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# Low Family Satisfaction and Depression in Adolescence: The Role of Self-Esteem

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## Abstract

*Background:* Self-esteem constitutes a pivotal individual characteristic during adolescence, which is intertwined both with family processes and the development of depression. Similarly, adverse family environment has been associated with adolescent depression. *Aim:* The present study aims to examine the possible contribution of adolescents' self-esteem to the relationship between family satisfaction and the emergence of depression. *Method:* The total sample consisted of 1919 high schools students (mean age 16 years old). Depression was assessed with the depression subscale of the Symptom Check List-90, self-esteem with the Rosenberg Self-Esteem Scale and family satisfaction with the Family Satisfaction Scale. *Results:* Findings revealed significant associations between low self-esteem and depression and low family satisfaction and depression. Additionally, the relationship between low family satisfaction and depression was found to be partially explained by low self-esteem. Results illustrate the significant associations between contextual and individual factors regarding depressive symptoms in adolescence.

**Keywords:** depressive symptoms, family, adolescence, self-esteem

## 1. Introduction

Self-esteem is a pivotal construct for adolescent development (Baldwin & Hoffmann, 2002) and a range of terms have been suggested to define it. According to some studies, self-esteem refers to the subjective feeling of self-worth and personal adequacy (Bosson, Brown, Zeigler-Hill, & Swann, 2003; Matthews, Deary, & Whiteman, 2003). Comprehensively, Rosenberg (1965) defined self-esteem as the evaluation of the self (positive or negative). Savin-Williams (1989) operationalized it as the ratio between one's successes and pretensions. More recently Neiss and colleagues (Neiss, Stevenson, Legrand, Iacono, & Sedikides, 2009) considered that self-esteem reflects how much a person evaluates and accepts himself. In that line of thought, Baldwin and Hoffmann (2002) supported that self-esteem is developing as a part of the process of self-understanding, mainly during adolescence.

A high level of self-esteem supplies individuals with the ability to accept happy moments, to handle unpleasant situations, to cope effectively with challenges, to engage in close relationships and to improve their strengths (Baumeister, Campbell, Krueger, & Vohs, 2003; Orth, Robins, Trzesniewski, Maes, & Schmitt, 2009; Robins, Trzesniewski, Tracy, Gosling, & Potter, 2002). High self-esteem is also considered to positively moderate the expression of dysfunctional schemata and depressive symptoms at the experience of negative life events (Abela & Skitch, 2007). Low self-esteem, on the other hand, has been linked to depression, aggression, less competency to overcome difficulties and decreased level of "wellbeing" in adolescence (Dori & Overholser, 1999; MacPhee & Andrews, 2006; Orth et al., 2009; Ralph & Mineka, 1998; Wang et al., 2013).

### 1.1 Self-Esteem and Depression

Overall, the development of a low or a high sense of self-esteem during childhood and adolescence might lead to a lasting negative or a positive attitude toward the self (Robins et al., 2002). Therefore, it could significantly affect general, concurrent, and future psychosocial adaptation (Swenson & Prelow, 2005). In that context a significant role of low self-esteem in the emergence of adolescent depression has been postulated (Steiger, Allemand, Robins, & Fend, 2014; Park et al., 2014). This association has been attributed to the causal

relationship between negative self-concept and the formulation of an equally negative self-prospect (Baldwin & Hoffmann, 2002; Orth, Robins, & Roberts, 2008). Lower levels of self-esteem have been associated with negatively biased perceptions of someone's life that could reinforce vulnerability to depression (Baumeister et al., 2003). In particular, cognitive tendencies which have been found to reduce self-esteem, such as high standards of self-evaluation (perfectionism), being self-critical and overgeneralizing failure may simultaneously induce depression (Carver, 1998; Hewitt, Flett, & Ediger, 1996; Negovan & Bagana, 2011). Therefore, failing to achieve a desired output, such as high academic performance, could enhance self-criticism eventuating symptoms of depression among adolescents (Thompson & Zuroff, 1999). This relationship could function even more negatively for adolescents situated within the Greek context, where academic performance is considered as highly significant (Motti-Stefanidi, Masten, & Asendorpf, 2014). These hypotheses are in consensus with solid theoretical arguments that define negative self-perception as one of the major elements that constitute the cognitive triad of depression (Beck, 1991).

