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Perceptions of Family Functioning and Self-concept in Adolescent Anorexia Nervosa [R]

My Trinh Ha, Herbert W. Marsh, Andrew J. Martin, and Christine Halse

Authors have highlighted the importance of the family for the development of positive self-concept and identity, not only in mental health research but also in various developmental and social psychology fields. With the increase in the incidence and prevalence of eating disorders in Australia and around the world, some researchers have attempted to understand how aspects of family functioning affect the onset and maintenance of the chronic illness, particularly for younger patients who are still undergoing drastic psychological changes and development. This study attempted to bridge gaps in the literature examining functioning and dyadic relations in families affected by eating disorders. More specifically, this study compared the perceptions of mothers, fathers and daughters about general family functioning to determine whether any discrepancies between the perceptions of family and how these affect self-concept in adolescent girls with anorexia nervosa.

Developmental psychologists and researchers have identified adolescence as a developmental period in which there are significant changes to the body, self-concept, identity and social relationship structures (Arnett, 2004). In attempts to accommodate the changes that occur during the adolescent period, adolescents typically experience fluctuations in their evaluations of themselves, their families and their friends. For example, many theorists and researchers have indicated that adolescents strive to become more independent from their parents and family, placing greater importance on their peer relations and relationships external to the home (Ardelt & Day, 2002; Conger & Rueter, 1996; Simmons & Blyth, 1987). However, although adolescents place greater emphasis and importance on their peer relations, the influence of the family does not completely diminish. In fact, various researchers have indicated that parents and older siblings can have a major influence on behaviour and personality characteristics. Furthermore, emotional support and the availability of emotional support from family have been shown to have significant effects on adjustment and positive mental health development for adolescents (Lau & Kwok, 2000). Moreover, studies have indicated that dysfunctional family functioning can hinder the development of positive and high self-esteem in adolescents, for example dysfunctional family environments have been associated with low levels of self-esteem (Lau & Kwok, 2000; Smets & Hartup, 1988). In fact, the adolescent period has been identified as one in which the risk of developing serious psychiatric disorders such as eating disorders, and depression are at its peak. For example Lau and Kwok (2000) indicated that family relationships were the most significant predictors of depression and low self-concept for both boys and girls.

Given the importance of family in development, and specifically, positive development, identity formation and self-concept, researchers have both directly and indirectly linked the family and family environment to various mental health issues. For example, given that family functioning has an influence on the development of self-esteem, some authors within the eating disorders field have argued that there is an indirect effect of family functioning on the development of eating disorders through low self-esteem (Smets & Hartup, 1988). Hence being one of the most robust predictors of eating disorders (see Polivy & Herman, 2002), authors have argued that family functioning has an indirect effect on eating disorders. Other authors within the eating disorders field however, have identified the family environment and family functioning as one of the major factors that affect the development and maintenance of eating disorders, along with low self-esteem (see Polivy & Herman, 2002; White, 2000 for reviews). From the existing literature, it is clear that the family can have an impact on the development of both self-esteem and family functioning, and given that the aetiological models that exist within eating disorders remain unclear, it is imperative to investigate the family within the clinical eating disordered population.

In eating disorders research, families affected by eating disorders are typically described as being dysfunctional; possessing characteristics such as rigidity, enmeshed relationships and conflict avoidance (see Szabo, Goldin, & Le Grange, 1999 for review). Other characteristics of the affected families include being controlling, overprotective (Castro et al, 2000; Leung et al, 2000; Shoebridge & Gardner, 2000) and overly critical (Bemporad et al., 1992; Haworth & Hoeppner, 2000). For example Bemporad and colleagues (1992), described the typical eating disordered family as being overly concerned with appearance, conformity, achievement, avoided conflicts and members of the family, particularly the parents, tended to be very critical. Their research indicated that 62% of the eating disordered participants report that there is a great deal of hostility between their parents. And over half of the participants saw their mother as the more dominant parent, characteristically overly demanding, perfectionist and preoccupied with appearance.

