979) and a behavior problem checklist devised by the authors. Results of the foregoing two tests were compared to the adolescents' responses to the Pierce Self-Concept Scale. Subjects' mean family
functioning and self-concept scores were within the range for normal scores. However, the subjects reported a high number of behavior problems ($p < .01$). Multivariate regression analysis found a significant relationship between extreme (e.g., rigid or disengaged) family functioning and adolescent behavior problems ($p = .001$) (p. 638). Lewis and Khaw therefore concluded that most families successfully adapt to the stress associated with CF but that families with extreme functioning are likely to have adolescents with psychosocial difficulties such as behavior problems.

As indicated, improvements in assessment tools may be helpful in the assessment of family functioning. Tools for the assessment of family functioning should be based on "clinically tested reputable theoretical models of family functioning" (Epstein et al., 1983, p. 171). The McMaster Model of Family Functioning (MMFF) is such a model.

The MMFF describes the multidimensional aspects of family life and is based on the patterns of healthy functioning families (Epstein et al., 1983). The model portrays the family as a system which functions in six equally important domains. In each domain a range of functioning from least to most effective is described. The domains are Problem Solving, Communication, Roles, Affective Responsiveness, Affective Involvement, and Behavior Control (Epstein et al., 1980, p. 312). A
General Functioning domain was added in 1981 to describe the family's overall health or pathology. The Family Assessment Device (FAD) is the operationalization of the MMFF (Epstein et al., 1983).

According to Bishop, Baldwin, Epstein, and Keitner (1984), the results of the FAD from various studies indicate that: chronic illness may affect family functioning; a family that functions well facilitates rehabilitation, and impaired family functioning may negatively affect rehabilitation and perhaps the development of family members (pp. 305-321). The following studies used the FAD to investigate the effect of chronic illness on family functioning: Bishop, Epstein, Keitner, Miller, & Srinivasen, (1986a); Bishop, Green, Cantor, & Torresin (in press); Miller, Bishop, Epstein, & Keitner, (1985).

Miller et al. (1985) compared families including a number with a psychiatric diagnosis of affective disorder, personality disorder, depression, and schizophrenia (psychiatric families) to self-reportedly healthy families (p. 353). Psychiatric families consistently responded abnormally to all scales of the FAD. The psychiatric families have 46% - 59% range of unhealthy scores and healthy families have a 19.4% - 36.1% range of unhealthy scores on the FAD. The most significant differences between the unhealthy scores of psychiatric and healthy families respectively


occurred in the areas of Problem Solving (56% vs. 20.8%), Affective Responsiveness (53.7% vs. 20.8%), and General Functioning (59% vs. 22.2%) (p < .001). The psychiatric families show disruptions in most areas of family functioning and this may have a negative effect on the development of children (Tonkin, 1982).

One study investigated family functioning and marital satisfaction of families with a chronically ill member (Bishop et al., 1986a). Individuals with disabilities from strokes and their families (stroke families) (N=22) completed the FAD during their first hospitalization. One year later subjects completed the FAD and the married couples completed the Locke-Wallace Marital Satisfaction Scale (LWMS) (p. 437). Finally, their scores were compared to compiled normal scores for the FAD and the LWMS.

The stroke families experienced considerable variations in their daily routines, such as physiotherapy, medical appointments, occasional hospitalizations, medications and home treatments (Bishop et al., 1986a). The authors speculated that the foregoing would negatively impact on the families' functioning. However, though the FAD scores of the stroke families were low during the first hospitalization, most families resumed normal functioning within one year. Some of the families did not always develop appropriate functioning to deal with
the day to day disruptions of chronic illness but their results did not significantly alter mean FAD scores for the sample. The stroke couples' mean results on the LWMS matched those of a similar control group with no health problems. Therefore Bishop et al. concluded that marital satisfaction was similar for stroke and healthy couples.

The effect of family dysfunction on the personal development of family members is not clear. However, this topic is under study and findings will soon be published (Bishop, personal communication, April 14, 1987). Bishop et al. (in press) used the FAD to study the functioning of families with a member who is chronically ill with rheumatoid arthritis (rheumatoid arthritis families). These families did not experience dysfunction in family functioning, anxiety, or depression any more than healthy functioning families except during times of stress. However, the rheumatoid arthritis families return to normal once the crisis is past.

When family problems are not resolved various maladaptive patterns take their place. These may become standard operating procedure for the family. For example, in a family with a child with CF the mother is often deemed responsible for daily home physiotherapy, medications, dietary and other therapeutic routines and appointments as well as her other family role
responsibilities (Travis, 1976). Some mothers and families may be able to adjust their functioning to meet these demanding responsibilities with ease while others may not. As a result, dysfunction may appear in areas of family functioning that would normally go well (e.g., with role responsibilities). This dysfunction may be due to fatigue, anxiety and/or other reasons (Bishop et al., 1986a).

Literature indicates that family functioning is likely to be disrupted in families with chronically ill children (Barnard, 1976; Maccoby, 1978; Rose & Thomas, 1987; Turk, 1964). Maccoby (1978) notes that under certain types of life stresses such as exacerbations of illness or divorce, parents may devote all their energy to the essentials of life (e.g., food and shelter). According to Maccoby, parents have little or no energy left for fostering the development of offspring let alone other family functioning activities (e.g., maintaining the marital relationship). Based on this observation, Maccoby recommends that health care professionals should first try to help families with the essentials of life. When these needs are supported, some families may return to healthy functioning. Other families may still require support to help them in promotion of family functioning and fostering development of children. In the case of ongoing difficulties in family functioning, specific instruction
in parenting skills and parent support groups are recommended (Maccoby, 1978).

Rose and Thomas (1987) describe in a book how the functioning of families with chronically ill children may be endangered due to ongoing stress resulting from illness. Like Maccoby, Rose and Thomas claim that the functioning of families must be supported for the welfare of children and adolescents with chronic illness. Unless family stress is reduced, parents may not be able to promote the development of children. Likely areas of difficulty in family functioning are communication, maintenance of disciplinary practices, and emotional attachments (e.g., affective interaction). Rose and Thomas recommend that nurses should help families with practical issues such as food, shelter, and arrangements for travel to health care appointments to reduce family stress levels. Rose and Thomas also suggest that the coping strategies of families be supported by nurses because ultimately the families' coping is related to successful adaptation of children.

Kathryn Barnard (1987) in the introduction to the Rose and Thomas book claims that promotion of parent-child interaction by nurses is extremely important. Barnard says parent-child interaction is the most vital determinant of children's development especially for children with chronic illness. In an earlier book Barnard emphasizes that: the process of parent-child
interaction is important in determining child health outcomes in families with chronically ill children, family functioning may often be impaired by stress, nurses' ultimate goal in child health is to identify and intervene before family functioning is seriously impaired, and that a major issue for nurses who work with chronically ill children and their families is the support of family functioning (Barnard, 1976).

Finally, a study by Turk (1964) details specific difficulties in family functioning for families including a child with CF. Turk describes how families from his sample (N=14) experienced difficulties such as: little time and money for adult activities, restriction of parental time alone, scant time or money for family recreation, and most importantly, serious difficulties with family communication. Turk refers to the communication difficulty as a family "web of silence" (p. 67). This web of silence causes family misunderstandings, lack of affective involvement between family members, and difficulties in the development of a self-concept for children (Turk, 1964).
Summary

Self-concept was defined and discussed from an developmental perspective. Next, self-concept was reviewed as a concept with emphasis on the Offer framework (Offer et al., 1981b). The effect of chronic illness such as CF on the development of self-concept was discussed. The concept of family functioning was described with emphasis on studies using the FAD. Finally, the effect of chronic illness on family functioning was reviewed.
CHAPTER 3
Research Methodology

Overview

The relationship between the self-concept of adolescents with CF and the functioning of their families was investigated with the use of two data collection instruments. The sample was obtained from the CF clinic at BCCH. Twenty-two adolescents with CF and their families volunteered to participate. The adolescents with CF completed a self-concept questionnaire (OSIQ), and the adolescents and some of their family members (N=34) completed a family functioning questionnaire (FAD).

Responses to the OSIQ and FAD were then analyzed to determine whether the subjects' scores differed from the standard normal scores for the two questionnaires. The Spearman rho correlation procedure was used to investigate relationships between the scales of the OSIQ and the FAD. The sections of this chapter deal with the selection of the sample for this study, the collection of data, and the analysis of data.

Selection of the Sample

Subject Selection Criteria

Selection of the subjects for this study were based on the following criteria:

1. families included an adolescent with CF between and including the ages of 13 and 19 years,
2. families included at least one natural or adopted parent,
3. family members could read and write English, and
4. families were not facing the impending death of any family member.

**Sampling Technique**

A convenience sample of 38 families with an adolescent with CF who attended the Cystic Fibrosis Clinic at BCCH met the subject selection criteria and were asked to participate in the study. The adolescents who volunteered to participate came from intact, divorced, and blended families. The families were from urban, suburban, and rural areas of British Columbia.

The names, addresses, and telephone numbers of the adolescent patients and their family members were derived from clinic records after the researcher obtained permission to use the CF Clinic population for the study. The medical director and the clinical nurse specialist provided information that indicated which families met the subject selection criteria of this study.

A control group was not utilized in this study. However, the normal reference group means and standard deviations of the OSIQ (Offer et al., 1981b) and FAD (Epstein et al., 1983; Miller et al., 1985) provided comparative data for analysis.
**Subjects' Rights**

The rights of subjects were protected by the researcher and the ethics committees of the University of British Columbia and British Columbia Children's Hospital (BCCH). Subjects received an envelope by mail which contained a written description of the study including the researcher's expectations of participants and the consent forms (Appendix A), the OSIQ (Appendix B) and FAD questionnaires (Appendix E), a Demographic Data Sheet (Appendix D), and a stamped envelope addressed to the researcher.

Subjects indicated their names on their completed questionnaires which facilitated the researcher's follow-up phone calls to non-respondents. To insure the subjects' anonymity the Demographic Data Sheet and the questionnaires were coded prior to data analysis. The researcher guaranteed subjects in the Letter of Information that their identity would be known only to the researcher and that data would be grouped for analysis and discussion. All of the subjects' responses to the study including consent forms, Demographic Data Sheets, and OSIQ and FAD questionnaires were destroyed after the completion of the study.

Subjects were informed in writing that their participation or non-participation in the study would not affect their health care services at any time. Subjects were also informed that their participation
could make a contribution to nursing theory. Advances in theory could positively influence the type of nursing care that adolescents with CF and their families receive, thus indirectly helping adolescents with CF and their families.

Method

As indicated, the subjects received an envelope containing information about the study, consent forms, the data collection instruments, a Demographic Data Sheet, and a stamped envelope addressed to the researcher. Questions on a Demographic Data Sheet regarding the family's socioeconomic status, religion, race, health, and the parents' marital status were completed by one parent. Adolescents and their family members who chose to participate in the study returned the signed consent forms, the Demographic Data Sheet, and the questionnaires to the researcher in the stamped pre-addressed envelope. Follow-up phone calls were made to non-respondents two and five weeks after the initial mailing of the study materials.

Data Collection Instruments

The Offer Self-Image Questionnaire. The OSIQ is a self-descriptive personality test used to measure the perceptions of self-concept of boys and girls between and including 13 and 19 years of age. The Offer Self-Image Questionnaire (OSIQ) (Offer et al., 1981b) is primarily useful in providing a standardized reliable
means of gathering information about the self-concept development of various populations of adolescents (p. 31). Thousands of adolescents from different countries including Canada, the United States, Ireland, Australia, and Israel have completed the OSIQ and in doing so have "shared their knowledge about themselves with us and other researchers" (p. 30).

Adolescents who complete the OSIQ (Offer et al., 1981b) usually find it to be an opportunity for sharing their thoughts with researchers (p. 30). This sharing occurs because adolescents "are typically seeking to establish their own identities, and thus are intensely interested in themselves. Adolescents as a group are particularly willing to share their inner experiences and perceptions" (p. 30). This makes the OSIQ useful for eliciting group and individual adolescent perceptions of self-concept (p. 31).

Test items were chosen and grouped into eleven scales thought to be important in the psychological life of adolescents on the basis of theoretical propositions (Erikson, 1950; Freud, 1958; Marcia, 1967), empirical findings, and clinical observations. Items were selected by Q-sort and then were checked for clarity in discussion with adolescents. A pilot study resulted in the rewording of some items (Offer et al., 1981b).

