

**FACTORIAL AND CONSTRUCT VALIDITY OF FACES IV
AMONG ITALIAN ADOLESCENTS**

R. Baiocco, F. Laghi, M. Cacioppo & M. Tafa
Sapienza University of Rome, Italy

Abstract

The purpose of this study was to verify the Italian adaptation of FACES IV. The sample consisted of 1416 high school and university students aged between 13 and 22 living at home with their parents. Data concerning age and sex differences revealed that three defined age groups differed with regard to the age variable on three dimensions: Cohesion, Enmeshed and Rigid, where middle adolescents (age 13-15) showed significantly higher scores than adolescents (age 16-18 and 19-22). Sex differences revealed that females had a higher mean score on Cohesion and Flexibility, whereas males had a higher mean score on Disengaged, Enmeshed and Chaotic. Internal consistency was measured to verify the six subscales' reliability and correlations were performed to examine the relationship between FACES IV and Family Communication, Family Satisfaction, and Parent and Peer Attachment (IPPA). The reliability and validity of FACES IV's Italian version are discussed. Data from this research encourage the use of FACES IV not only in research on family functioning but also for educational and counselling purposes.

Keywords: family functioning; attachment security; validation; assessment; adolescence

Roberto Baiocco, Ph.D. Sapienza University of Rome, via dei Marsi, 78,00185,
Rome Italy Phone: 39.0649917851; Fax: 39.06.49917672; Email:
Roberto.baiocco@uniroma1.it

In the field of family therapy and family assessment it is very important to have instruments with documented reliability and validity. The Circumplex Model of Marital and Family Systems (Olson, Sprenkle, & Russell, 1979; Olson, 2000; Olson & Gorall, 2003;) has been studied and used by clinicians and researchers in clinical and developmental psychology for over 25 years (e.g. Hanson et al., 1989; Magill & Hurlbut, 1986). This model evaluates families on three key concepts: *cohesion*, *flexibility* and *communication* (Tafa, 2007a). Cohesion is defined as the emotional bonding that family members have toward one another. Family flexibility refers to the quality and expression of the family's leadership, organization, roles, and relationship rules. The communication dimension can be considered as a facilitating dimension that helps families modify their levels of cohesion and flexibility (see Franklin and Streeter (1993) for a more detailed description of the Circumplex model). The main hypothesis of the Circumplex model is that well-functioning families are considered balanced, falling mid-range in terms of cohesion and flexibility. In accordance with this model, Olson, Russell and Sprenkle (1989) have developed the Family Adaptability and Cohesion Evaluation Scale (FACES), a self-report, pencil-and-paper instrument that evaluates family functioning. The Family Adaptability and Cohesion Evaluation Scale, Version IV (FACES IV) is the current self-report questionnaire used to assess the primary dimensions of the Circumplex model (OLSON, 2011).

This latest revision was considered necessary because previous versions of FACES have produced scores that are often linearly related to adjustment and positive outcomes (Kazak et al., 1997; Maurice-Stam, Oort, Last, & Grootenhuis, 2008; Marsac & Alderfer, 2010; Sloper, 2000). A linear relationship between cohesion and adaptability and positive family adjustment is inconsistent with the Circumplex model because families extremely low and extremely high on each of these dimensions are postulated to be poorly

functioning. To respond to the criticisms of the previous FACES measures, Olson and colleagues have recently developed FACES IV in the hope of contributing a reliable and valid self-report measure assessing the Circumplex model. The current measure contains 42 items to assess six dimensions: two balanced scales, *Cohesion* and *Flexibility*, and four unbalanced scales, *Rigid*, *Chaotic*, *Enmeshed* and *Disengaged*, assessing the lower and the upper ends of Cohesion and Flexibility (OLSON, 2011).