However, although associations have been frequently made between family functioning, family characteristics and eating disorders, many of the beliefs about families and eating disorders have been based on clinical observations rather
than empirical research, despite the fact that empirical research in the area has substantially increased over the last several decades. Despite this increase, research findings have not been consistent and can be highlighted by the number of existing theories that exist within the field of eating disorders (Eisler, 1995; see Kog & Vandereycken, 1988 for a review). Hence, whilst some researchers have found that some family characteristics are more common in those that are affected by anorexia nervosa than non-clinical families, others have not. For example in a quantitative comparison of adolescents with anorexia and non-clinical adolescents, Castro et al (2000) found that the perceptions of over-protectiveness and control did not differ between the two populations and concluded that it was difficult to believe that there are any fundamental differences between clinical and non-clinical families. Furthermore, Szabo et al (1999) found that there were few differences between clinical samples and non-clinical samples in terms of family functioning (adaptability, flexibility, boundary maintenance and general functioning). However, the results of the Szabo et al study did indicate that girls with anorexia nervosa perceived their families as having a lack of structure and leadership.

In addition to the research suggesting that family is related to the onset of eating disorders such as anorexia nervosa, studies have also linked family functioning to outcomes in adolescent anorexia and eating disorders. In this literature, authors have argued that positive family functioning and positive interactions within the family can increase the likelihood of recovery. Despite recent advances indicating the benefits of family therapy in the treatment of anorexia, researchers have not yet established the extent to which various members of the family unit perceive family functioning differently and whether these perceptions impact how the patient (child) feels about themselves and the relationships that they have with their parents. Furthermore, it is not known how these perceptions of family functioning are related to evaluations of the self (self-esteem) which is a main characteristic of eating disordered patients. A further limitation in the existing body of literature is that authors have tended to discount the perceptions of fathers or mothers (most commonly fathers) and have considered parents as a parental unit or have considered only mothers as representative of the parental unit (see Ohanessian, Lerner, Lerner, & von Eye, 1995). This has important implications, as mothers and fathers may have significantly different perceptions of the family and how it functions as a unit and hence, these perceptions may differentially affect the child and how they perceive both themselves and the way that the family functions.

A further limitation of the family literature is that researchers often consider parental/child perceptions as distorted as a result of being a sufferer of the eating disorder, or because they are not suffering from the illness, hence their perceptions are less valuable. Again this has important implications for theory and practise as regardless of whether the perceptions are distorted; the different perceptions of family functioning have the potential to influence evaluations of the self both within the family and in external interactions. Hence, understanding the differences and the factors that influence these differences in perceptions may further inform treatment and aetiology models for anorexia. As Ohanessian et al (1995) emphasise, there is a large paucity within the literature that addresses whether there are discrepancies between the views of varying family members, and hence little is known about what affect these discrepancies have on anorexia nervosa.

This study thus attempted to bridge this gap in the literature by exploring the varying perceptions of family functioning in families with daughters affected by anorexia nervosa. Further, this study investigated the relations between perceptions of family functioning, self-concept. More specifically, this study aims to:

- Assess the reliability of the FAMIII (Brief) in daughter and parent samples
- Determine the relation between girls’ perceptions of family functioning and their parents’ perceptions of family functioning
- Explore the relations between perceptions of family functioning and self-esteem, evaluations of parent relations self-concept
- Explore the effects of parental and girls perceptions of family functioning on self-esteem and parent relations self-concept
- Explore the effects girls own ratings of general family functioning, self-ratings, and dyadic relations with parents on self-esteem and parent relations self-concept.

**Methodology**

*Participants and Procedure*

**Clinical Sample**

The clinical sample of adolescent girls was recruited from two adolescent medicine units in two large public hospitals in Western Sydney. All adolescent participants had received a medical diagnosis of anorexia nervosa, which was based on, but not exclusive to, DSM-IV criteria. The sample consisted of 76 adolescent girls aged between 12 and 18 years ($M=14.93, SD=1.80$). The average length of illness for this sample was 12.82 months ($SD=18.75$ months). At the time of recruitment, all participants were receiving treatment for their eating disorder with either the inpatient or outpatient
services provided at these clinics. Potential participants were excluded from the study if they had not received a primary diagnosis of anorexia nervosa. Of the 76 participants, 35 were recruited as inpatients (comprising 46.05 percent of the total clinical sample), whilst the remaining 41 participants were recruited through the outpatient clinics (comprising 53.95% of the clinical sample).