The questionnaire, comprised of 130 items, has eleven scales that measure the psychological adjustment
of the adolescent (Offer et al., 1982). The scales are grouped into five systems; the Social, Familial, Sexual, Coping and Psychological Selves (Offer et al., 1981b).

Offer et al.'s (1981b) analysis of compiled OSIQ data resulted in a description of the self-concept of normal adolescents. In the same book, the authors describe lower variations from normal self-concept scores in adolescents who were psychiatric patients, delinquents, or chronically ill. Lower variations from normal self-concept scores for the chronically ill occurred on the OSIQ Body and Self-Image and Sexual Attitudes Scales (p. 31).

The Psychological Self (PS), comprised of three scales, reflects the adolescent's concerns, wishes, feelings, and fantasies (Offer et al., 1982, p. 3). The Impulse Control Scale measures the strength of adolescent's self-control over the pressures of the internal and external environment. A low score reflects an impulsive adolescent who has a low frustration tolerance. A high score indicates an adolescent who delays gratification. The Emotional Tone Scale measures the adolescent's ability to maintain emotional stability despite fluctuations in emotions. A low score indicates unhealthy emotional lability, while a high score indicates emotional stability. The body and Self-Image Scale evaluates the extent of the
adolescent's adjustment to or awkward feelings about the physical changes of adolescence. A high score indicates that the adolescent has well defined physical boundaries and feels physically competent, while low scores indicate the opposite (p. 3).

The Social Self (SS)(Offer et al., 1982, p. 3) represents adolescent attitudes about relationships with peers and other social contacts with three scales. The Social Relationship Scale measures the adolescent's object relations (e.g., attachment) and friendship patterns. A low score indicates that the adolescent feels lonely and isolated, while a high score indicates security and a capacity for empathy. The Morals Scale evaluates the conscience of the adolescent. A low score suggests irresponsible disregard for others and a high score indicates responsible caring for others (e.g., empathy). The Vocational and Educational Attitudes Scale measures the adolescent's feelings about school and career planning (p. 4). Adolescents with high scores often do well in school and career planning.

The Sexual Self (SeS) has one scale, Sexual Attitudes, which evaluates the adolescent's attitudes about sexuality. A low score means the adolescent is sexually conservative. A high score means that the adolescent has a "relative openness to sexuality" (Offer et al., 1982, p. 4).
The Familial Self (FS) has one scale, Family Attitudes, which reflects the authors' belief that family interaction is a more important determinant of self-concept than any other social variable (Offer et al., 1981b). Low scores on the Family Attitudes scale indicate difficulties in communication in the family and dissatisfaction with discipline practices. High scores indicate positive feelings about adolescent-parent communication (Offer et al., 1982, p. 4).

The Coping Self (CS), which is comprised of three scales, focuses on the adaptive capabilities of the adolescent and the coping behaviors used to adapt to the world. The Mastery of the External World Scale measures the adolescent's adaptation to the immediate environment. Low scores indicate a lack of confidence, and high scores a sense of confidence and control. The Psychopathology Scale measures the relative mental health of the adolescent. Low scores mean the adolescent likely has mental health problems, and high scores mean the adolescent is mentally healthy. The Superior Adjustment Scale measures the quality of the adolescent's coping in regard to the self, significant others, and their world. An adolescent with a low score tends to experience difficulty coping, while high scores indicate adaptive coping. (Offer et al., 1982, p. 4).

There are two operational assumptions of the OSIQ. First, it evaluates adolescent functioning in multiple
areas because adolescents considered to be developing in the realm of normalcy may master most areas of the self-concept while failing to progress in one or two. Second, it assumes that adolescents have sufficient self-awareness to provide self-description (Offer et al., 1981b).

To complete the questionnaire, subjects select answers from a numerical response format of six alternatives (1 through 6) that is printed next to each item. Responses range from 1 "describes me very well" to 6 "does not describe me at all". Half the items are positively worded and half are negatively written to reduce response bias. An example of a positive item is "I can count on my parents most of the time" and an example of a negative item is "I feel I have no talent whatsoever" (Offer et al., 1982).

In scoring the OSIQ, responses to negatively worded items are reflected (reversed) by subtracting the negative value from 7. For example, the response value of 6 for a negative item becomes 1 after reflection (7-6=1). A reflected score of 1 indicates a well developed self-concept in the area evaluated by the negative item. Positive item response values are accepted at face value with 1 as the best score.

Raw scale scores are calculated as the sum of the subject's positive and reflected item response values, divided by the number on that scale. As a result, raw
scale scores can range from one to six times the number of items in a scale. "A low score implies positive development of a self-concept in the area measured by a scale and a high score implies poor adjustment in that area" (Offer et al., 1982, p. 5).

The OSIQ scoring procedure next uses a formula to standardize scores so they can be more easily understood. Standard scores are generated from compiled age and sex-appropriate normal reference group (e.g., females from 13 - 15 years inclusive) means and standard deviations as tabulated in the OSIQ Manual (Offer et al., 1982). A subject's scale score is subtracted from the appropriate reference group mean. This number is divided by the reference group standard deviation. The quotient is multiplied by 15 and then 50 is added to that product. A score of 50 is equal to the reference group mean (standard mean). A score lower than 50 is considered to indicate a less well developed self-concept than that of a normal adolescent. A score higher than 50 indicates the subject has a better developed self-concept than that of a normal adolescent. A score of 65 is one standard deviation (SD=15) above the mean and a score of 35 is one standard deviation below the mean.

The total score for the OSIQ is determined by summing the scale scores and averaging this sum by dividing by the number of scales (eleven). As with
scale scores, a total OSIQ score of 50 equals the standard mean for all sex and age-appropriate reference groups.

The reliability of the OSIQ has shown acceptable levels of internal consistency. Offer, Ostrov and Howard (1977) found alpha coefficients (Chronbach, 1971) for the eleven scales range from .43 to .73 (Appendix C). The OSIQ demonstrated stability over time. The test-retest coefficients of the eleven scales over a period of six months range from .48 to .84 and are .73 for the total score (Offer et al., 1981b).

The validity of the OSIQ has been demonstrated in findings from three studies which provide estimates of concurrent validity for the OSIQ when compared to other instruments measuring similar constructs (Offer, 1969; Coche & Taylor, 1974; Hjorth, 1980). The instruments used for comparison were the Bell Inventory, the Minnesota Multiphasic Personality Inventory (MMPI), and the Tennessee Self-Concept Questionnaire (TSC). The OSIQ scales of Body and Self-Image and Family Attitudes correlate most highly with similar scales of the TSC (Offer et al., 1981b). Coche and Taylor (1974) found moderate to high correlations between many scales of the OSIQ and the MMPI.

Predictive validity was demonstrated over an eight year period in a study of normal adolescent boys (Offer, 1969). Subjects showed continued normal adjustment over
this time span. Construct validity was also supported in the same study in the following way. "Subjects chosen for their normality on the basis of their OSIQ scores proved to be consistently non-deviant and non-psychopathological over an eight year period" (Offer et al., 1982, p. 6). Normal adolescents' OSIQ scores are variable and still reflect healthy values if nine of the scale scores are at or above the standard mean score.

The Family Assessment Device. The FAD is a 60 item self-report questionnaire designed to measure six domains of family functioning as described by the McMaster Model of Family Functioning (MMFF) and an additional General Functioning Scale. The MMFF "describes the structural and organizational properties of family groups and the patterns of transaction among family members which have been found to distinguish between healthy and unhealthy families" (Epstein et al., 1983, p. 172). The MMFF has been used in clinical work by Epstein et al. (1983) in a family counselling context, and in empirical work (Miller et al., 1985).

Items were selected from a 240 item pool for their relationship to the six MMFF domains of family functioning and respectively grouped into scales. Then a seventh General Functioning Scale was added later to measure the overall health of the family. Items were also chosen for their internal consistency as demonstrated by a sample of (N=503) healthy and
unhealthy subjects (Epstein et al., 1983, p. 176).

The seven FAD domains of family functioning are: Problem Solving, Communication, Roles, Affective Responsiveness, Affective Involvement, Behavior Control, and General Functioning. The following description outlines characteristics of each FAD scale.

Problem Solving is the ability to resolve problems involving instrumental (e.g., financial) and affective (e.g., anger) issues. The scale focuses on the aspects of families that are most related to members' well being and emotional health. Healthy families solve problems efficiently while at the other end of the spectrum, disturbed families can neither identify nor resolve many of their problems.

Communication refers to how instrumental and affective information, especially in the verbal mode, is exchanged. Healthy families communicate directly and clearly, while at the disturbed end of the scale it is neither clear nor direct. Roles are the repetitive patterns of behavior by which family members fulfill their functions (e.g., nurturance and personal development). At the healthy end of the scale, all the necessary functions are fulfilled, while at the disturbed end one or more functions may not be met.

Affective Responsiveness refers to the family's ability to respond to a variety of stimuli with the appropriate quality and quantity of feelings (e.g., love
and sadness). Healthy families regularly respond with appropriate feelings, while in disturbed families one or more members demonstrate responsiveness problems. Affective Involvement refers to the extent of interest and value that family members hold for each other. Empathic involvement characterizes good functioning, while disturbed families show either lack of or over involvement.

The Behavior Control Scale evaluates behavioral expectations of members (e.g., social and physiological behavior and methods of achievement of the expectations). Health is generally associated with flexible consistency, while disturbance is related to chaotic or rigid patterns. The General Functioning Scale evaluates the overall health and pathology of the family. This scale assesses the presence of themes among the other scales of the FAD such as rigidity and enmeshment (Miller et al., 1985).

Family members who reside together individually and confidentially complete the questionnaires. Subjects select responses from a rating scale of four alternatives that is printed below each item. The wording of the responses varies from "strongly agree" to "strongly disagree". Half of the items are positively worded and half are negatively worded to reduce response bias. An example of a positive item is "We resolve most everyday problems around the house". An example of a negative item is "We don't know what to do when an
emergency comes up" (Epstein et al., 1983). According to Epstein et al. (1983), it is not necessary for all members to complete the FAD, therefore results must be viewed with caution.

In scoring of the FAD, family mean scale scores are calculated by summing the family's individual scale scores and dividing this number by the number of family members. Family mean scale scores are compared to the standard cut-off scores for normal healthy families as indicated by compiled FAD data (Miller et al., 1985). According to Miller et al. (1985), subjects' family mean scale scores can also be compared to the scores of a random sample of healthy hospital employees (N=45) if researchers wish to compare subjects to scores expected of the general population. The FAD mean scale scores of the subjects of this study as well as the FAD scores of the random sample (Miller et al., 1985), and the suggested FAD healthy cut-off scores appear in Table 5.

Generally, a scale score of 2 indicates healthy family functioning, while higher and lower scores respectively signify healthy and unhealthy functioning. It is common for normally functioning families to have a few scale scores below the standard mean scale score but most of the healthy families' FAD scale scores are at or above the healthy cut-off scores. Families with mostly low FAD scale scores tend to be poorly functioning families (Miller et al., 1985).

The reliability of the FAD is described in two articles by the authors (Epstein et al., 1983; Miller et
The seven FAD scales have internal consistency alpha coefficients (Chronbach 1971) greater than .70 and range from .72 - .92 (Epstein et al., 1983, p. 175) (Appendix F). The seven scales of the FAD are moderately independent. This differs from the psychometric tradition

"which dictates that scales of an instrument should be independent of each other. On the other hand, there is no reason to think that different aspects of family functioning will be different from each other. In fact we would expect problems in one area of family functioning to have ramifications in other areas" (Epstein et al., 1983, p. 178).

Therefore, the constructors of the FAD believe that total independence of scales is an illogical demand of a family assessment measure. However, the FAD scales are sufficiently independent to be distinguishable (p. 178).

Test-retest estimates for the FAD scales range from .66 to .76. These coefficients were obtained from reportedly healthy hospital employees (N=45) after the duration of one week (Miller et al., 1985, p. 347). Social desirability is a factor which may alter the reliability of responses to self-report questionnaires (Wylie, 1979). Epstein et al. (1983) investigated this possibility with the Marlowe-Crowne Social Desirability Scale. Randomly selected families from a hospital employee population (N=72) completed the Marlowe-Crowne Social Desirability Scale and the FAD. Coefficients between the tests were low and ranged from -.06 to -.19.
Therefore, Epstein et al. (1983) concluded that social desirability did not significantly alter FAD results.

Validity of the FAD is described by the authors (Epstein et al., 1983; Miller et al., 1985). The FAD demonstrates concurrent validity when compared with the Family Unit Inventory (FUI) (Van der Veen & Olson, 1981). Coefficients greater than .5 occurred for all FUI and FAD scale pairs except for Behavior Control and General Functioning (p < .01) (Miller et al., 1985).