Despite the relevance of measures assessing family functioning for research and clinical work, an Italian version of Faces IV has not been available until now; also, in the European context, there are only Spanish (Rivero, Martinez-Pampliega, & Olson, 2010) and Hungarian adaptations (Mirnics, Vargha, Tóth, & Badgy, 2010) of the instrument. This article reports findings from a validity study of the Italian version of the new FACES IV measure using an adolescent population.

Measures of parents and peer attachments were chosen to validate FACES IV, as higher scores on Balanced Cohesion and Balanced Flexibility and lower scores on the Disengaged, Enmeshed, Chaotic and Rigid scales are postulated to be indicative of better parents and peer relations. Family environment that is unable to provide a sense of security, availability, and attunement to the child's needs has been identified by attachment theorists as contributing to the pathologization of dependency that characterizes a number of mental disorders (Bowlby, 1988). A vast literature underscores the importance of familial relationships in supporting adolescents' efforts to gain increasing independence and to manage the many challenges they face (Fisher & Feldman, 1998; Larson, Richards, Moneta, Holmbeck, & Duckett, 1996; Noller, 1994; Scabini & Cigoli, 2006; Scabini & Galimberti, 1995; Steinberg & Morris, 2001); the developmental task of adolescents is the achievement of psychological independence from parents but with continued

connectedness (Hauser, 1991; Hill & Holmbeck, 1987; Youniss & Smollar, 1985). Henry, Sager, and Plunkett (1996) found that perceptions of family closeness were significantly associated with adolescents' expressions of empathic concern for others, and family communication was also significantly related to empathy. King (1989) found family cohesion to be positively related to career maturity for adolescent males and females. For males, King (1989) also found a relationship between family cohesion and greater internal locus of control. According to the systemic-relational theory, this evolutionary task is characterized by a process of *co-evolution* (Onnis, 2010): parents and adolescents are engaged, together, in a *developmental challenge* (Minuchin, 1974).

The first aim of the study was to examine (1) the psychometric quality of FACES IV, particularly its factor structure and scale reliability; a second aim was to analyse (2) the influence of sex and age on family functioning; the third aim was to verify (3) the instrument's convergent and divergent validity by studying the relationship between the six scales of FACES IV, communication and satisfaction, and family, parent and peer attachment.

Method

Participants and procedures

The sample consisted of 1416 participants (672 F; 744 M) aged between 13 and 22 (Mean: 17.38; Std. Deviation: 2.67). The sample was divided into three age groups: 13-15 (341), 16-18 (477), and 19-22 (598). The subjects of the sample were treated as living at home, in that they lived with their parents all week or at least at the weekend. The subjects were selected from high school and the University of Rome, Italy, and participation was voluntary and confidential. The Italian adaptation of FACES IV is based on a rational translation procedure: two Italian researchers

(an associate professor of clinical psychology and developmental psychology and a family therapist) independently translated the original version according to the translation guidelines, in order to make the items as clear and concise as possible. The two different translations were subsequently compared for the purpose of obtaining a unanimously accepted version. The agreed version was then translated back into English by a bilingual American/Italian translator with no knowledge of the original version, and compared with the original one, in order to guarantee syntactic and technical matching and conceptual equivalence.

Measures

The *Family Adaptability and Cohesion Evaluation Scale* (FACES IV; Olson, 2011) is divided into six scales: two balanced scales, Cohesion and Flexibility, assessing central-moderate areas and four unbalanced scales, Enmeshed, Disengaged, Chaotic, Rigid, assessing the lower and the upper ends of Cohesion and Flexibility. Whereas the two balanced scales, Balanced Cohesion and Balanced Flexibility, are similar to previous FACES III scales, the four Unbalanced Scales, Enmeshed, Disengaged, Chaotic, Rigid, represent a novel improvement.