**Parent Sample**

The parent sample was also recruited from the adolescent medicine units of the two western Sydney hospitals. Typically, girls and their parents were approached and recruited at the same time. Parents were able to participate in the study regardless of whether their child was participating in the study. The total parent sample consisted of 86 parents; 51 were mothers of girls who had been diagnosed with anorexia nervosa, and 35 were fathers. Parents were aged between 32 and 58 years ($M=45.71$, $SD=5.44$). 86% of the parent sample indicated that they were married ($n=74$), whilst 8.1% were divorced ($n=7$), 3.5% were separated ($n=3$), 1.2% widowed ($n=1$), and 1.2% of the parents were living in a De Facto relationship ($n=1$).

In total, 52 of the 86 parents were matched family sets, consisting of mother, father and daughter sets (representing 60.5% of the sample); whilst 25 of the 86 parents formed matched father or mother daughter sets (thus representing 29.1% of the parent sample). Of the remaining parents, there were 2 sets of matched parents whose daughter did not participate in the study, and 7 non-matching parents.

**Instrumentation**

**The Family Assessment Measure III (Brief)**

To assess perceptions of family functioning, the Family Assessment Measure (Brief)-III (FAM III; Skinner, Steinhauer and Santa-Barbara, 1995) was employed. The FAM III is a self-report questionnaire that provides a quantitative assessment of the respondents’ perceptions of their family strengths and weaknesses. The theoretical basis of this instrument lies within the Process Model of Family Functioning. This theory of family functioning asserts that the overarching aim of the family structure is to successfully achieve a variety of tasks through appropriate role allocation and performance, agreement and cooperation within the family, effective communication, appropriate affective expression, family member involvement, control and influence, and finally, values and norms.

The FAM III has been used in a wide range of studies investigating family functioning within families that have experienced chronic health and psychological issues such as schizophrenia (Levene, 1991), Cystic Fibrosis (Cowen, Keenan, Simmons, Arndt and Levison, 1985), clinical depression (Jacob, 1991), intellectual and physical disabilities, and alcoholism (Jacob, 1991). Despite this, the FAM III has not been used extensively with patients and families with eating disorders. The questionnaire explores family members’ perceptions of family functioning, their own personal roles within the family and relationships between dyads of family members. In the Brief version that is used in this study, there are 3 scales, each consisting of 14 items. The first is the general scale measuring perceptions of general family functioning, the second is the self-rating scale, which measures the individuals’ perception of their role within the family, and the third scale is the dyadic relationship scale which investigates relationships between pairs of family members. Each scale has a total score, but these scores do not add up to a total family functioning score.

Previous reports indicate that internal consistency is good, with Conbach’s Alpha estimates ranging from .80 to .93 for all three scales of the FAM III (Skinner et al, 1995). Reliability estimates for the current samples were comparable to previous published estimates, and well within the acceptable range for clinical and research purposes (Anastasi & Urbina, 1997; Hills, 2003). The reliability estimates for both parent and clinical adolescent samples are presented in table 1.

**Self-Description Questionnaire II- Short (SDQII-S)**

The SDQII-S is a well-known and established instrument that is often utilized to assess the multiple dimensions of the self-concept in adolescents. The instrument consists of 51 items that measure 11 different dimensions of the self-concept. Previous reliability estimates have indicated that all the SDQII-S scales (including the general scale) have high internal consistency levels with Cronbach’s $\alpha$ ranging from .80-.90 (Marsh, Ellis, Parada, Richards, & Huebeck, 2003). For clinical samples, the SDQII-S has also been shown to have strong psychometric properties, with Cronbach’s $\alpha$ estimates for scales ranging from .80-.93 (Ha, Marsh, & Halse, 2004).