The FAD also demonstrates discriminative validity as compared to clinicians' ratings of a sample (N=22) of healthy and unhealthy families at correlations of .64 and .67 respectively. However, the sample size of this study was small.

In a study of retired couples the FAD demonstrated predictive and concurrent validity with two other instruments. These were the Locke-Wallace Marital Satisfaction Scale (LWMS) and the Philadelphia Geriatric Morale Scale (PGMS) (Epstein et al., 1983). The FAD predicted 22% of the variance in morale for wives as measured by the PGMS. Separate regression analysis showed that the FAD predicted 28% of the variance of marital satisfaction for both husbands and wives on the LWMS. "Thus, the measures [FAD, PGMS, and the LWMS] were assessing related phenomena" (Miller et al., 1985). Construct validity is indicated for the FAD because it
"shows moderate relationships to other similar family tests" (Miller et al., 1985, p. 352).

Data Analysis

Descriptive statistics are primarily used to describe the variables under study. They may also be used to determine relationships among variables. In this study, the descriptions were of the self-concept of adolescents with CF and of the functioning within their families. The relationship of adolescent self-concept and family functioning was determined by using the Spearman rho correlation procedure.

Subjects' overall and mean OSIQ scale scores were compared to normal standard OSIQ scores and standard deviations for the appropriate sex and age as provided in the OSIQ manual (Offer et al., 1982). Subjects' mean scale scores were also compared to the scores of other groups of adolescents (normal, delinquent, oncologic and anorectic adolescents) with the use of plot graphs. These graphs can be used to represent the OSIQ scores of individuals or groups of adolescents. The comparisons between groups are obvious when data are represented in this fashion.

In this study, the mean family FAD scale scores were determined by summing the scores of all a family's respondents for that scale and dividing that number by the number of respondents in that family. To produce a mean FAD scale score for the sample, the mean
family FAD scale scores were averaged. These overall mean FAD scores were compared to the healthy cut-off scores for the FAD (Miller et al., 1985, p. 354).

The subjects' mean FAD scores were also compared to those of the randomized sample (N=45) of self-reportedly healthy families from a hospital employee population studied by Miller et al. (1985). As suggested by Miller et al. (1985), the FAD scores of families from the general population may be slightly lower than scores indicating healthy family functioning. Therefore, the FAD scores of the subjects of this study were compared to suggested healthy FAD scores and the scores of the random sample.

The subjects' overall mean OSIQ and FAD scales were correlated using the Spearman rho correlation procedure. FAD and OSIQ scale scores were ranked to show ordinal data and to investigate relationships among data. In the Spearman rho correlation procedure the intensity of relationships among data are indicated by coefficients from -1 to 1 which are expressed in decimal form. For example, the subjects' mean OSIQ scale score on Emotional Tone was paired with the families' mean FAD scale score on Communication resulting in a coefficient of -.76.

Statistical tests of relationship may be notoriously difficult to interpret (Diers, 1979). However, the scoring of the OSIQ and FAD somewhat eases
this difficulty. Both data collection instruments are scaled in a positive direction. "The higher the score the more of the variable there is" (Diers, 1979). Thus high scores on the OSIQ and FAD mean healthy development of a self-concept and family functioning respectively. Negative and positive correlations resulting from the Spearman rho correlation procedure in this study can therefore be accepted at face value.

Interpretation of correlations indicates more or less relationship between variables but does not indicate causality. "Of the three conditions necessary to make causal interpretations (concomitant variation, time order and random assignment) only concomitant variation is automatically part of association testing studies" (Diers, 1979). Only the association between variables is determined in studies using relationship-seeking methodologies.

Interpretation of the meaning of Spearman rho correlation coefficients also depends on the confidence levels for the data collection instruments. Confidence levels tend to be higher when instruments have been used on large populations, and when the sample size of the particular study is large (Anderson & Sclove, 1978). The OSIQ has been used on over 15,000 subjects and reports confidence levels of $p < .05$ for all of the OSIQ scales (Offer et al., 1981b, p. 159).
The FAD has not been tested on large populations. However, the FAD has been shown to statistically discriminate healthy from unhealthy families (N=316) in a study by Epstein et al. (1983, p. 178), and in a study (N=98) by Miller et al. (1985, p. 353). Unfortunately the FAD still has to be validated with other reputable family models and needs to be tested on larger populations before its results can be interpreted as confidently as those of the OSIQ. However, Anderson and Sclove (1978, p. 598) and Miller et al. (1985) suggest that correlation coefficients beyond .5 (positive or negative) for tests that measure similar constructs are evidence of some relationship between the variables under study.

Miller et al. (1985) used such a guideline when interpreting data from a study that compared the FAD with two other family questionnaires, the FUI and FACES II (p. 354). Similar constructs measured by the FAD and OSIQ are psychopathology, problem solving ability, and family relationships. Therefore for the reasons discussed above, correlation coefficients greater than [.5] are cautiously considered in this study.

Summary

The selection of volunteer subjects and protection of their rights were discussed. The descriptive correlational design of this mail-out study was described with emphasis on the data collection
instruments, the OSIQ and the FAD. Standard scores of the data collection instruments were discussed. The use of the Spearman rho correlation procedure on OSIQ and FAD scale pairs was described with emphasis on interpretation of resulting correlation coefficients.
CHAPTER 4
Results and Discussion

Overview

The following chapter describes this study's sample of 22 families with an adolescent with CF, and reports results of the OSIQ, FAD, and their Spearman rho correlation coefficients. A discussion of the results concludes this chapter.

Results

Description of the Sample

The sixty percent response rate of this study exceeded the expected rate for mail-out surveys by 10% (Polit & Hungler, 1983). Out of a total suitable population of 38 families with an adolescent with CF, 22 responded to the study. Fifteen female and seven male adolescents responded to the OSIQ and FAD, and 34 of their family members returned the PAD. Twenty of these were mothers, six were fathers and eight were male or female siblings. Although small, the size of the sample in this study favorably compared with those of other studies on this population (Landon et al., 1980; Steinhausen & Schindler, 1981). Usual sample sizes for this population range from 20 to 38 subjects. Unfortunately, the small size of the sample in this study limits confidence in interpretation of results.

These middle-class subjects were from intact, separated, divorced, and blended families of
various religious and ethnic backgrounds. Subjects were from urban, suburban, and rural areas of British Columbia. The demographic data from this sample were not useful in statistical analysis. However, these data were useful for describing the sample.

Table 1 shows the frequencies and percentages for responses to the questions on the Demographic Data Sheet. The Demographic Data Sheets were completed by one parent in each of the 22 families with one exception. An adolescent who was the sole respondent from her family answered the questions on one Demographic Data Sheet.
Table 1

Frequencies and Percentages of Family Responses
to the Demographic Data Sheet
(N=22)

<table>
<thead>
<tr>
<th>Family Role of Respondents (N=56)</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female Adolescent with CF aged 13-15 years</td>
<td>7</td>
<td>12.5</td>
</tr>
<tr>
<td>Female Adolescent with CF aged 16-19 years</td>
<td>8</td>
<td>14.3</td>
</tr>
<tr>
<td>Male Adolescent with CF aged 13-15 years</td>
<td>3</td>
<td>5.4</td>
</tr>
<tr>
<td>Male Adolescent with CF aged 16-19 years</td>
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<td>7.1</td>
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<tr>
<td>Mother</td>
<td>20</td>
<td>35.7</td>
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<tr>
<td>Father</td>
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<td>10.7</td>
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<tr>
<td>Female sibling</td>
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<td>5.4</td>
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<tr>
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<td>8.9</td>
</tr>
<tr>
<td></td>
<td><strong>56</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Religion of the family (N=22)

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roman Catholic</td>
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<td>32</td>
</tr>
<tr>
<td>Protestant</td>
<td>8</td>
<td>36</td>
</tr>
<tr>
<td>Other (unspecified)</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>None</td>
<td>5</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td><strong>22</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Marital status of parents from 22 families

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>15</td>
<td>68</td>
</tr>
<tr>
<td>Remarried</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Single</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Separated</td>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td>Divorced</td>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td><strong>22</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Table continues
Table 1

**Frequencies and Percentages of Family Responses**

to the Demographic Data Sheet

(N=22)

<table>
<thead>
<tr>
<th>Family Role</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ethnic origin of families</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Western European</td>
<td>6</td>
<td>27</td>
</tr>
<tr>
<td>Eastern European</td>
<td>1</td>
<td>4.5</td>
</tr>
<tr>
<td>N. American</td>
<td>12</td>
<td>55</td>
</tr>
<tr>
<td>Inuit</td>
<td>1</td>
<td>4.5</td>
</tr>
<tr>
<td>Other (unspecified)</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>22</td>
<td>100</td>
</tr>
</tbody>
</table>

| **Racial origin of families**|           |    |
| White                        | 20        | 91 |
| Asian                        | 1         | 4.5|
| Inuit                        | 1         | 4.5|
| **Total**                    | 22        | 100|

| **Range of income of families**|           |    |
| Less than $10,000             | 1         | 5  |
| $20,000 - $40,000             | 17        | 77 |
| Greater than $40,000          | 4         | 18 |
| **Total**                     | 22        | 100|
When data were interpreted it was important to remember the limitations of this small self-appointed sample and the limited confidence in standard FAD scores. The 22 adolescents with CF and their 34 family members who responded to this study were not representative of the overall population of adolescents with CF and their families. Perhaps only adolescents with well developed self-concepts and/or family members from normal functioning families were able to fulfill the requirements of this study. The limited confidence in standardized FAD scores was explained earlier in this chapter.

The Offer Self-Image Questionnaire

Subjects' OSIQ mean scale scores were above the standard mean of 50 on all scales except for the Body and Self-Image Scale. However, this scale score of 49.37 was not low enough to be considered unhealthy. The standardized OSIQ results for all scales were slightly negatively skewed except for Superior Adjustment, which was more symmetrically distributed. In addition, graphic plots of the subjects' mean scale scores were similar to graphs of the scores of normal adolescents as described from compiled OSIQ data (Offer et al., 1982). The mean scores of adolescent subjects on the OSIQ appear in Table 2.

The scale scores for four subjects were all above the standard mean of 50. Nineteen of the subjects had
nine of their scale scores above the standard mean. This sample of adolescents with CF had higher scores than the standard normative values for the OSIQ. For all 22 subjects, the mean Moral and Psychopathology Scale scores were beyond the first standard deviation (50+15) above the mean standard score.

Mean scale scores for the subjects were greater than .66 standard deviations above the standard mean on the Impulse Control, Emotional Tone, Vocational and Educational Goals, and Superior Adjustment Scales. The remaining mean scale scores were above 50 with one exception. The subjects' score was 49.37 on the Body and Self-Image Scale. However, the foregoing score was .04 of a standard deviation below the standard mean and it should not be considered to fall within the unhealthy range of OSIQ scores (Offer et al., 1981b).
Table 2

OSIQ Scores* for Adolescents With CF
(N=22)

<table>
<thead>
<tr>
<th>Scale</th>
<th>Mean Score</th>
<th>sd</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological Self</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impulse Control</td>
<td>64.00</td>
<td>10.58</td>
<td>43.09 - 83.63</td>
</tr>
<tr>
<td>Emotional Tone</td>
<td>60.90</td>
<td>15.89</td>
<td>28.84 - 82.79</td>
</tr>
<tr>
<td>Body and Self-Image</td>
<td>49.37</td>
<td>18.14</td>
<td>13.77 - 88.03</td>
</tr>
<tr>
<td>Social Self</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Morals</td>
<td>68.38</td>
<td>20.34</td>
<td>24.44 - 92.41</td>
</tr>
<tr>
<td>Sexual Self</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Attitudes</td>
<td>56.76</td>
<td>12.16</td>
<td>29.50 - 74.50</td>
</tr>
<tr>
<td>Familial Self</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family Attitudes</td>
<td>50.91</td>
<td>21.36</td>
<td>10.23 - 86.00</td>
</tr>
<tr>
<td>Coping Self</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mastery of the External World</td>
<td>58.79</td>
<td>13.81</td>
<td>21.37 - 76.54</td>
</tr>
<tr>
<td>Vocational and Educational Goals</td>
<td>63.80</td>
<td>11.57</td>
<td>39.67 - 82.11</td>
</tr>
<tr>
<td>Psychopathology</td>
<td>67.65</td>
<td>14.82</td>
<td>42.22 - 85.43</td>
</tr>
<tr>
<td>Superior Adjustment</td>
<td>60.12</td>
<td>12.38</td>
<td>39.44 - 88.31</td>
</tr>
<tr>
<td>Total Overall Average</td>
<td>59.90</td>
<td>11.16</td>
<td>37.49 - 75.97</td>
</tr>
</tbody>
</table>