Epidemiological findings indicate depression as one of the most frequently diagnosed psychiatric disorders in youth. Studies support that nearly 9% of children have already experienced a major depressive episode until the age of 14 and that one third of the onset of major depressive disorder occurs in adolescence (Hankin et al., 1998; Kessler et al., 2005; Lewinsohn, Rohde, & Seeley, 1998; Lewinsohn, Rhode, Klein, & Seeley, 1999). Given the substantial humanitarian and economic costs of depression (WHO, 2008) shedding more light at the association between low self-esteem and depression in adolescence appears important.

### *1.2 Family Satisfaction and Depression*

Beside individual level factors such as self-esteem, contextual effects have been supported to contribute to mental health difficulties among adolescents (Bronfenbrenner & Morris, 2006). Several studies have advocated the importance of the family for the development of depressive symptoms in young people (Eley et al., 2004; Ferro & Boyle, 2015; Lonigan, Phillips, & Hooe, 2003). Parental psychopathology and family conditions such as low cohesion, high discord, low parental support and conflicts have been found to play a major role in the emergence of depression in adolescence (Sheeber, Davis, Leve, Hops, & Tildesley, 2007; Gladstone, Parker, Mitcell, Wilhelm, & Malhi, 2005; Shittu et al., 2014, Nomura, Wickramaratne, Warner, Mufson, & Weissman, 2002; Marmorstein & Iacono, 2004). In addition, a range of family socioeconomic factors including low parental education level and poverty have also been known to predict adolescent depression (Lupien, King, Meaney, & McEwen, 2000; Eley et al., 2004; Ensminger, Fothergill, Bornstein, & Bradley, 2003). These kind of socioeconomic factors could either directly or indirectly influence the adolescents' sense of fulfilment within their families (Marshall & Henderson, 2014).

A construct which seems to captivate the delicate emotional tie of the developing individual with the family in which he/she is growing up is that of "family satisfaction". Family satisfaction is the subjective evaluation of various aspects of family relationships and communication and is defined as the degree to which a person feels pleased and gratified within his/her family (Olson, 2011). Low family satisfaction is likely to be experienced due to family dysfunction and has been supported to be more prevalent among young individuals who manifest symptoms of depression (Safer, 2009). Considering adolescents in particular, inadequate family responses to their needs might subsequently induce feelings of anger along with a sense of low family satisfaction (Painuly, Sharan, & Mattoo, 2005). These may operate as precursors of depression. These effects could be stronger in cultures where family is significantly valued, such as the Greek cultural context is supported to be (Malikiosi-Loizos & Giovazolias, 2015).

### *1.3 Family Satisfaction and Self-Esteem*

Higher family dysfunction and low family satisfaction appear to have been associated to a lower sense of self-esteem both in adolescents (Blatt & Homann, 1992; Mandara & Murray, 2000) and young adults (Diener & Diener, 2009). Recently, Streamer and Seery (2015) highlighted the interactive effect of family functioning and self-esteem in the emergence of the individual's identity and adaptation.

### *1.4 The Role of Self-Esteem in the Association between Family Satisfaction and Depression*

In alignment with the above findings, studies have suggested a combined effect of self-esteem (or negative cognitions about oneself, in general) and family functioning on the emergence of adolescent depression (Alloy, Abramson, Smith, Gibb, & Neeren, 2006; Ferro & Boyle, 2015). However, the various aspects of these associations have not been explicitly described. This dearth of findings may be particularly important in

adolescent populations, where due to cultural influences family plays a distinctive role in the development of behaviour, such as Greek adolescents seem to be (Malikiosi-Loizos & Giovazolias, 2015; Rogoff, 2003).

On that basis and provided that: i) Lower self-esteem has been described as a possible repercussion of low family satisfaction in adolescence (Diener & Diener, 2009; Mandara & Murray, 2000); and ii) Both adverse family functioning and low self-esteem have been indicated to increase the risk for depression (Ferro & Boyle, 2015); a likely contributing role of low self-esteem in the association between family satisfaction and depressive behaviours should be investigated. Literature supports the role of the family as a source of causal effects in the development of behaviour and self-esteem in particular (Blatt & Homann, 1992). Additionally, dysfunctional cognitions have been suggested to mediate the link between contextual effects and depression (Alloy et al., 2006). In the light of these findings, the need for examining the possible contributing effect of self-esteem in the relationship between family satisfaction and depressive symptoms among adolescents becomes more prominent.