**Results and Discussion**

**Perceptions of Family Functioning**

To date, within the eating disorders field, there has been a paucity of research that has examined the differing perceptions family functioning within the family. Furthermore, researchers have typically only investigated perceptions
of mothers or fathers rather than both parents. Thus, analyses were conducted in an attempt to determine whether different family members in fact had different perceptions of the general family functioning. The analysis indicated that there was a significant difference between the general family functioning scores for girls and mothers, and girls and fathers ($F_{150,159} = 5.94, p < .05$). Post hoc analyses indicated that girls scored significantly higher than their mothers (mean difference = -3.74, $SE = 1.09$, $p < .01$) but not their fathers ($p > .05$). However, there was not a significant difference between mothers and fathers perceptions of general family functioning (mean difference = -1.21, $SE = 1.17$, $p > .05$) (see figure 1).

These results thus suggest that although there was no significant difference between mothers and fathers, because of the significant difference between mothers and daughters, fathers and mothers should not be combined to form a single parental unit in studies that examine the effect of family functioning on various outcomes, as the effect of mothers and fathers perceptions could vary.

The Effect of Family Functioning on Self-Concept

Evaluations of the relations between perceptions of family functioning self-esteem and parent relations self-concept indicated that girls’ perceptions of family functioning were most strongly correlated with parental relations and self-esteem, whereas parents perceptions (both mothers’ and fathers’) were shown to have only small to moderate associations with girls self-esteem and parental relations self-concept. Associations indicated that the higher the family functioning score (i.e., increased dysfunction and problematic functioning), the lower the score for parent relations and self-esteem. Further, it was shown that although mothers’ perceptions of family functioning were significantly related to daughters’ perceptions of general family functioning, fathers’ ratings were not.

Parental (both mother and father) perceptions were shown to have small relations and non-significant associations with both self-esteem and parent relations self-concept (see table 2). These results suggest that parental perceptions have very little influence on girls’ evaluations of the self and that girls own perceptions of the family and the way that it functions would have the larger effect on the self and the development of the self.

Regression analyses examining the effect of daughter and parental perceptions of family functioning on self-esteem and parental relations self-concept indicated that as expected daughter family functioning perceptions had the largest predictive ability ($\beta = -.471$, $p < .05$) as compared to mother ($\beta = .125$, $p > .05$) and father perceptions ($\beta = .028$, $p > .05$). Both mother and father family functioning scores had non-significant effects on self-esteem. Even when the mothers’ and fathers’ family functioning scores were combined to make a parental unit, the beta coefficient remained insignificant (for daughters $\beta = -.57$, $p < .05$; for parents as a unit $\beta = -.043$, $p > .05$). This result thus indicates that the child’s perception of how the family works and functions has the largest influence on evaluations of the self as compared to parental perceptions.

Similar results were revealed for the assessment of parental relations self-concept indicating that mothers and fathers perceptions of family functioning did not have a significant affect on girls’ perceptions of parental relations self-concept ($p > .05$). The daughters perceptions of general family functioning were shown to have the highest predictive ability for parental relations self-concept ($\beta = -.780$, $p > .05$). These results therefore indicate that despite parental perceptions of family functioning, girls’ self-esteem and parental relations self-concept are guided by their own perceptions of how the family functions.

Given that girls’ own perceptions of family functioning and their own ratings of their roles within the family unit were shown to be the most important self-esteem and parental relations self-concept in comparison to parents’ assessments of family functioning, analyses were conducted to determine whether self-ratings, perceptions of overall family functioning or perceptions of various dyadic relations had more effect on self-esteem and parent relations. Analyses surprisingly indicated that when self-ratings and general family functioning were entered into the model for self-esteem, family functioning had a significant effect, whereas self-ratings did not. Furthermore, perceptions of the dyadic relations were shown to have an insignificant effect on self-esteem. This is a surprising result as self-ratings could be seen as one’s own evaluation of the self within the family, and could thus be seen as a construct that is somewhat like self-esteem within the family context. On the other hand, analysis of the effect of general family functioning and self-ratings on parent relation’s self-concept indicated that both self-ratings and general family functioning had significant negative effects, although surprisingly, dyadic relations with parents were shown to have an insignificant effect. This is surprising because it is intuitive to think that parental relations self-concept would be heavily reliant on perceptions of these dyadic relations (see table 3).