* Scores >50 indicate a more positive self-concept while scores <50 indicate a more negative self-concept.
When scores are further examined according to age and sex-appropriate reference groups, it is apparent that younger male and female adolescents (aged 13-15 years) reported more difficulties with the development of self-concept. These younger adolescents had low scores on the Body and Self-Image Scales. The mean scores for age and sex-appropriate reference groups are shown in Table 3. Male adolescents in the younger age group were .34 of a standard deviation below the standard mean on the Body and Self-Image Scale and female adolescents of corresponding age were .48 of a standard deviation below the mean. Male adolescents between 15-19 years had a low score on this scale (46.26). However, the 15-19 year old males' score was only .25 of a standard deviation below the standard mean score considered to be indicative of normalcy. Female adolescents aged 15-19 years had a high score on the scale which was .56 of a standard deviation above the standard mean.
Table 3  
Mean OSIQ Scores* for Adolescents with CF Classified by Age and Sex  
(N=22)  

<table>
<thead>
<tr>
<th>Scale</th>
<th>Females (13-15) (n=7)</th>
<th>Females (16-19) (n=8)</th>
<th>Males (13-15) (n=3)</th>
<th>Males (16-19) (n=4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological Self</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impulse Control</td>
<td>62.27</td>
<td>62.23</td>
<td>69.99</td>
<td>66.11</td>
</tr>
<tr>
<td>Emotional Tone</td>
<td>56.78</td>
<td>57.60</td>
<td>68.68</td>
<td>68.86</td>
</tr>
<tr>
<td>Body and Self-Image</td>
<td>42.76</td>
<td>58.39</td>
<td>44.89</td>
<td>46.25</td>
</tr>
<tr>
<td>Social Self</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Relationships</td>
<td>61.17</td>
<td>47.54</td>
<td>64.26</td>
<td>70.00</td>
</tr>
<tr>
<td>Morals</td>
<td>68.37</td>
<td>61.75</td>
<td>83.79</td>
<td>70.12</td>
</tr>
<tr>
<td>Familial Self</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family Attitudes</td>
<td>58.17</td>
<td>55.75</td>
<td>52.83</td>
<td>59.2</td>
</tr>
<tr>
<td>Sexual Self</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual Attitudes</td>
<td>40.77</td>
<td>58.60</td>
<td>41.88</td>
<td>60.08</td>
</tr>
<tr>
<td>Coping Self</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mastery of the</td>
<td>61.85</td>
<td>58.52</td>
<td>50.36</td>
<td>60.33</td>
</tr>
<tr>
<td>External World</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vocational and</td>
<td>62.45</td>
<td>62.16</td>
<td>60.98</td>
<td>71.56</td>
</tr>
<tr>
<td>Educational Goals</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychopathology</td>
<td>69.13</td>
<td>65.76</td>
<td>65.85</td>
<td>70.25</td>
</tr>
<tr>
<td>Superior Adjustment</td>
<td>62.36</td>
<td>55.03</td>
<td>59.70</td>
<td>66.69</td>
</tr>
<tr>
<td>Total Score</td>
<td>58.61</td>
<td>58.38</td>
<td>60.08</td>
<td>62.75</td>
</tr>
</tbody>
</table>

* Scores >50 indicate a more positive self-concept while scores <50 indicate a more negative self-concept.
Male and female adolescents aged 13-15 years also had low mean scores on the Sexual Attitudes Scale. The mean score of the male adolescents was .54 of a standard deviation below the standard mean; the score of the female adolescents in the same age group was .62 of a standard deviation below the mean. Male and female adolescents aged 15-19 years had higher scores on the Sexual Attitudes Scale with mean scale scores .67 and .57 respectively of a standard deviation above the standard mean.

Even when the low mean scale scores were considered all age and sex-appropriate reference groups of subjects had total OSIQ scores well above the standard mean of 50. Standard deviations for the reference groups ranged from .56 to .85 of a standard deviation above the standard mean OSIQ total score.

As indicated, the eleven OSIQ scales are collapsed into five Self Systems. The mean scores for the five Selves are tabulated in Table 4. Mean Self scores of the subjects were above the standard mean of 50 with two exceptions. Female and male adolescents aged 13-15 years had Sexual Self scores below the standard mean. The low scores of subjects (except females aged 16-19 years) on the Body and Self-Image Scale, a component of the Psychological Self, did not cause the subjects' mean score on the Psychological Self to drop below the standard mean.
Table 4
Mean Scores* for the Five OSIQ Selves Classified by Age and Sex (N=22)

<table>
<thead>
<tr>
<th>Self</th>
<th>Females (13-15) (n=7)</th>
<th>Females (16-19) (n=8)</th>
<th>Males (13-15) (n=3)</th>
<th>Males (16-19) (n=4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological</td>
<td>53.93</td>
<td>59.41</td>
<td>61.18</td>
<td>60.40</td>
</tr>
<tr>
<td>Social</td>
<td>62.57</td>
<td>55.01</td>
<td>66.96</td>
<td>66.45</td>
</tr>
<tr>
<td>Sexual</td>
<td>40.75</td>
<td>58.60</td>
<td>41.88</td>
<td>60.08</td>
</tr>
<tr>
<td>Familial</td>
<td>61.85</td>
<td>58.52</td>
<td>50.36</td>
<td>60.33</td>
</tr>
<tr>
<td>Coping</td>
<td>64.65</td>
<td>60.97</td>
<td>62.18</td>
<td>69.50</td>
</tr>
</tbody>
</table>

* Scores >50 indicate a more positive self-concept while scores <50 indicate a more negative self-concept.

The Family Assessment Device

The FAD scores of the families of this study were positively skewed (long tail to the right) with one exception. The Affective Involvement Scale scores were symmetrically distributed. Mean scores of the families in this study were similar to those of the random sample (N=45) investigated by Miller et al. (1985) as described in Chapter 3. Miller et al. suggest that researchers should use the scores for their studies "for specialized usages such as a screening device or for the identification of normal families" (Miller et al., 1985, p. 384). Miller et al. (1985) emphasize that the general population of families contains some families with difficulties in family functioning. According to
Miller et al. (1985), researchers should compare their subjects' FAD mean scores to the scores of the Miller (1985) sample and suggested healthy cutoff scores for the FAD (Epstein et al., 1983). Therefore, the mean FAD scale scores of subjects, the scores of Miller et al.'s (1985) random sample, and suggested healthy cut-off scores for the FAD are tabulated in Table 5.
Table 5

Overall Mean FAD Scale Scores, Scores of a Random Sample* and Suggested Healthy Cutoff Scores** for the FAD

(N=22)

<table>
<thead>
<tr>
<th>Fad scale</th>
<th>Subjects (N=22)</th>
<th>Scores of Miller's Random Sample* (N=45)</th>
<th>Suggested Healthy Cutoff Scores** (N=803)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem Solving</td>
<td>1.79 .41</td>
<td>1.87 .38</td>
<td>2.10</td>
</tr>
<tr>
<td>Communication</td>
<td>1.90 .51</td>
<td>2.02 .46</td>
<td>2.10</td>
</tr>
<tr>
<td>Roles</td>
<td>2.21 .35</td>
<td>2.05 .31</td>
<td>2.10</td>
</tr>
<tr>
<td>Affective Responsiveness</td>
<td>1.82 .52</td>
<td>1.89 .56</td>
<td>2.00</td>
</tr>
<tr>
<td>Affective Involvement</td>
<td>1.85 .49</td>
<td>1.78 .40</td>
<td>2.00</td>
</tr>
<tr>
<td>Behavior Control</td>
<td>1.72 .25</td>
<td>1.75 .35</td>
<td>1.80</td>
</tr>
<tr>
<td>General Functioning</td>
<td>1.75 .54</td>
<td>1.71 .45</td>
<td>1.80</td>
</tr>
</tbody>
</table>

* Miller et al. (1985) - The authors suggest these scores as an alternative to the Healthy Cutoff Scores. The authors assume that the general population as represented by their random sample would contain some families with some difficulties in family functioning.

** Epstein et al. (1983) - The authors compiled Suggested Healthy Cutoff Scores as a result of several studies (N=803).
Many of the FAD scale scores of this study and those of the random sample were below the scores considered indicative of healthy family functioning (suggested healthy cutoff scores) (Epstein et al., 1983). This means that the mean FAD scale scores of subjects were lower than scores indicative of healthy family functioning. However, subjects' scores were similar to the scores of the general population as described by Miller et al. (1985) with three exceptions. The subjects' mean scores on the Problem Solving and Communication Scales were lower; the subjects' mean score on the Roles Scale was higher.

When compared to suggested healthy scores the mean scores of subjects were lower except on the Roles Scale. The Behavior Control and General Functioning Scale scores were near the suggested healthy cutoff scores. However, the remaining four scale mean scores of the subjects (Problem Solving, Communication, Affective Responsiveness, and Affective Involvement) were far below the healthy cutoff scores. This means the subjects reported less than healthy family functioning.

The Relationship of Self-Concept and Family Functioning

The subjects' overall mean OSIQ and FAD scale scores had Spearman rho coefficients ranging from .34 to -.76. The strongest negatively and positively correlated OSIQ and FAD mean scales are provided in Table 6.
Table 6

Spearman rho Correlation Coefficients of Selected FAD and OSIQ Scores
(N=22)

<table>
<thead>
<tr>
<th>OSIQ Scale</th>
<th>FAD Scale</th>
<th>Coefficient r</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional Tone</td>
<td>Communication</td>
<td>-.76</td>
</tr>
<tr>
<td>Emotional Tone</td>
<td>Affective Involvement</td>
<td>-.70</td>
</tr>
<tr>
<td>Psychopathology</td>
<td>Affective Involvement</td>
<td>-.72</td>
</tr>
<tr>
<td>Impulse Control</td>
<td>Affective Involvement</td>
<td>-.70</td>
</tr>
<tr>
<td>Mastery of the External World</td>
<td>Problem Solving</td>
<td>-.74</td>
</tr>
<tr>
<td>Family Attitudes</td>
<td>Behavior Control</td>
<td>.34</td>
</tr>
</tbody>
</table>

Negative correlations appeared with many of the FAD - OSIQ scale pairs. The strongest negatively correlated pairs were: Emotional Tone and Communication; Mastery of the External World and Problem Solving; Psychopathology and Affective Involvement; Emotional Tone and Affective Involvement; and Impulse Control and Affective Involvement. The highest positive correlation coefficient was .34 for the scale pair of Family Attitudes and Behavior Control. However, the foregoing positive correlation coefficient was too low to be statistically significant.
The above negative correlation coefficients resulted when the adolescents' respective higher mean OSIQ scale scores were paired with their families' low mean FAD Scale scores. For example, the mean score on Emotional Tone (60.90) (10.9 above the standard mean) was paired with low mean scores on two FAD Scales. These were Communication (1.90) and Affective Involvement (1.85) which were respectively .2 and .15 below suggested healthy cutoff scores as suggested by Epstein et al. (1983). The adolescents' higher OSIQ Psychopathology and Impulse Control Scales (respectively 17.65 and 14.0 above the standard mean) were also paired with the families' lower mean score on the Affective Involvement Scale of the FAD. Also, the adolescents' mean score on the Mastery of the External World Scale of the OSIQ (8.79 above the standard mean) when paired with the families' mean score on the Problem Solving Scale of the FAD (.21 below the suggested healthy cutoff scores (Epstein et al., 1983), resulted in a negative correlation coefficient.

In contrast, the highest positive correlation coefficient resulted from the pairing of the adolescents' mean score on the Family Attitudes Scale of the OSIQ and the Behavior Control Scale of the FAD. The foregoing mean scores of subjects respectively were 0.91
and 0.08 above the scores suggested for healthy functioning by the authors of the data collection instruments (Epstein et al., 1983; Offer et al., 1982). Also, the correlation coefficient was .34, which is not strong statistical evidence for a relationship.

The biasing effect of adolescent subjects responding to both data collection instruments was considered. Therefore, the Spearman rho correlation procedure was carried out with and without the adolescents' FAD data. Results indicated that this factor did not influence findings. Therefore, the initial Spearman coefficients as described in Table 6 were accepted.