The *Family Communication Scale* (FCS) is based on the Parent-Adolescent Communication Scale (PAC; Barnes & Olson, 1985) a 20-item scale developed to measure communication in families with an adolescent (Tafà, 2007b). The FCS is a shorter 10-item scale of Likert type based on the longer 20-item version which can be used with a variety of family forms and families at various lifecycle stages related to the Circumplex model. The internal consistency reliability of the scale is 0.90; the test re-test is 0.86; the mean score for family communication is 36.2 and the standard deviation is 9.0 based on a sample of 2,465 individuals (Olson & Gorall, 2006). In this study internal consistency reliability is 0.84.

Family Satisfaction Scale (FSS). This was developed by Olson (1995) in relation to the Circumplex model. The scale assesses the degree of satisfaction with aspects related to family cohesion and flexibility. The current version of the Family Satisfaction Scale contains 10 items on a Likert-type scale and is based on the original 14-item scale. For a sample of 2,465 family members, the 10-item family satisfaction scale has an alpha reliability of 0.93 and test re-test of 0.85; the mean score for the scale is 37.5 and standard deviation is 8.5. In this study internal consistency reliability is 0.90.

Inventory of Parent and Peer Attachment (IPPA) (Armsden & Greenberg, 1987; Marcus & Betzer, 1996) is a 53-item scale designed to assess affective and cognitive dimensions of relationships with parents and close friends. It consists of two scales: the first scale measures attachment to parents and consists of 28 items on a Likert-type scale and the latter measures attachment to peers and consists of 25 items on a Likert-type scale. Both provide an indication of the perceived level of security in the relationship with specific attachment figures (parents and peers). This level is calculated by using dimensions such as the quality of communication and the extent of anger, alienation and/or hopelessness resulting from an unresponsive or inconsistently responsive attachment figure. The Alienation scale was recoded for both scales and is reported to have good internal consistency coefficients (Parents 0.88 and Peers 0.92) (Armsden & Greenberg, 1987; Butler, Fearon, Atkinson, & Parker, 2007). The IPPA has been used in a number of studies, and its reliability and validity have been shown to be satisfactory. In this study consistency reliability is between 0.80 and 0.84.

Data analysis

The Statistical Package for the Social Sciences (SPSS 18.0) was used to conduct bivariate and multivariate analyses relating to independent variables. A principal component analysis was

performed with Kaiser's criterion (Eigenvalue >1), followed by an oblimin rotation. The corresponding subscores were calculated by summing the items within each dimension. The internal consistency of the overall scale and subscales were measured by the Cronbach's alpha coefficient. MANOVA analysis was conducted to evaluate sex and age differences. Pearson correlation coefficients were calculated to assess the convergent and divergent validity of the scale.

Results

Psychometric characteristics of FACES IV

A factor analysis using oblimin rotation was used to analyse data. The scree plot suggested that five factors should be extracted (Kline, 1995). The dimensions formulated to define the construct of family functioning were confirmed after factor analysis and accounted for 38.2 % of the post-rotational variance: all the items of each dimension were loaded on the same factor with a correlation of at least 0.30. Factor 1 (17.67 % variance) was loaded by all the items of Cohesion and Flexibility dimensions; Factor 2 (8.09 % variance) by the items that described the Enmeshed dimension; Factor 3 (5.47 % variance) was loaded by Chaotic's items; Factor 4 (3.91 % variance) was loaded by all the items of the Rigid dimension; Factor 5 (3.06% variance) was loaded by all the items of the Disengaged dimension. Internal consistency (Cronbach's alpha) was measured to verify the reliability of the six subscales. The internal consistency was good for the six subscales (Cronbach's alpha coefficient ranged from 0.63 to 0.73). Table 1 and Table 2 illustrate factor loadings, eigenvalues, explained variance and reliability, and descriptive statistics of each dimension, respectively.

Intercorrelations of the six FACES IV scales give information about the relationship of the scales and may also be indicators of the circumplexity of the measure proposed by its developers

but not confirmed by some authors (Mirnics et al., 2010). The two balanced scales of the main dimensions (Cohesion and Flexibility) were highly correlated, also in accordance with factor analytic calculations where those two scale items were grouped in one factor. The two balanced scales were negatively correlated with the unbalanced scales Disengaged and Chaotic. The two unbalanced scales (Enmeshed and Rigid) appeared to be independent of other scales, while being in a significant relationship (0.38).