### *1.5 The Present Study*

This research aims to assess the contribution of self-esteem to the relationship between family satisfaction and depression in a sample of Greek adolescents. Therefore, the following research hypotheses were formulated:

H<sub>1</sub>: Based on international literature (Baldwin & Hoffmann, 2002; Baumeister et al., 2003; Orth et al., 2008; Steiger, Allemand, Robins, & Fend, 2014; Park et al., 2014), it is hypothesized that lower self-esteem will be found to be associated with higher depression symptoms.

H<sub>2</sub>: Given the significant role of family processes and family dysfunction in the development of depression (Ferro & Boyle, 2015), it is expected that low family satisfaction will be associated with higher depression symptoms.

H<sub>3</sub>: Provided that low family satisfaction has been found to reinforce poorer self-esteem among adolescents (Diener & Diener, 2009; Mandara & Murray, 2000) and that both adverse family functioning and lower self-esteem have been found to function as risk factors for depression (Ferro & Boyle, 2015); it is assumed that low self-esteem could contribute to the relationship between low family satisfaction and high depression symptoms.

## **2. Material & Methods**

### *2.1 Sample*

The sample was selected among high school students in the wider metropolitan area of Athens using a random sampling strategy, according to quotas of place of residence and high school type (academic or vocational track), as described by the latest inventory card of the Ministry of Education. Based on these quotas we randomly (by lottery) selected school units and participants. All first and second grade of lyceum (Greek secondary high school) students of each selected school unit were eligible for participation. Official permission for the study was obtained from the National Ministry of Education and the principal and school board of each high school involved. Parents' consent was also sought. Response and parental consent rates were obtained for over 95% of the sample. The estimated maximum sampling error with a sample size of 1919 is 2.24% at the 95% confidence level ( $Z = 1.96$ ).

Specifically, our sample consisted of 1919 students (mean age = 16.14, SD = 0.92) attending Greek public, daytime high schools. Three hundred thirty three participants came from vocational track high schools (17.4%) and 1586 (82.6%) from academic track high schools. This ratio reflects the nation's high academic orientation (National Statistical Authority of Greece, 2012). One thousand and forty eight participants attended the first grade of secondary high school (year 10) (54.6%) and 867 (45.2%) attended the second grade of secondary high school (year 11). Considering gender, 949 participants (49.5%) were males and 970 (50.5%) were females.

Regarding socio-economic characteristics, the marital status of the participants' family entailed 83.5% (1601) married parents, 10.2% (196) divorced or separated parents, 2.1% (41) remarried parents, 3.2% (62) with one widowed parent and 1% (19) with never married parents. Regarding their highest paternal education level, 5.6% (107) had their father completed primary education, 11.3 % (216) gymnasium (year 9), 34.5% (664) secondary high school (year 12), 23.7% (455) vocational college, 17% (327) BSc degree, 7 % (134) MSc Degree and 0.8% (16) PhD. Regarding their father's profession, 6.8 % (131) of their fathers were managers-directors, 14.5% (278) public servants, 3% (58) artists, 15.9% (305) owners of small businesses, 0.3% (5) farmers, 7.7% (148) technicians, 4.7% (91) unspecified labours, 3.5% (68) pensioners, 9.3% (179) unemployed, 23.6% (453) private employees and 10.6% (203) scientists.

## 2.2 Measures

A group of specially trained researchers collected the data as part of a wider research on adolescent development. Demographic information and a battery of questionnaires were completed by the participants. Questionnaires analysed for the purposes of the present study included:

### 2.2.1 SCL-90 R (Symptoms Check List 90 Revised)

The SCL-90 R (Derogatis & Savitz, 1999) has been widely used for the assessment of psychopathology symptoms of adolescents both in Greece and internationally (Antonson, Thorsén, Sundquist, & Sundquist, 2014; Tsitsika et al., 2011). The questionnaire extracts three general and nine specific clinical indices. The clinical index referring to depression (which was used in the present analyses) is composed of thirteen items which assess symptoms of dysphoric mood, withdrawal of life interest, lack of motivation, loss of vital energy, feelings of hopelessness, thoughts of suicide, and cognitive and somatic correlates of depression (e.g., “Feeling hopeless about the future”). Adolescents reported the intensity of their symptoms on a 5-point scale (0 = “not at all”, 1 = “a little”, 2 = “moderate”, 3 = “very much”, 4 = “all the time”). The mean of the subscale items was calculated ranging from 0-4, where 0 indicated minimum and 4 maximum disturbance. The internal reliability rates in the present study were for obsessive compulsive symptoms, Cronbach  $\alpha = .79$ ; somatization Cronbach  $\alpha = .85$ ; interpersonal sensitivity Cronbach  $\alpha = .82$ ; hostility, Cronbach  $\alpha = .85$ ; phobic anxiety, Cronbach  $\alpha = .82$ ; depression, Cronbach  $\alpha = .83$ ; anxiety, Cronbach  $\alpha = .72$ ; paranoia, Cronbach  $\alpha = .73$  and psychoticism, Cronbach  $\alpha = .75$ .