Discussion

The Offer Self-Image Questionnaire

The self-concept scores of the subjects were generally high. Most mean OSIQ scale scores were higher than scores suggested for adolescents with well developed self-concepts. However, subjects indicated that their self-concepts were less well developed in two areas. The adolescents, except for the females aged 16-19 years, reported concerns about Body and Self-Image; adolescents aged 13-15 years had concerns about Sexual Attitudes.

These two areas of concern do not mean that subjects had poorly developed self-concepts. The OSIQ assumes normal adolescents display similar variations in
OISIQ scores (Offer et al., 1981b). Therefore, though some subjects had concerns in two areas of the self-concept, subjects on the whole reported above average self-concept development. The characteristics associated with a well developed self-concept were discussed in the description of the OISIQ in Chapter 3. According to analysis of subjects' OISIQ item responses which range from "Describes me very well" to "Does not describe me at all", subjects reported that these characteristics described them well.

The subjects' concerns about Body and Self-Image were not extreme. As indicated, the females aged 16-19 years did not report concerns on this scale. The subjects' overall score on the scale was only .63 below the standard mean of 50. Furthermore, a trend toward better Body and Self-Image scores was noted for the older adolescents. The 16-19 year old females score was above 50 and the 16-19 year old males were only 3.75 below the standard mean. This may indicate that adolescents adapt to their physical difficulties as they get older.

Landon et al. (1980) and Lewiston (1980) report that adolescents with CF had difficulties with development of the body and self-image area of the self-concept as measured with the OISIQ. They attribute this to the unusual physical challenges the adolescents face, namely growth delays, difficulties with sexual
maturation, low weight, respiratory and gastrointestinal difficulties, and life prolonging treatments. Landon et al. (1980) and Lewiston (1980) say that the body and self-image concerns of the adolescents are a sign of realistic concern about poor health. They recommend that health care professionals should support the development of a self-concept in this population by giving them practical advice on how to cope with physical difficulties, and by providing education about adolescent growth and development, nutrition, and sexuality.

Smith et al. (1983) also remark on the physical difficulties that adolescents with CF face in development of a self-concept. Smith et al. report that subjects' healthy self-concept scores as measured with the TSC were related to perceptions of positive social support including that from health care professionals. Subjects from the Smith sample reported that the services of the adolescent clinic helped them. Services included practical advice about coping with physical difficulties, education about growth and development, provision of regular medical appointments, and relaxation techniques such as biofeedback, which helped the adolescents to cope with the difficulties of CF. Subjects of this study received advice about coping with physical difficulties and regular medical appointments and advice from a clinical nurse specialist from the
Physical difficulties were cited by Boyle et al. (1976), Daniel (1977), Offer et al. (1981b), and Travis (1976) as a major reason for difficulties encountered by this population in the development of a self-concept. The foregoing authors claim that adolescents cannot cope with the physical difficulties of CF. However, according to Lewiston (1980), the authors focus too much on the problems of the adolescents without accounting for their adaptive capacities.

The physical concerns of the subjects of this study appear to affect their Sexual Attitudes as evaluated by the OSIQ. According to Offer et al. (1981b), whose subjects also had concerns about sexuality, these findings appear reasonable when the sexual maturation difficulties of this population are considered. Adolescents with CF are often thin, pale, may have obvious breathing problems, and may even be sterile. They may not look like healthy adolescents. This may prevent them from fitting in easily with their peers who place a priority on emerging sexual attractiveness (Tonkin, 1982). Therefore, Lewiston (1980) emphasizes the importance of vigorous medical treatment of low weight for this population (including the use of total parenteral nutrition). Total parenteral nutrition helps in absorption of caloric intake away from the adolescent’s vulnerable
gastrointestinal system. Adolescents can then gain weight including body fat which stimulates sexual maturation, especially in females. Thus, the adolescents can look more normal and acquire secondary sex characteristics. Another benefit may be that the adolescents will look more like their peers.

Lewiston (1980) and Offer et al. (1981b) recommend that opportunities for education and counselling regarding sexuality should be made available to this population. According to Offer et al. (1981b), supportive interventions by health care professionals can promote the development of the Sexual Self in adolescents with CF.

Smith et al. (1983) also found that subjects' self-concept scores were related to social support such as that from health care professionals. Health care services for the Smith sample included an adolescent clinic, regular medical appointments, inpatient and outpatient education and counselling by a clinical nurse specialist, and contact with an adolescent support group if desired. The adolescents of the Smith et al. sample had a multidisciplinary team of health care professionals trying to help the adolescents with many aspects of their lives.

Such services and more were provided to the subjects of this study by the staff of the BCCH CF Clinic. Additional services included: financial
assistance for medications, treatment aids, and trips to clinic; an inpatient and outpatient liaison with the CF Clinic staff; genetic, nutritional, and physiotherapy counselling; a CF newsletter, and easy access to expert consultants from many fields through the tertiary care facilities of BCCH. These services help the adolescents with practical concerns and promotion of many aspects of their health. The healthy self-concept scores of the adolescents of this study may have been influenced by the social support they received from the CF Clinic and BCCH.

**The Family Assessment Device**

The mean FAD scores of the families of this study were less than scores suggested for healthy functioning families (Suggested Healthy Cutoff Scores) as recommended by Epstein et al. (1983), with one exception. The participating families reported high scores on the Roles Scale. Three of the families' mean FAD scale scores were similar to those expected of the general population according to Miller et al.'s (1985) analysis of scores from a random sample of reportedly healthy families. Nineteen families had lower scores than the Miller sample.

A score above the healthy score on the Roles Scale suggests that the families' patterns of behavior are well organized so that family members fulfill their functions. As described by Daniel (1977); Rose & Thomas
families with a child with CF often expend so much energy on the necessities of life that other areas of family functioning such as communication and feelings of attachment to each other are negatively affected. Therefore, a family which appears well organized and competent may not necessarily have healthy family functioning. This may be an important point to remember in assessment of the family functioning of this population.

The General Functioning and Behavior Control Scale scores of the subjects were near the suggested healthy cutoff scores recommended for healthy family functioning by Epstein et al. (1983). Respectively, these findings indicate that the families were cohesive and were flexible in the control of behavior (e.g., discipline). This finding of family flexibility was encouraging. According to the report of Docter (1973), rigid families may adhere so strictly to the control of the disease that the personality of the adolescent may be damaged. Since the families of this study reported scores indicative of flexible Behavior Control and cohesive General Functioning they were unlikely to be so strict with treatment that the adolescents' other needs would be neglected.

The families' low mean scores on four scales of the FAD are a concern. Families' scores on the Scales of Problem Solving, Communication, Affective
Responsiveness and Affective Involvement were below the suggested healthy cutoff scores (Epstein et al. 1983) and scores thought to be representative of the general population of families (Miller et al., 1985).

Problem Solving refers to the families' ability to resolve instrumental and affective problems. As indicated in the description of the FAD in Chapter 3, the FAD focuses on aspects of family functioning related to the members' well-being and emotional health. Families with healthy functioning efficiently solve problems. The scores of the families of this study were below scores of healthy functioning families and those thought to indicate the family functioning of the general population. Turk (1964) and Travis (1976) suggest that families under stress focus so much energy on the necessities of life that they have little left for problem solving, family fun, and adult activities. Such may be the case with the families of this study. Or perhaps the families of adolescents with CF have so many problems to face that they are unable to resolve many of them.

The low mean Communication score of the families indicate that the families likely had unclear indirect verbal communication. When such communication occurs, it is often not well expressed or perceived. Thus, misunderstandings are possible, and sorting out feelings and problems may be difficult. Communication is a vital
aspect of family functioning. Difficulties with communication may impact significantly on other areas. Because of this Barnard (1978), Boyle et al. (1976), Rose and Thomas (1987), and Turk (1964) recommend that health care professionals should promote family communication for the benefit of family functioning and for the well being of the adolescent. These authors claim that clear communication is necessary within the family and between the family and health care professionals. Only then can family functioning, the well-being of family members, and the health care of chronically ill children be maintained.

The families in this study reported a low score on the FAD Scale of Affective Responsiveness. This score was .07 below the score of Miller et al.'s (1985) random sample and the suggested healthy cut-off scores for the scale. (Epstein et al., 1983). This indicates that the family members do not respond appropriately to each other. The families reported that they were not all that supportive of the feelings of members. Such a situation could be difficult when a family member has feelings such as anxiety which other family members may not respond to appropriately. The Affective Responsiveness of the family may also be hindered if members do not openly communicate their feelings. Such may already be the case for the families of this sample.

Finally, the Affective Involvement score of the
subjects was lower than the suggested healthy cut-off score but higher than the score of the random sample. The families of this study reported they either were under or over involved with each other. According to Epstein et al. (1983) disturbed families show a lack of too much involvement. It is possible that the families of this study were more involved with each other for the treatment oriented domains of Roles, Behavior Control, and General Functioning but not for the more social domains of Problem Solving, Communication, or Affective Responsiveness. Such a conclusion reflects Turk's (1964) description of families with an adolescent with CF. Turk says the families were isolated in their feelings for each other due to problems in their communication patterns which may have stemmed from fatigue resulting from hectic treatment regimes.

Though FAD scores of the families were not far below those described by Miller et al. (1985) for the general population, their scores are of concern for two reasons. Families with a chronically ill member may need to function better than healthy families to ensure their needs are met (Bishop et al., 1986b); and family functioning is thought to have an important effect on the self-concept development of adolescents (Bishop et al., 1984; Offer et al., 1982).

The families of this study did not report scores indicative of better functioning than the general
population. Therefore, the families may not have been able to function well enough to fulfill all of the family's and family members' needs. Exactly what influenced the FAD scores in a low direction is not clear. However, a major factor was that all of the families included an adolescent with CF. Living with CF is stressful for many families and according to Steinhausen and Schindler (1981) and Travis (1976), family functioning of this population is negatively affected by daily stressful experiences. The next concern about subjects' reported difficulties in family functioning and the possible negative impact of this on the self-concept development of adolescents with CF is discussed in the last section of this chapter.

The Relationship Of Self-Concept and Family Functioning

Contrary to literature, family functioning in this sample appeared to be negatively related to the development of adolescent self-concept (DeWet & Cwyes, 1984; Lewis & Khaw, 1982; Offer et al., 1981b). Rather than family functioning being the most important determinant of self-concept as Offer et al. suggest, it was negatively related to the adolescents' high self-concept scores. The Affective Involvement Scale of the FAD was represented in three of the five negative Spearman rho correlation coefficients. Communication and Problem Solving are the remaining FAD scales represented in the negative correlation coefficients.
As previously discussed, the negative coefficients noted in Table 6 appeared reasonable because the two data collection instruments share the same directionality. Furthermore, low mean scores of families on the FAD scales were related to high mean scores of adolescents on the OSIQ scales in five Spearman rho correlation coefficients. These data indicate that a negative relationship exists between some of the variables of family functioning and adolescent self-concept.

Developmental theorists adamantly claim that healthy family functioning is necessary for the healthy development of self-concept (Erikson, 1968; Freud, 1905; Offer et al., 1981b). Why the adolescents reported scores indicative of a well developed self-concept when their family functioning was reportedly decreased is not clear. Smith et al. (1983) claim that the services provided to the adolescents by a multidisciplinary team of health care professionals may bolster the development of self-concept in adolescents with CF. Perhaps the adolescents of this study perceived help from other social supports from the multidisciplinary CF Clinic which may have helped in adolescents' development of self-concept.
Summary

The sample of this study was described. Results of the OSIQ, FAD, and their Spearman rho correlation coefficients were presented and discussed. The adolescents with CF in this study reported well developed self-concepts and their families reported less than healthy family functioning.
CHAPTER 5

Summary, Conclusions, Implications, and Recommendations

Summary

The relationship between family functioning and the development of a self-concept in adolescents with CF was investigated with a descriptive correlational study. Two data collection instruments were mailed to a convenience sample of 38 families. Self-appointed adolescent subjects with CF (N=22) from urban, suburban, and rural areas of B.C. and some of their family members (N=34) responded to the study. The adolescents completed a self-concept questionnaire (OSIQ) and they and their responding family members completed a family functioning questionnaire (FAD). A Demographic Data Sheet was completed by one parent in each family. Data collection instruments were returned to the researcher by mail.