-----Insert Tables 1 and 2 about here-----

Sex and age differences

To investigate age and gender differences, we conducted a 3 (age: 13-15, 16-18, and 19-22) x 2 (gender) MANOVA on the six dimensions of FACES IV. The analysis revealed a main effect for age (Wilks's Lambda= 0.96; $F_{12,2810} = 4.17$; $p < 0.001$) and a significant effect for gender (Wilks's Lambda= 0.95; $F_{6,1405} = 10.01$; $p < 0.001$) and no significant age x gender interaction effect (Wilks's Lambda = 0.99; $F_{12,2810} = 2.19$; n.s.). The post hoc analysis by Tukey test revealed that the three groups differed as regards the age variable on three dimensions: Cohesion ($F(2,1413) = 3.53$; $p < .05$), Enmeshed ($F(2,1413) = 9.61$; $p < .001$), and Rigid ($F(2,1413) = 14.06$; $p < .001$), where middle adolescents (age 13-15) showed significantly higher scores than adolescents (age 16-18 and 19-22) (Table 3). Sex differences revealed that females showed a higher mean score on Cohesion ($F(1,1414) = 11.72$; $p < .001$), and Flexibility ($F(1,1414) = 4.99$; $p < .05$), whereas males had a higher mean score on Disengaged ($F(1,1414) = 28.45$; $p < .001$), Enmeshed ($F(1,1414) = 25.67$; $p < .001$), and Chaotic ($F(1,1414) = 27.72$; $p < .001$) (Table 3).

-----Insert Table 3 about here-----

Convergent and divergent validity of FACES IV

Pearson correlations were performed to examine the relationship between FACES IV and the dimensions of Family Communication, Family Satisfaction, and Parent and Peer Attachment. Table 4 displays the results of these analyses. Family Satisfaction and Family Communication correlated with other scales as expected on the basis of other researches (Mirnics et al., 2010): there were strong positive correlations with the balanced scales and negative correlations with the unbalanced scales. Similar results were found for Parent and Peer attachment, but only Parent attachment showed the strongest relationship with balanced and unbalanced scales.

-----*Insert Table 4 about here*-----

Conclusion

There were three principal aims of this study: the first one was to evaluate the reliability, validity and factorial structure of FACES IV, the second one was to investigate the relevance of sex and age on family functioning and the third to study the relationship between family functioning, communication and satisfaction and adolescents' perception of parent and peer attachment. The lack of valid and reliable measurements of family functioning, especially in the Italian context, has impeded research on this topic. We believe that the measurement of these variables is mandatory, not only for a diagnostic and clinical comprehension of the family, but for understanding adolescents' behaviour and their psychological well-being from a systemic perspective. In this study we examined the main questions concerning the reliability, validity and structure of FACES IV: the dimensions formulated to define family functioning were found after

the exploratory factor analysis and internal consistency results were high. Data showed that the first factor, which can be called the balanced dimension, was loaded by all the items belonging to the Cohesion and Flexibility scales. There was only one item of the Rigid scale that showed an expected and high correlation with this first factor (item 23: 'Our family is highly organized'). This item describes a family as 'highly' organized, but the adverb 'highly' should probably be translated into Italian as 'excessively' in order to underline the idea of a non-balanced way of family functioning in terms of inner organization. All the other items of FACES IV that belong to the same scale showed high correlations with only one dimension and no cross-loading correlations.