Summary and Conclusion

To reiterate, this study attempted to investigate the effect of family functioning on self-esteem and parent relations self-concept in a group of adolescent girls with anorexia nervosa. Previous research has found evidence to suggest that there is an association between eating disorders and family functioning, and that typically; family functioning is poor and
negative in family units that are affected by anorexia and other eating disorders. However, existing knowledge of the effect of the family in eating disorders have been based on clinical observations rather than empirical research, hence little is known about the effect of family functioning in eating disorders. Furthermore, researchers have argued that the family plays an important role in the development of positive self-esteem. This study therefore attempted to address these gaps within the literature. Furthermore, very little research has investigated the varying perceptions of different family members on family functioning. Results suggested that there was a difference between mothers and daughters but not between mothers and fathers or daughters and fathers. Specifically, girls perceived general family functioning as more negative than their mothers. Results from the analyses also indicated that the girls perceptions of family functioning were the more significant predictors of self-esteem and parent relations self-concept, and further that dyadic relations between daughter and mother and daughter and father had no significant effect on either self-esteem or parent relations self-concept.

Like much of the research within the mental health sector, and specifically within the clinical fields, this research study has its limitations. Firstly, it is limited by its sample size and level of missing data, though this sample is large in comparison to many studies within the field. Additionally, more sophisticated and complex analyses on the data could not be conducted as a result of the limited number of matched family sets within the study. Furthermore, this study only investigated the direct effect of family functioning on self-esteem and parent relations self-concept, and given the argument that family functioning may only have an indirect association with eating disorders through self-esteem, future research is required to investigate the possible mediating relations between these variables.

One of the strengths of the current study is that it examines the subjective experience of family functioning using the FAM as opposed to objective assessments that are typically done by clinicians, and therefore researchers can gain a sense of how the individuals’ perceptions affect their evaluations of themselves. Furthermore, some researchers have argued that the subjective experience of family is more important than objective characteristics for the development and maintenance of psychiatric and mental disorders (Houben, Pierloot, & Vandereycken, 1989).

The importance of the family on individual psychological and emotional development is undeniable. This study has indicated that an individuals’ own perceptions of general family functioning can be the most important predictor for self-esteem. This has important implications, for current aetiological models and future research because if self-esteem is a mediating variable for the association between family functioning and eating disorders, therapists need to address the girls’ perceptions of family functioning and hence target her conceptions and understanding of the family.

About the Authors

My Trinh Ha completed a Bachelor of Science Degree with Honours in Psychology at the University of Adelaide. She is a PhD candidate from the SELF Research Centre, University of Western Sydney, and is the recipient of an Industry based Australian Postgraduate Award. My Trinh is attached to the ARC funded project: Multiple Perspectives of Eating Disorders in Girls.

Professor Herbert W. Marsh is Professor of Educational Psychology, founding Director of the SELF Research Centre and served as UWS’s inaugural Dean of Graduate Research Studies and Pro-Vice-Chancellor. He received UWS’s inaugural awards for Research, Postgraduate Supervision, and Doctorate of Science. Herb has published more than 250 peer-reviewed journal articles, 40 chapters, 10 monographs, and 225 conference papers.

Associate Professor Andrew J. Martin is Associate Professor and International Senior Research Fellow at the Faculty of Education and Social Work, University of Sydney, Australia. His areas of interest are motivation, academic achievement, pedagogy, and research methods.

Associate Professor Christine Halse works in the School of Education at the University of Western Sydney. She has published extensively on the social, cultural and psychological construction of identity and its implications for educational policy and practice in local, national and international contexts. Associate Professor Christine Halse is also the Chief investigator of a multi-disciplinary, multi-method ARC Linkage grant exploring issues related to eating disorders in teenage girls.