The adolescents' mean scale, "Self", and total OSIQ scores were compared to standard reference group means and standard deviations. OSIQ scores were reviewed to note individual differences. Families' mean scale scores on the FAD were compared to those of a random sample thought to be similar to the general population (Miller et al., 1985) and to the suggested healthy cut-off scores for the FAD (Epstein et al., 1983). The Spearman rho correlation procedure was used to compare all possible scale pairs of OSIQ and FAD.
The adolescents described themselves as having well-developed self-concepts with two exceptions. Females aged 13-15 years and all male subjects reported concerns about Body and Self-Image with mean scores below the standard mean of 50 for the OSIQ. Female and male adolescents aged 13-15 years had concerns about sexuality as measured by the Sexual Attitudes Scale of the Sexual Self. The nine remaining OSIQ mean scale scores of the adolescents ranged from .06 to 1.23 standard deviations (SD=15) above the standard mean.

Family functioning results were similar to the scores of randomly selected reportedly healthy families on the Behavior Control and General Functioning Scales of the FAD (Miller et al., 1985). The sample had slightly lower scores than those suggested for healthy functioning families (Epstein et al., 1983) on the FAD scales of Problem Solving, Communication, Affective Responsiveness, and Affective Involvement. The families' score on the Roles Scale was higher than scores suggested by authors of the FAD (Epstein, 1983; Miller, 1985). Roles were reportedly well defined in these families, possibly as a result of their dealings with the demands of treatment regimes. However, though families may have well defined roles, they may have difficulties with some areas of family functioning such as, communication and in feeling and responding.
emotionally with each other.

In this study, family functioning was negatively related to the development of self-concept in adolescents with CF. Five negative coefficients resulted from the use of the Spearman rho correlation procedure on FAD and OSIQ scale pairs. Respectively, the Affective Involvement of the family was negatively related to the adolescents' lack of Psychopathology, healthy Emotional Tone, and ability to have Impulse Control. The Problem Solving ability of the family was negatively related to the adolescents' sense of Mastery of the External World. Communication within the family was negatively related to the healthy Emotional Tone of the adolescent.

Reasons for these negative findings are not clear, especially since developmental theorists claim that healthy functioning families are the major determinant of a well-developed adolescent self-concept. The subjects of this study reported less than healthy family functioning. However, the supportive role of the CF Clinic staff may promote the development of a self-concept in adolescents with CF as described by Smith et al. (1983). The clinic staff have regular contact with the adolescents and promote their health with a multidisciplinary approach. The staff know the adolescents and some of their family members. Staff are often involved in resolution of difficulties of
treatment and of family upsets, thus providing a social support for adolescents and their families.

Conclusions

The following conclusions are based on the findings of this study.

1. Adolescents with CF have well developed self-concepts in nine of the eleven areas measured by the OSIQ.

2. Adolescents with CF, except for females aged 16 to 19 years, have concerns about Body and Self-Image as evaluated by the OSIQ.

3. Male and female adolescents aged 13 to 15 years have concerns affecting their Sexual Selves.

4. Families of adolescents with CF have less than healthy functioning as assessed by the FAD in the domains of Problem Solving, Communication, Affective Responsiveness, and Affective Involvement.

5. Families of adolescents with CF have better than average Role functioning as evaluated by the FAD.

6. Family functioning and development of adolescent self-concept are negatively related in the respective FAD/OSIQ domains of Communication and Emotional Tone, Affective Involvement and Emotional Tone, Affective Involvement and Psychopathology, Affective Involvement and Impulse Control, and Problem Solving and Mastery of the External World.
Implications for Nursing

Nurses have frequent contact with adolescents with CF and some of their family members during clinic visits and hospital admissions. These nurses should be aware that adolescents with CF may have concerns about their body and self-image. Younger adolescents of both sexes may have concerns about sexuality.

Nursing assessments of adolescents with CF should obtain data about the adolescent's self-concept through interviews and the use of self-concept questionnaires. In assessment, nurses should watch for behaviors such as withdrawal, poor eye contact, and negative comments about themselves that indicate the adolescent has difficulties regarding body and so that even self-image and sexuality so that even quiet adolescents can obtain the support they need.

Nurses may be able to help adolescents with CF to develop coping behaviors to deal with difficulties related to CF and its treatment. For example, nurses can teach them about adolescent growth and development and sexuality. Adolescents may then be more aware that many of the changes that they experience are normal. Adolescents who are very concerned about their appearance, low weight, and breathing difficulties might benefit from nurses' recommendations on how to disguise these problems so that they can blend in with their peer group.
The adolescents of this study might benefit from sharing their concerns about body and self-image and sexuality. Nurses could promote the formation of support groups for adolescents with CF which could be led by nurses skilled in dealing with adolescents with CF. Guided discussions among adolescents with CF may help the adolescents to gain emotional and practical support from each other, such as ways that they deal with the problems of CF and the demands of treatment.

Nurses who work with families of adolescents with CF should be aware that the families may experience decreased functioning. These families experience communication difficulties, inability to relieve stress, and family members' inability to feel involved with and respond appropriately to each other. Nurses should therefore assess these areas of family functioning. If ongoing or episodic difficulties in family functioning appear, these should be investigated. Nurses may collaborate with other health professionals in contact with these families regarding further assessments, interventions, and referrals.

Nurses should recommend that parents of adolescents with CF might benefit from sharing
information and emotional support in groups for parents run by the CF Association's local chapters in B.C. Support for parents could include education about communication and problem-solving skills. Families who have difficulty with affective responsiveness could perhaps benefit from family counselling. Also, nurses can educate parents about adolescent growth and development while focusing on the body and self-image. Perhaps if parents are aware of their adolescents' concerns they will be better able to help their adolescents.

Availability of the clinical nurse specialist may be of assistance to adolescents with CF and their families. In addition to being an ongoing support, the clinical nurse specialist provides education for the adolescents and their families. This nurse has continued contact with this population and therefore knows the patterns of interaction and the personalities of the family members. Therefore, the clinical nurse specialist is in a position to provide ongoing emotional, physical, and educational support for adolescents with CF and their families.

**Recommendations for Further Research**

The size of the sample in this study limits generalization of results, particularly regarding the well developed self-concept and diminished family functioning of this population. The study should be
replicated to validate the foregoing. Larger samples could be obtained in multi-center research projects. For example, the CF clinics in large Canadian cities could pool their populations of adolescents with CF and their families to provide a larger sample than the one available for this study.

Also, response rates could be increased by personal contact rather than a mailed survey for the collection of data. Probably a larger number of subjects would participate if it is less complicated to complete and return data collection instruments. This would be beneficial for two reasons. First, self-report questionnaires have an inherent relationship to social desirability (Wylie, 1979). Complete anonymity could be guaranteed if subjects' names were not required for follow-up. Guaranteed anonymity could improve the quality of responses to data collection instruments. This might occur because subjects likely would be less affected by a wish for social desirability and would disclose more truthful and complete information. Second, other methodologies from the qualitative approach such as structured interviews might round out results from self-report questionnaires.

Further qualitative investigation of the body and self-image of adolescents with CF is warranted because self-report measures may omit salient aspects of the individual's phenomenal environment (Wylie, 1979). More
knowledge about the body and self-image and sexuality perceptions of adolescents with CF would provide further direction for nursing practice. Also, reasons for the variance in OSIQ scores among age and sex appropriate groups could be addressed by further qualitative and quantitative studies. Future studies could compare self-concept scores of adolescents with CF to other groups of chronically ill adolescents to determine similarities or differences in their self-concept. If chronically ill adolescents routinely describe concerns about their body and self-image and sexuality that are similar to those of this sample, this knowledge would provide further direction for nursing practice.

Longitudinal and/or cross sectional studies of families with children with CF of various ages might determine whether family functioning varies with the age of the child with CF. A qualitative study might be appropriate to determine families' perceptions of how they function when they have an adolescent with CF. Qualitative and quantitative investigation of family problem-solving, communication, and affective involvement is also warranted.
References


Bishop, D., Green, S., Cantor, M., & Torresin, L. (in press). Family functioning and rheumatoid arthritis. *Archives of Rehabilitation*.


Appendix A

Letter of Information

Families and Teenagers with CF

My name is Isabelle Mac Leod, R.N. My Master’s thesis for the University of British Columbia investigates how teenagers and their families cope with CF. My keen interest in this topic began while I was head nurse on the adolescent unit at B.C. Children’s Hospital (BCCH). Much research now focuses on CF and I hope to add valuable information to this effort. This study was approved by the CF Clinic and BCCH and is funded by the Canadian Lung Association.

Teenagers and parents residing together in your family should complete the Family Assessment Device separately, anonymously and honestly. One parent should fill out the Demographic Data Sheet. The teenager with CF should confidentially complete the Offer Self-Image Questionnaire. All of the responses should be shared only with this researcher. Please complete all identifying information and answer all the questions on the questionnaires.

All questionnaires will be seen only by this researcher and will be coded and grouped for analysis. Confidentiality is guaranteed. You may receive a summary of the results if you like. You are under no obligation to participate and your decision will not affect your present or future health care in any way. The findings may improve the quality of health care for adolescents with CF and their families. Please read and sign the consent forms if you wish to participate and return all materials to me in the stamped envelope provided.

Sincere thanks,

Isabelle Mac Leod, R.N., B.N.
Parents' Consent Form

I have read the letter of information about the study "Families and Teenagers with CF". I understand the purpose of this study and what is required of me as a participant.

__________________________

__________________________
Parent(s) signature

__________________________
Date
Teenager's Consent Form

I have read the letter of information describing the study "Families and Teenagers with CF". I understand what is required of me as a participant, that my information will be kept strictly confidential and that I am free to withdraw without question at any time. I understand that my decision regarding participation in the study will not jeopardize my health care in any way.

_________________________

Teenager's signature

_________________________

Date
Appendix B

THE OFFER SELF-IMAGE
QUESTIONNAIRE FOR ADOLESCENTS
SECOND EDITION

(FEMALES)
INTRODUCTION TO THE OFFER SELF-IMAGE QUESTIONNAIRE

THIS QUESTIONNAIRE IS USED FOR SCIENTIFIC PURPOSES. THERE ARE NO RIGHT OR WRONG ANSWERS.

AFTER CAREFULLY READING EACH OF THE STATEMENTS ON THE FOLLOWING PAGES, PLEASE CIRCLE THE NUMBER ON THE ANSWER SHEET THAT INDICATES HOW WELL THE ITEM DESCRIBES YOU: THE NUMBERS CORRESPOND WITH CATEGORIES THAT RANGE FROM "DESCRIBES ME VERY WELL" (1) TO "DOES NOT DESCRIBE ME AT ALL" (6). PLEASE CIRCLE ONLY ONE CHOICE FOR EACH STATEMENT.

EXAMPLE

STATEMENT: I AM AN ADOLESCENT.

CHOICE OF ANSWERS:

1—DESCRIBES ME VERY WELL  3—DESCRIBES ME FAIRLY WELL  5—DOES NOT REALLY DESCRIBE ME
2—DESCRIBES ME WELL  4—DOES NOT QUITE DESCRIBE ME  6—DOES NOT DESCRIBE ME AT ALL

RESPONSE: 1 2 3 4 5 6

PLEASE RESPOND TO ALL ITEMS.