### 2.2.2 RSES (Rosenberg Self Esteem Scale)

Participants were asked to complete the RSES which assesses a person’s overall evaluation of his or her worthiness (Rosenberg, 1965). The reason we have chosen the RSES is that it is one of the most widely used for assessing global self-esteem (Marsh, 1996). The scale consists of 10 items, each answered on a 4-point Likert scale ranging from 0 = “strongly disagree” to 4 = “strongly disagree”. The measure contains an equal number of positively (e.g., item 1: on the whole I am satisfied with myself) and negatively (e.g., item 2: at times, I think I am no good at all) worded items. The latter (items 2, 5, 6, 8 & 9) were reversely scored (i.e., 0 = 3, 3 = 0). The items’ scores were added resulting to an overall score ranging from 0 to 30. The higher the total score, the higher the self-esteem of the respondent (Rosenberg, 1965). The internal consistency of the scale was satisfactory with a Cronbach  $\alpha = 0.81$ . Furthermore, in the Principal Component Analysis conducted, the Kaiser-Meyer-Olkin value was found to be 0.94 and the Bartlett’s Test of Sphericity 9920.28,  $p < 0.001$ . The analysis suggested the presence of only one component with eigenvalue greater to 1, explaining 55.62% of the total variance.

### 2.2.3 FSS (Family Satisfaction Scale)

FSS (Olson, 2011) contains 10 items. These are designed to assess satisfaction by various aspects of family functioning including family closeness, flexibility and communication (e.g., How satisfied are you with the amount of time you spend together as a family?). Participants had to report their level of satisfaction considering each of these items on a five-point scale ranging from 1 = “very unsatisfied” to 5 = “very much satisfied”. The points of the ten answers were added resulting to a range of 10-50 and higher scores indicated higher level of family satisfaction. In the present study the scale was found to be internally consistent, with a Cronbach  $\alpha = 0.91$ . Additionally, in the Principal Component Analysis conducted, the Kaiser-Meyer-Olkin value was found to be 0.94 and the Bartlett’s Test of Sphericity 9234.33,  $p < 0.001$ . The analysis suggested the presence of only one component with eigenvalue greater to 1, explaining 55.84% of the family satisfaction scores’ variance.

## 2.3 Calculation and Analysis

In order to study the associations between self-esteem and depression ( $H_1$ ), as well as between family satisfaction and depression ( $H_2$ ) we performed multiple linear regression analyses (stepwise method) with depression as the dependent variable. Second, to study the possible contributing role of self-esteem to the relationship between family satisfaction and depression the Sobel test was calculated ( $H_3$ ). This measured the total and the specific indirect effects of family satisfaction on depression, supplemented by bias-corrected with accelerated bootstrap confidence intervals for the indirect effect (as proposed by Preacher & Hayes, 2008). Thus, from the total association  $C$  (Figure 1) we allocated the association  $c'$ , which represents the total direct effect, the association  $a$ , which represents the effect of family satisfaction on self-esteem, and the association  $b$ , which represents the effect of self-esteem on depression (Figure 2).

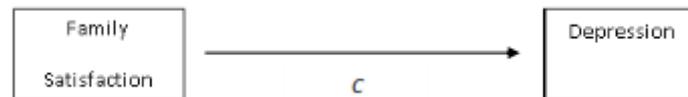


Figure 1. Total effect (C) of family satisfaction on depression

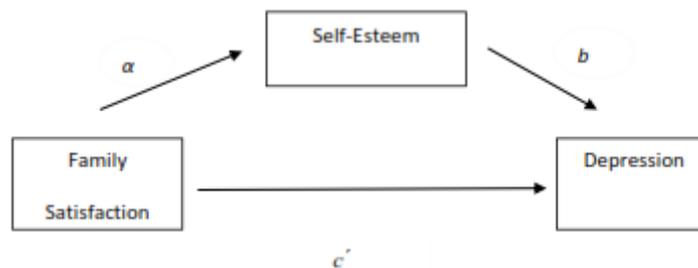


Figure 2. Indirect effect of family satisfaction on depression through self-esteem ( $a \times b$ ) and direct effect ( $c'$ )