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References


Table 1: Internal consistency estimates for the three scales of the FAMIII (Brief)

<table>
<thead>
<tr>
<th>Scale</th>
<th>Daughters</th>
<th>Mothers</th>
<th>Fathers</th>
<th>Parental unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Family Functioning Scale</td>
<td>0.89</td>
<td>0.87</td>
<td>0.87</td>
<td>0.87</td>
</tr>
<tr>
<td>Self-Rating Scale</td>
<td>0.88</td>
<td>0.85</td>
<td>0.74</td>
<td>0.82</td>
</tr>
<tr>
<td>Dyadic Relations Scale</td>
<td>0.94</td>
<td>0.93</td>
<td>0.91</td>
<td>0.93</td>
</tr>
<tr>
<td>Average</td>
<td>0.90</td>
<td>0.88</td>
<td>0.84</td>
<td>0.87</td>
</tr>
</tbody>
</table>

Cronbach's Alpha Estimates

Mothers  Fathers  Daughters

Mean General Family Functioning Score

Figure 1: Mean Family Functioning Score for Mothers, Fathers and Daughters

Table 2: Correlations between various family functioning scales for different family members

<table>
<thead>
<tr>
<th>Daughter gen</th>
<th>Mother gen</th>
<th>Father gen</th>
<th>Self-rating</th>
<th>Self-esteem</th>
<th>Prnt Sc</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daughter gen</td>
<td>1.00</td>
<td>.48*</td>
<td>.23</td>
<td>.78*</td>
<td>-.66*</td>
</tr>
<tr>
<td>Mother gen</td>
<td>1.00</td>
<td>.68*</td>
<td>.32*</td>
<td>-.27</td>
<td>-.27</td>
</tr>
<tr>
<td>Father gen</td>
<td>1.00</td>
<td>.32</td>
<td>-.13</td>
<td>-.10</td>
<td></td>
</tr>
<tr>
<td>Self-rating</td>
<td>1.00</td>
<td>-.60*</td>
<td>-.73</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-esteem</td>
<td>1.00</td>
<td>-.60*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prnt Sc</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Prnt Sc= Parent relations self-concept, daughter gen= daughters perception of general family functioning, self-rating= daughters rating of her own functioning within the family, mother gen= mothers’ perception of general family functioning, father gen= fathers’ perception of general family functioning, *p<.05.

Table 3: Standardised Beta Coefficients for the prediction of self-esteem and parent relations self-concept

<table>
<thead>
<tr>
<th>Scale</th>
<th>Beta</th>
<th>t-value</th>
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</thead>
<tbody>
<tr>
<td>Self-esteem</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daughter Gen</td>
<td>-.46</td>
<td>-3.02*</td>
</tr>
<tr>
<td>Self-rating</td>
<td>-.25</td>
<td>-1.62</td>
</tr>
<tr>
<td>Dyad fath</td>
<td>-.02</td>
<td>-.20</td>
</tr>
<tr>
<td>Dyad moth</td>
<td>.06</td>
<td>.64</td>
</tr>
<tr>
<td>Prnt Sc</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daughter Gen</td>
<td>-.47</td>
<td>-3.67*</td>
</tr>
<tr>
<td>Self-rating</td>
<td>-.34</td>
<td>-5.67*</td>
</tr>
<tr>
<td>Dyad fath</td>
<td>.10</td>
<td>1.20</td>
</tr>
<tr>
<td>Dyad moth</td>
<td>-.01</td>
<td>-.08</td>
</tr>
</tbody>
</table>

Note. Prnt Sc= Parent relations self-concept, daughter gen= daughters perception of general family functioning, self-rating= daughters rating of her own functioning within the family, dyad fath= girls perception of the relationship between herself and her father, dyad moth= girls perception of the relationship between herself and her mother, *p<.05. All Beta Coefficients are presented in standardized form.