THANK YOU

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DANIEL OFFER, M.D
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1—DESCRIBES ME VERY WELL
2—DESCRIBES ME WELL
3—DESCRIBES ME FAIRLY WELL
4—DOES NOT QUITE DESCRIBE ME
5—DOES NOT REALLY DESCRIBE ME
6—DOES NOT DESCRIBE ME AT ALL

1. I CARRY MANY GRUDGES. 1___
2. WHEN I AM WITH PEOPLE I AM AFRAID THAT SOMEONE WILL MAKE FUN OF ME. 2___
3. MOST OF THE TIME I THINK THAT THE WORLD IS AN EXCITING PLACE TO LIVE IN. 3___
4. I THINK THAT I WILL BE A SOURCE OF PRIDE TO MY PARENTS IN THE FUTURE. 4___
5. I WOULD NOT HURT SOMEONE JUST FOR THE "HECK OF IT." 5___
6. THE RECENT CHANGES IN MY BODY HAVE GIVEN ME SOME SATISFACTION. 6___
7. I AM GOING TO DEVOTE MY LIFE TO HELPING OTHERS. 7___
8. "LOSE MY HEAD" EASILY. 8___
9. MY PARENTS ARE ALMOST ALWAYS ON THE SIDE OF SOMEONE ELSE, e.g. MY BROTHER OR SISTER. 9___
10. THE OPPOSITE SEX FINDS ME A BORE. 10___
11. IF I WOULD BE SEPARATED FROM ALL THE PEOPLE I KNOW, I FEEL THAT I WOULD NOT BE ABLE TO MAKE A GO OF IT. 11___
12. I FEEL TENSE MOST OF THE TIME. 12___
13. I USUALLY FEEL OUT OF PLACE AT PICNICS AND PARTIES. 13___
14. I FEEL THAT WORKING IS TOO MUCH RESPONSIBILITY FOR ME. 14___
15. MY PARENTS WILL BE DISAPPOINTED IN ME IN THE FUTURE. 15___
16. IT IS VERY HARD FOR A TEENAGER TO KNOW HOW TO HANDLE SEX IN A RIGHT WAY. 16___
17. AT TIMES I HAVE FITS OF CRYING AND/OR LAUGHING THAT I SEEM UNABLE TO CONTROL. 17___
18. I AM GOING TO DEVOTE MY LIFE TO MAKING AS MUCH MONEY AS I CAN. 18___
19. IF I PUT MY MIND TO IT, I CAN LEARN ALMOST ANYTHING. 19___
20. ONLY STUPID PEOPLE WORK. 20___
21. VERY OFTEN I FEEL THAT MY FATHER IS NO GOOD. 21___
22. I AM CONFUSED MOST OF THE TIME. 22___
1-DESCRIBES ME VERY WELL  
2-DESCRIBES ME WELL  
3-DESCRIBES ME FAIRLY WELL  
4-DOES NOT QUITE DESCRIBE ME  
5-DOES NOT REALLY DESCRIBE ME  
6-DOES NOT DESCRIBE ME AT ALL

| 23. | I FEEL INFERIOR TO MOST PEOPLE I KNOW. | 23___ |
| 24. | UNDERSTANDING MY PARENTS IS BEYOND ME. | 24___ |
| 25. | I DO NOT LIKE TO PUT THINGS IN ORDER AND MAKE SENSE OF THEM. | 25___ |
| 26. | I CAN COUNT ON MY PARENTS MOST OF THE TIME. | 26___ |
| 27. | IN THE PAST YEAR I HAVE BEEN VERY WORRIED ABOUT MY HEALTH. | 27___ |
| 28. | DIRTY JOKES ARE FUN AT TIMES. | 28___ |
| 29. | I OFTEN BLAME MYSELF EVEN WHEN I AM NOT AT FAULT. | 29___ |
| 30. | I WOULD NOT STOP AT ANYTHING IF I FELT I WAS DONE WRONG. | 30___ |
| 31. | MY SEX ORGANS ARE NORMAL. | 31___ |
| 32. | MOST OF THE TIME I AM HAPPY. | 32___ |
| 33. | I AM GOING TO DEVOTE MYSELF TO MAKING THE WORLD A BETTER PLACE TO LIVE IN. | 33___ |
| 34. | I CAN TAKE CRITICISM WITHOUT RESENTMENT. | 34___ |
| 35. | MY WORK, IN GENERAL, IS AT LEAST AS GOOD AS THE WORK OF THE GIRL NEXT TO ME. | 35___ |
| 36. | SOMETIMES I FEEL SO ASHAMED OF MYSELF THAT I JUST WANT TO HIDE IN A CORNER AND CRY. | 36___ |
| 37. | I AM SURE THAT I WILL BE PROUD ABOUT MY FUTURE PROFESSION. | 37___ |
| 38. | MY FEELINGS ARE EASILY HURT. | 38___ |
| 39. | WHEN A TRAGEDY OCCURS TO ONE OF MY FRIENDS, I FEEL SAD TOO. | 39___ |
| 40. | I BLAME OTHERS EVEN WHEN I KNOW THAT I AM AT FAULT TOO. | 40___ |
| 41. | WHEN I WANT SOMETHING, I JUST SIT AROUND WISHING I COULD HAVE IT. | 41___ |
| 42. | THE PICTURE I HAVE OF MYSELF IN THE FUTURE SATISFIES ME. | 42___ |
| 43. | I AM A SUPERIOR STUDENT IN SCHOOL. | 43___ |
| 44. | I FEEL RELAXED UNDER NORMAL CIRCUMSTANCES. | 44___ |
1-DESCRIBES ME VERY WELL  3-DESCRIBES ME FAIRLY WELL  5-DOES NOT REALLY DESCRIBE ME
2-DESCRIBES ME WELL   4-DOES NOT QUITE DESCRIBE ME  6-DOES NOT DESCRIBE ME AT ALL

45. I FEEL EMPTY EMOTIONALLY MOST OF THE TIME. 45
46. I WOULD RATHER SIT AROUND AND LOAF THAN WORK 46
47. EVEN IF IT WERE DANGEROUS, I WOULD HELP SOMEONE WHO IS IN TROUBLE. 47
48. TELLING THE TRUTH MEANS NOTHING TO ME. 48
49. OUR SOCIETY IS A COMPETITIVE ONE AND I AM NOT AFRAID OF IT. 49
50. I GET VIOLENT IF I DON'T GET MY WAY. 50
51. MOST OF THE TIME MY PARENTS GET ALONG WELL WITH EACH OTHER. 51
52. I THINK THAT OTHER PEOPLE JUST DO NOT LIKE ME. 52
53. I FIND IT VERY DIFFICULT TO ESTABLISH NEW FRIENDSHIPS. 53
54. I AM SO VERY ANXIOUS. 54
55. WHEN MY PARENTS ARE STRICT, I FEEL THAT THEY ARE RIGHT, EVEN IF I GET ANGRY. 55
56. WORKING CLOSELY WITH ANOTHER GIRL NEVER GIVES ME PLEASURE. 56
57. I AM PROUD OF MY BODY. 57
58. AT TIMES I THINK ABOUT WHAT KIND OF WORK I WILL DO IN THE FUTURE. 58
59. EVEN UNDER PRESSURE I MANAGE TO REMAIN CALM. 59
60. WHEN I GROW UP AND HAVE A FAMILY, IT WILL BE IN AT LEAST A FEW WAYS SIMILAR TO MY OWN. 60
61. I OFTEN FEEL THAT I WOULD RATHER DIE, THAN GO ON LIVING. 61
62. I FIND IT EXTREMELY HARD TO MAKE FRIENDS. 62
63. I WOULD RATHER BE SUPPORTED FOR THE REST OF MY LIFE THAN WORK. 63
64. I FEEL THAT I HAVE A PART IN MAKING FAMILY DECISIONS. 64
65. I DO NOT MIND BEING CORRECTED. SINCE I CAN LEARN FROM IT. 65

FOR COMPUTER USE ONLY

66-69_ _ _ 70_ _ _ 71-72_ _ _ 73_ _ _ 74_ _ _ 75_ _ _ 76-80_ _
<table>
<thead>
<tr>
<th>Number</th>
<th>Statement</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>66</td>
<td>I feel so very lonely.</td>
<td>66</td>
</tr>
<tr>
<td>67</td>
<td>I do not care how my actions affect others as long as I gain something.</td>
<td>67</td>
</tr>
<tr>
<td>68</td>
<td>I enjoy life.</td>
<td>68</td>
</tr>
<tr>
<td>69</td>
<td>I keep an even temper most of the time.</td>
<td>69</td>
</tr>
<tr>
<td>70</td>
<td>A job well done gives me pleasure.</td>
<td>70</td>
</tr>
<tr>
<td>71</td>
<td>My parents are usually patient with me.</td>
<td>71</td>
</tr>
<tr>
<td>72</td>
<td>I seem to be forced to imitate the people I like.</td>
<td>72</td>
</tr>
<tr>
<td>73</td>
<td>Very often parents do not understand a person because they had an unhappy childhood.</td>
<td>73</td>
</tr>
<tr>
<td>74</td>
<td>For me good sportsmanship in school is as important as winning a game.</td>
<td>74</td>
</tr>
<tr>
<td>75</td>
<td>I prefer being alone than with kids my age.</td>
<td>75</td>
</tr>
<tr>
<td>76</td>
<td>When I decide to do something, I do it.</td>
<td>76</td>
</tr>
<tr>
<td>77</td>
<td>I think that boys find me attractive.</td>
<td>77</td>
</tr>
<tr>
<td>78</td>
<td>Other people are not after me to take advantage of me.</td>
<td>78</td>
</tr>
<tr>
<td>79</td>
<td>I feel that there is plenty I can learn from others.</td>
<td>79</td>
</tr>
<tr>
<td>80</td>
<td>I do not attend sexy shows.</td>
<td>80</td>
</tr>
<tr>
<td>81</td>
<td>I fear something constantly.</td>
<td>81</td>
</tr>
<tr>
<td>82</td>
<td>Very often I think that I am not at all the person I would like to be.</td>
<td>82</td>
</tr>
<tr>
<td>83</td>
<td>I like to help a friend whenever I can.</td>
<td>83</td>
</tr>
<tr>
<td>84</td>
<td>If I know that I will have to face a new situation, I will try in advance to find out as much as is possible about it.</td>
<td>84</td>
</tr>
<tr>
<td>85</td>
<td>Usually I feel that I am a bother at home.</td>
<td>85</td>
</tr>
<tr>
<td>86</td>
<td>If others disapprove of me I get terribly upset.</td>
<td>86</td>
</tr>
<tr>
<td>87</td>
<td>I like one of my parents much better than the other.</td>
<td>87</td>
</tr>
</tbody>
</table>
1--DESCRIPTS ME VERY WELL
2--DESCRIPTS ME WELL
3--DESCRIPTS ME FAIRLY WELL
4--DOES NOT QUITE DESCRIBE ME
5--DOES NOT REALLY DESCRIBE ME
6--DOES NOT DESCRIBE ME AT ALL

88. BEING TOGETHER WITH OTHER PEOPLE GIVES ME A GOOD FEELING.
89. WHENEVER I FAIL IN SOMETHING, I TRY TO FIND OUT WHAT I CAN DO IN ORDER TO AVOID ANOTHER FAILURE.
90. I FREQUENTLY FEEL UGLY AND UNATTRACTIVE.
91. SEXUALLY I AM WAY BEHIND.
92. IF YOU CONFIDE IN OTHERS YOU ASK FOR TROUBLE.
93. EVEN THOUGH I AM CONTINUOUSLY ON THE GO, I SEEM UNABLE TO GET THINGS DONE.
94. WHEN OTHERS LOOK AT ME THEY MUST THINK THAT I AM POORLY DEVELOPED.
95. MY PARENTS ARE ASHAMED OF ME.
96. I BELIEVE I CAN TELL THE REAL FROM THE FANTASTIC.
97. THINKING OR TALKING ABOUT SEX FRIGHTENS ME.
98. I AM AGAINST GIVING SO MUCH MONEY TO THE POOR.
99. I FEEL STRONG AND HEALTHY.
100. EVEN WHEN I AM SAD I CAN ENJOY A GOOD JOKE.
101. THERE IS NOTHING WRONG WITH PUTTING ONESELF BEFORE OTHERS.
102. I TRY TO STAY AWAY FROM HOME MOST OF THE TIME.
103. I FIND LIFE AN ENDLESS SERIES OF PROBLEMS—WITHOUT SOLUTION IN SIGHT.
104. AT TIMES I FEEL LIKE A LEADER AND FEEL THAT OTHER KIDS CAN LEARN SOMETHING FROM ME.
105. I FEEL THAT I AM ABLE TO MAKE DECISIONS.
106. I HAVE BEEN CARRYING A GRUDGE AGAINST MY PARENTS FOR YEARS.
107. I AM CERTAIN THAT I WILL NOT BE ABLE TO ASSUME RESPONSIBILITIES FOR MYSELF IN THE FUTURE.
108. WHEN I ENTER A NEW ROOM I HAVE A STRANGE AND FUNNY FEELING.
109. I FEEL THAT I HAVE NO TALENT WHATSOEVER.
1. DO NOT REHEARSE HOW I MIGHT DEAL WITH A REAL COMING EVENT. 110
2. WHEN I AM WITH PEOPLE I AM BOtherED BY HEARING STRANGE NOISES. 111
3. MOST OF THE TIME MY PARENTS ARE SATISFIED WITH ME. 112
4. I DO NOT HAVE A PARTICULARLY DIFFICULT TIME IN MAKING FRIENDS. 113
5. I DO NOT ENJOY SOLVING DIFFICULT PROBLEMS. 114
6. SCHOOL and STUDYING MEAN VERY LITTLE TO ME. 115
7. EYE FOR AN EYE and TOOTH FOR A TOOTH DOES NOT APPLY FOR OUR SOCIETY. 116
8. SEXUAL EXPERIENCES GIVE ME PLEASURE. 117
9. VERY OFTEN I FEEL THAT MY MOTHER IS NO GOOD. 118
10. HAVING A BOYFRIEND IS IMPORTANT TO ME. 119
11. I WOULD NOT LIKE TO BE ASSOCIATED WITH THOSE KIDS WHO "HIT BELOW THE BELT." 120
12. WORRYING A LITTLE ABOUT ONE'S FUTURE HELPS TO MAKE IT WORK OUT BETTER. 121
13. I OFTEN THINK ABOUT SEX. 122
14. USUALLY I CONTROL MYSELF. 123
15. I ENJOY MOST PARTIES I GO TO. 124
16. DEALING WITH NEW INTELLECTUAL SUBJECTS IS A CHALLENGE FOR ME. 125
17. I DO NOT HAVE MANY FEARS WHICH I CANNOT UNDERSTAND. 126
18. NO ONE CAN HARM ME JUST BY NOT LIKING ME. 127
19. I AM FEARFUL OF GROWING UP. 128
20. I REPEAT THINGS CONTINUOUSLY TO BE SURE THAT I AM RIGHT. 129
21. I FREQUENTLY FEEL SAD. 130