The criterion for choosing this method was the recommendation of bootstrapping over the Sobel test for testing mediation, based on having higher power, while maintaining reasonable control over the Type I error rate (MacKinnon, Lockwood, & Williams, 2004). The bootstrap estimates applied in the present analysis were calculated on the minimum recommended 1,000 bootstrap samples. The above applications were conducted with the SPSS 20 software package.

### 3. Results

The multiple correlation index of self-esteem ( $H_1$ ) and family satisfaction ( $H_2$ ) on depression was 0.46 and the adjusted regression coefficient  $R^2$  was 0.21  $\{F(2, 1842) = 243.30, p < 0.001\}$ . Both our independent variables contributed significantly to the prediction of depression (self-esteem  $beta = -0.35, t = -15.80, p < 0.001$ ; family satisfaction  $beta = -0.20, t = -9.30, p < 0.001$ ). After controlling for family marital status, father's education and profession, the total effect (C) of family satisfaction on depression was  $-0.03, p < 0.001$ . The direct effect ( $c'$ ) of family satisfaction on depression was found to be  $-0.02, p < 0.001$ , denoting that about one third is mediated through self-esteem. The ratio of the indirect to total effect of family satisfaction on depression through self-esteem has been 0.36 (low confidence interval = 0.29—High confidence interval = 0.45). These indicate that over one third of the effect of family satisfaction on depression symptoms was explained by the mediating effect of self-esteem.

The values of the coefficients of  $a$  and  $b$  paths were 0.28 and  $-0.04$  respectively, denoting that low family satisfaction was strongly associated to lower self-esteem, which in turn influences (although less intensively) the risk for depression ( $H_3$ ).

The total completely standardised indirect effect of family satisfaction on depression through self-esteem was found to be  $f = ab = -0.11$  (99% low confidence interval =  $-0.14$  to—High confidence interval =  $0.09$ ). Finally, the ratio of the indirect to the direct effect of family satisfaction on depression through self-esteem equals 0.56 (low confidence interval =  $0.40$ —High confidence interval =  $0.81$ ).

When the analysis was repeated after bias-corrected and accelerated bootstrapping, the above estimates and 99% confidence intervals were practically unchanged.

### 4. Discussion

This study examined how vulnerability to develop depression in adolescence is associated with family satisfaction and self-esteem in a sample of Greek high school students. Results suggested that low self-esteem and low family satisfaction are risk factors for adolescent depression. Moreover, the negative relationship between family satisfaction and depression was found to be partially explained by lower self-esteem. The latter indicates the significant associations between contextual and individual factors in the emergence of depression in

adolescence. Particularly, it provides an empirical indication in relation to the impact of family context on self-esteem of the adolescents increasing their risk to develop depression.

#### *4.1 Self-Esteem and Depression*

The significant negative relationship revealed between self-esteem and depression has been reported in other studies as well (Steiger, Allemand, Robins, & Fend, 2014; Park et al., 2014). Self-esteem reflects the idea one has for him or her-self, being therefore one of the three major elements, which constitute the cognitive triad associated to depression as described by Beck (1991), negative self-perception.

A proposed interpretation for the relationship between self-esteem and depression is that specific cognitive tendencies that define self-esteem may “invite” depression (Negovan & Bagana, 2011). Analytically, high standards of self-evaluation, being self-critical and overgeneralization of failure have been depicted as intra-individual factors, which through predefining the self-esteem level may at a second stage provoke depression (Negovan & Bagana, 2011). The motivation to perfection, which is caused by high personal standards, may induce unpleasant emotions (Hewitt, Flett, & Ediger, 1996), especially when it is related with academic challenges, like those that Greek high school students at the age of 16 appear to face (Motti-Stefanidi, Matsen, & Asendorpf, 2014). The distance between the achieved and the desired academic performance could enhance self-criticism in adolescents (Thompson & Zuroff, 1999) with wide-ranging negative ramifications. Vulnerability to depression could increase when the above referred cognitive tendencies coexist with overgeneralization. The individual, who progressively thinks of more and more instances of failure after a negative experience, could perceive himself or herself as inadequate, thus becoming more vulnerable to depression (Carver, 1998).