For the most part, our pattern of correlations is consistent with the correlations derived from the validation sample of Gorall, Tiesel, and Olson (2006) and the study of Olson et al. (2007); however, most of our correlations were of lesser magnitude. Higher scores on the Cohesion dimension were strongly related to higher scores on the Flexibility scale ($r = 0.70$) and lower scores on the Disengaged dimension ($r = -0.55$). The Flexibility scale was negatively correlated particularly with the Disengaged ($r = -0.39$) and Rigid dimensions ($r = -0.31$) whereas the Chaotic scale was positively correlated with Disengaged ($r = 0.40$) and Rigid dimensions ($r = 0.23$). Higher scores on the Enmeshed dimension were strongly related to higher scores on the Rigid ($r = 0.38$) and Chaotic scales ($r = 0.23$). The balanced scales were very highly correlated, suggesting a strong concordance in the region where family functioning and health are theorized to be at their maximum. There were also high negative correlations between the balanced scales of each dimension with some of the extremes of the other dimensions. Yet, even with the different range of magnitude, all the signs were in the expected direction.

As regards demographics, age difference was found on three dimensions: Cohesion, Enmeshed, and Rigid. For these scales the younger group (13-15), compared with middle adolescents (16-18) and young adults (19-22) showed significantly higher scores (Table 3). As in previous research on an Italian sample of adolescents (Tafà & Baiocco, 2009), younger adolescents perceived a higher level of cohesion in the family but at the same time a more negative perception of family functioning, as expressed by a higher score on the Rigid and Enmeshed dimensions. A possible explanation is that self-reports seem to reflect a more realistic image about family functioning for the elderly, in comparison with younger subjects who could be prone to idealization of the family institution.

Sex differences revealed that females showed a more positive attitude towards their families: females reported a higher mean score on the Cohesion and Flexibility dimensions, whereas males had a higher mean score on Disengaged, Enmeshed, and Chaotic dimensions (Table 3). Different studies have noted that adolescent females demonstrate heightened emotional awareness in family relationships (Murray, Halligan, Adams, Patterson, & Goodyer, 2006; Steinberg & Davila, 2008; Sunday et al., 2008). Further research is needed to determine the role of gender in the development of trust and intimacy and perceived family functioning.

The correlations between the three family scales and the FACES IV scales were analysed to determine the instrument validity. Table 4 shows large correlations between the FACES IV scales and the dimensions of Family Communication, Family Satisfaction, and Parent and Peer Attachment. Family Satisfaction and Family Communication correlated with other scales as expected on the basis of other researches (Mirnics et al., 2010). Similar results were found with Parent and Peer attachment, but only Parent attachment showed the strongest relationship with the Balanced and Unbalanced scales. Correlations were strongest between the Cohesion and

Flexibility scales and Family Communication (respectively $r = 0.72$ and $r = 0.66$) and Satisfaction (respectively $r = 0.64$ and $r = 0.59$) as well as parents (respectively $r = 0.37$ and $r = 0.22$) and peer attachment (respectively $r = 0.16$ and $r = 0.12$). The Chaotic and Disengaged subscales showed a negative correlation with Parent (respectively $r = -0.34$ and $r = -0.34$) and Peer attachment (respectively $r = -0.15$ and $r = -0.11$). The other two unbalanced scales, Enmeshed and Rigid, however, showed negative correlation with Family Communication and Satisfaction (Rivero et al., 2010) and parents and peer attachment in the expected direction, thus supporting the curvilinear hypothesis according to which families scoring higher on these FACES IV subscales should have more difficulty in their functioning. Data underscore the importance of familial relationships in supporting adolescents' efforts to achieve psychological independence from parents while maintaining connectedness.