FOR COMPUTER USE ONLY

66-69  70  71-72  73  74  75  76-80
# Appendix C

Table C-1

Alpha Coefficients of each OSIQ Scale Classified by Age and Sex *

<table>
<thead>
<tr>
<th>OSIQ scale</th>
<th>Younger Males</th>
<th>Older Males</th>
<th>Younger Females</th>
<th>Older Females</th>
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<tr>
<td></td>
<td>(n=326)</td>
<td>(n=192)</td>
<td>(n=278)</td>
<td>(n=154)</td>
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<tr>
<td>Psychological Self (PS)</td>
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<tr>
<td>Impulse Control</td>
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<td>.70</td>
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<td>Emotional Tone</td>
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<td>.79</td>
<td>.78</td>
<td>.81</td>
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<tr>
<td>Body and Self-Image</td>
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<td>.62</td>
<td>.66</td>
<td>.56</td>
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<tr>
<td>Social Self (SS)</td>
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<td>Social Relationships</td>
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<td>.78</td>
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<tr>
<td>Morals</td>
<td>.60</td>
<td>.51</td>
<td>.56</td>
<td>.36</td>
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<tr>
<td>Vocat.-Educ. Goals</td>
<td>.57</td>
<td>.69</td>
<td>.61</td>
<td>.61</td>
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<tr>
<td>Sexual Self (SeS)</td>
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<tr>
<td>Sexual Attitudes</td>
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<td>.55</td>
<td>.67</td>
<td>.48</td>
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<tr>
<td>Family Self (FS)</td>
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<tr>
<td>Family Attitudes</td>
<td>.57</td>
<td>.83</td>
<td>.87</td>
<td>.88</td>
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<tr>
<td>Coping Self (CS)</td>
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<tr>
<td>Mastery of the External World</td>
<td>.48</td>
<td>.58</td>
<td>.60</td>
<td>.61</td>
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<tr>
<td>Psychopathology</td>
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<td>.73</td>
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<td>Superior Adjustment</td>
<td>.52</td>
<td>.60</td>
<td>.60</td>
<td>.61</td>
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Appendix D

Demographic Data Sheet

For each person *living in your household*, please list the following information, indicating the nature of each person’s role in the house (e.g., husband, wife, son, daughter, sister, friend, grandmother, etc.).

<table>
<thead>
<tr>
<th>Family Role</th>
<th>First Name</th>
<th>Religion</th>
<th>Age</th>
<th>Sex</th>
<th>In School</th>
<th>Education</th>
<th>Medical/ Psychiatric Problems</th>
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<tbody>
<tr>
<td>1</td>
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<td></td>
<td></td>
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<tr>
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<td>6</td>
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<td></td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>
Present marital status of heads of household: (check all that apply)

<table>
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<tr>
<th>Male</th>
<th>Female</th>
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<tbody>
<tr>
<td>Married only once</td>
<td>( )</td>
</tr>
<tr>
<td>Remarried</td>
<td>( )</td>
</tr>
<tr>
<td>Single</td>
<td>( )</td>
</tr>
<tr>
<td>Never married</td>
<td>( )</td>
</tr>
<tr>
<td>Divorced</td>
<td>( )</td>
</tr>
<tr>
<td>Separated</td>
<td>( )</td>
</tr>
<tr>
<td>Widowed</td>
<td>( )</td>
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</table>

Number of years in present marital status

Number of previous marriages - (male)

- (female)

Total family income (all sources) during past year: (OPTIONAL)

<table>
<thead>
<tr>
<th>$ 0 - 9,999 ( )</th>
<th>$ 50,000 - 59,999 ( )</th>
</tr>
</thead>
<tbody>
<tr>
<td>$10,000 - 19,999 ( )</td>
<td>$ 60,000 - 69,999 ( )</td>
</tr>
<tr>
<td>$20,000 - 29,999 ( )</td>
<td>$ 70,000 - 99,999 ( )</td>
</tr>
<tr>
<td>$30,000 - 39,999 ( )</td>
<td>$100,000 + ( )</td>
</tr>
<tr>
<td>$40,000 - 49,999 ( )</td>
<td></td>
</tr>
</tbody>
</table>

Parents’ Occupation: __________________________

Do you identify with any specific ethnic group? If yes, check below the primary ethnic group.

Western European (British, French, German, etc.) ( )
Eastern European (Russian, Polish, etc.) ( )
Mediterranean (Italian, Middle Eastern, North African, Greek, Cyprian, etc.) ( )
North American (U.S. American, Canadian) ( )
South American (Central and South American) ( )
Inuit ( )
Asian or Pacific Islander ( )

What is your race?

Inuit ( )
Oriental ( )
Black ( )
Hispanic ( )
White ( )
INSTRUCTIONS:

This booklet contains a number of statements about families. Please read each statement carefully, and decide how well it describes your own family. You should answer according to how you see your family.

For each statement there are four (4) possible responses:

- **Strongly Agree (SA)** Check SA if you feel that the statement describes your family very accurately.
- **Agree (A)** Check A if you feel that the statement describes your family for the most part.
- **Disagree (D)** Check D if you feel that the statement does not describe your family for the most part.
- **Strongly Disagree (SD)** Check SD if you feel that the statement does not describe your family at all.

These four responses will appear below each statement like this:

41. We are not satisfied with anything short of perfection.

   ___ SA ___ A ___ D ___ SD

The answer spaces for statement 41 would look like this. For each statement in the booklet, there is an answer space below. Do not pay attention to the blanks at the far right-hand side of each answer space. They are for office use only.
1. Planning family activities is difficult because we misunderstand each other.
   ____ SA ____ A ____ D ____ SD

2. We resolve most everyday problems around the house.
   ____ SA ____ A ____ D ____ SD

3. When someone is upset the others know why.
   ____ SA ____ A ____ D ____ SD

4. When you ask someone to do something, you have to check that they did it.
   ____ SA ____ A ____ D ____ SD

5. If someone is in trouble, the others become too involved.
   ____ SA ____ A ____ D ____ SD

6. In times of crisis we can turn to each other for support.
   ____ SA ____ A ____ D ____ SD

7. We don't know what to do when an emergency comes up.
   ____ SA ____ A ____ D ____ SD

8. We sometimes run out of things that we need.
   ____ SA ____ A ____ D ____ SD

9. We are reluctant to show our affection for each other.
   ____ SA ____ A ____ D ____ SD

10. We make sure members meet their family responsibilities.
    ____ SA ____ A ____ D ____ SD

11. We cannot talk to each other about the sadness we feel.
    ____ SA ____ A ____ D ____ SD

12. We usually act on our decisions regarding problems.
    ____ SA ____ A ____ D ____ SD
13. You only get the interest of others when something is important to them.
   SA   A   D   SD

14. You can't tell how a person is feeling from what they are saying.
   SA   A   D   SD

15. Family tasks don't get spread around enough.
   SA   A   D   SD

16. Individuals are accepted for what they are.
   SA   A   D   SD

17. You can easily get away with breaking the rules.
   SA   A   D   SD

18. People come right out and say things instead of hinting at them.
   SA   A   D   SD

19. Some of us just don't respond emotionally.
   SA   A   D   SD

20. We know what to do in an emergency.
   SA   A   D   SD

21. We avoid discussing our fears and concerns.
   SA   A   D   SD

22. It is difficult to talk to each other about tender feelings.
   SA   A   D   SD

23. We have trouble meeting our bills.
   SA   A   D   SD

24. After our family tries to solve a problem, we usually discuss whatever worked or not.
   SA   A   D   SD
25. We are too self-centered.
   _____ SA _____ A _____ D _____ SD

26. We can express feelings to each other.
   _____ SA _____ A _____ D _____ SD

27. We have no clear expectations about toilet habits.
   _____ SA _____ A _____ D _____ SD

28. We do not show our love for each other.
   _____ SA _____ A _____ D _____ SD

29. We talk to people directly rather than through go-betweens.
   _____ SA _____ A _____ D _____ SD

30. Each of us has particular duties and responsibilities.
   _____ SA _____ A _____ D _____ SD

31. There are lots of bad feelings in the family.
   _____ SA _____ A _____ D _____ SD

32. We have rules about hitting people.
   _____ SA _____ A _____ D _____ SD

33. We get involved with each other only when something interests us.
   _____ SA _____ A _____ D _____ SD

34. There's little time to explore personal interests.
   _____ SA _____ A _____ D _____ SD

35. We often don't say what we mean.
   _____ SA _____ A _____ D _____ SD

36. We feel accepted for what we are.
   _____ SA _____ A _____ D _____ SD
37. We show interest in each other when we can get something out of it personally.
   _____ SA _____ A _____ D _____ SD

38. We resolve most emotional upsets that come up.
   _____ SA _____ A _____ D _____ SD

39. Tenderness takes second place to other things in our family.
   _____ SA _____ A _____ D _____ SD

40. We discuss who is to do household jobs.
   _____ SA _____ A _____ D _____ SD

41. Making decisions is a problem for our family.
   _____ SA _____ A _____ D _____ SD

42. Our family shows interest in each other only when they can get something out of it.
   _____ SA _____ A _____ D _____ SD

43. We are frank with each other.
   _____ SA _____ A _____ D _____ SD

44. We don't hold to any rules or standards.
   _____ SA _____ A _____ D _____ SD

45. If people are asked to do something they need reminding.
   _____ SA _____ A _____ D _____ SD

46. We are able to make decisions about how to solve problems.
   _____ SA _____ A _____ D _____ SD

47. If the rules are broken, we don't know what to expect.
   _____ SA _____ A _____ D _____ SD

48. Anything goes in our family.
   _____ SA _____ A _____ D _____ SD
49. We express tenderness.
   ____ SA ____ A ____ D ____ SD

50. We confront problems involving feelings.
   ____ SA ____ A ____ D ____ SD

51. We don't get along well together.
   ____ SA ____ A ____ D ____ SD

52. We don't talk to each other when we are angry.
   ____ SA ____ A ____ D ____ SD

53. We are generally dissatisfied with the family duties assigned to us.
   ____ SA ____ A ____ D ____ SD

54. Even though we mean well, we intrude too much into each other's lives.
   ____ SA ____ A ____ D ____ SD

55. There are rules about dangerous situations.
   ____ SA ____ A ____ D ____ SD

56. We confide in each other.
   ____ SA ____ A ____ D ____ SD

57. We cry openly.
   ____ SA ____ A ____ D ____ SD

58. We don't have reasonable transport.
   ____ SA ____ A ____ D ____ SD

59. When we don't like what someone has done, we tell them.
   ____ SA ____ A ____ D ____ SD

60. We try to think of different ways to solve problems.
   ____ SA ____ A ____ D ____ SD
# Appendix F

Table F-1

**Internal Consistency and Test-retest coefficients of the FAD**

<table>
<thead>
<tr>
<th>FAD Scale</th>
<th>Alpha coefficient</th>
<th>Test-retest</th>
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<tbody>
<tr>
<td>Problem Solving</td>
<td>.74</td>
<td>.66</td>
</tr>
<tr>
<td>Communication</td>
<td>.75</td>
<td>.72</td>
</tr>
<tr>
<td>Affective Responsiveness</td>
<td>.83</td>
<td>.76</td>
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<td>Affective Involvement</td>
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<td>.67</td>
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<td>Behavior Control</td>
<td>.72</td>
<td>.73</td>
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<td>Roles</td>
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