#### *4.2 Family Satisfaction and Depression*

The finding regarding the association of low family satisfaction and depression reinforces the well-established theoretical suggestion that adolescent psychopathology is often the by-product of the effect of proximal contextual conditions (Bronfenbrenner & Morris, 2006). The revealed association of low family satisfaction with depression is in consensus with a wide range of studies, which support the importance of family function in the pathogenesis of depression in youth (Eley et al., 2004; Ferro & Boyle, 2015; Lonigan, Phillips, & Hooe, 2003). Specifically, low family satisfaction may directly stem from an irritable mood due to family emotional mismanagement and it is experienced from almost the half of the youth who suffer from minor depression (Safer, 2009). Inappropriate family response to adolescents’ needs may reduce their level of satisfaction, provoking anger and irritation, which are basic components of youth depression (Painuly et al., 2005). The present finding appears to have particular significance for Greek adolescents, due to the pivotal role of family in the Greek cultural context (Malikiosi-Loizos & Giovazolias, 2015).

#### *4.3 Family Satisfaction and Self-Esteem*

The direct association between family satisfaction and self-esteem was found to be significant; this finding is in accordance to the existing literature on adolescents as well as adults. The explanation of this association may be based on the widely accepted concept of Balby’s (1969) attachment theory, which suggests that the way people perceive themselves is strongly influenced by their early childhood experiences with important family figures (Ainsworth, 1989). Recent research (Streamer & Seery, 2015) points to the same direction as well.

#### *4.4 The Role of Self-Esteem in the Association between Family Satisfaction and Depression*

Finally, our findings revealed a significant contributing role of self-esteem on the association between low family satisfaction and depression. The association among these three factors could also be interpreted through different pathways; literature, however, suggests that family characteristics influence self-esteem, rather than the reverse. This is shown by findings that parent-child interactions maintain an etiological role in the development of maladaptive cognitive processes, which include negative self-perception (a feature of low self-esteem) and associate with depression (Blatt & Homann, 1992). Moreover, there is evidence which suggests that dysfunctional cognitions (another feature of low self-esteem) may mediate the relationship between a negative rearing atmosphere and depression (Alloy et al., 2006). Specifically, negative parenting style seems to define negative cognitions about the self, which in turn increase vulnerability for depression (Alloy et al., 2006). The negative reactions in the adolescents’ family environment may be perceived by them as a kind of rejection, which, being internalized in a second stage, could lead to low self-esteem. The causal relation between self-esteem and depression (Beck, 1991) supposes that negative beliefs about one’s self are a critical causal factor for depression (Choi & Lee, 2010). Thus, the internalization of a dissatisfying family environment could provide the basis for a low sense of self-esteem favourable to depressive behaviours.

#### 4.5 Limitations

A major limitation of our study is that the results were based on self-report answers. Moreover, cultural and socio-economic factors should be taken into account, when generalizing the findings. Research in different cultural contexts and age groups should also be conducted. Further, the relationship between family environment and depression seems bidirectional. Certain family factors may promote the development of depression and depressive symptoms may reversely promote a negative family atmosphere (Sheeber et al., 2007). In addition, it is likely that adolescents with depressive symptoms will be negatively critical when they are asked to evaluate their family relationships, reporting low family satisfaction (Kirkcaldy & Siefen, 1998). Finally, although the present study includes a large sample of Greek high school students, it does not include longitudinal data and therefore, interpretation of the findings needs to be cautious. Despite these limitations the present findings achieve to illustrate the important role of self-esteem in the association between low family satisfaction and vulnerability to depression in a culturally specific sample that has not been previously assessed.

#### 4.6 Conclusion

Research on adolescent depression has made rapid progress in the last decades, advancing the knowledge concerning its association with both biological and environmental factors. The present study illustrates the need to consider family environment and how that is perceived in adolescence as a crucial factor when trying to understand depression during this age period, stressing the need for the role of family to be taken into account. Furthermore, findings concerning the way self-esteem seems to impact the association between low family satisfaction and the development of depression provide guidelines for health policy preventive initiatives. Such initiatives should aim both to family interventions and to individual support to adolescents in order to improve their self-esteem, especially in dysfunctional families.

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