Discussion

The comprehension of family functioning is relevant to improving the effectiveness of psychological and social work interventions with youths and their families. Psychologists and social work practitioners need to be well-versed in conducting comprehensive measures of family functioning, and instruments like FACES IV may be helpful tools for this task. As noted earlier, this is the first research in the Italian context that has examined the reliability and validity of FACES IV in a sample of non-clinical adolescents. Our study suggests that the Circumplex model has a cross-cultural applicability and can be a useful instrument in the Italian context. Of course, our research is not exempt from limitations such as the use of a convenience sample of non-clinical families. This issue limits the variability in the scale scores, subsequently limiting the generalization of the results to other more diverse families. It is important to use

FACES IV with different populations in terms of types of problems (drug abuse, delinquency, etc.), ethnicity and cultural background, family structure (single parent, step-families, etc.) family income, social class, and education. In future studies we intend to include multiple family members in order to investigate the low correlation existing between family members.

References

- Armsden, G. C., & Greenberg, M. T. (1987). The inventory of parent and peer attachment: Individual differences and their relationships to psychological well-being in adolescence. *Journal of Youth and Adolescence*, *16*, 427-454.
- Barnes, H., & Olson, D. (1985) Parent adolescent communication and the Circumplex Model. *Child Development*, *56*, 438-447.
- Bowlby, J. (1988). *A secure base*. London: Routledge.
- Butler, S., Fearon, P., Atkinson, L., & Parker, K. (2007). Testing an interactive model of symptom severity in conduct disordered youth: Family relationships, antisocial cognitions and social contextual risk. *Criminal Justice and Behavior*, *34*(6), 721-738.
- Fisher, L., & Feldman, S. S. (1998). Familial antecedents of young adult health risk behavior: A longitudinal study. *Journal of Family Psychology*, *12*(1), 66-80.
- Franklin, C., & Streeter, C. L. (1993). Validity of the 3-D Circumplex Model for family assessment. *Research on Social Work Practice*, *3*, 258-275.
- Hanson, C., Cigrang, J., Harris, M., Carle, D., Relyea, G., & Burghan, G. (1989). Coping styles in youths with insulin-dependent diabetes mellitus. *Journal of Consulting and Clinical Psychology*, *57*, 644-651.
- Hauser, S. T. (1991). *Adolescents and their families: Paths of ego development*. New York, NY: Free Press.
- Henry, C. S., Sager, D. W., & Plunkett, S. W. (1996). Adolescents' perception of family system characteristics, parent-adolescent dyadic behavior, adolescent qualities, and adolescent empathy. *Family Relations*, *45*, 283.

- Hill, J. P., & Holmbeck, G. N. (1987). Familial adaptation to biological change during adolescence. In R.M. Lerner (Ed.), *Biological-psychosocial interactions in early adolescence: Child psychology* (pp. 207-223). Hillsdale, NJ: Erlbaum.
- Kazak, A. E., Barakat, L., Meeske, K., Christakis, D., Meadows, A., & Casey, R. (1997). Post-traumatic stress, family functioning and social support in survivors of childhood leukemia and their mothers and fathers. *Journal of Consulting and Clinical Psychology, 65*, 120-129.
- King, M. B. (1989). Eating disorders in a general practice population. Prevalence, characteristics and follow-up at 12 to 18 months. *Psychological Medicine, 14*, 1-34.
- Kline, R. B. (1995). New objective ratings scales for child assessment, II. Self-report scales for children and adolescents: Self-report of personality of the behavior assessment system for children, the youth self-report, and the personality inventory for youth. *Journal of Psychoeducational Assessment, 13*, 169-193.
- Larson, R., Richards, M., Moneta, G., Holmbeck, G., & Duckett, E. (1996). Changes in adolescents' daily interactions with their families from ages 10 to 18: Disengagement and transformation. *Developmental Psychology, 32*, 744-754.
- Magill, J., & Hurlbut, N. L. (1986). The self-esteem of adolescents with cerebral palsy. *The American Journal of Occupational Therapy, 40*(6), 402-407.
- Marcus, R. F., & Betzer, P. D. S. (1996). Attachment and antisocial behavior in early adolescence. *Journal of Early Adolescence, 16*(2), 229-248.
- Marsac, M. L., & Aldefer, M. A. (2010) Psychometric properties of the Faces-IV in families of pediatric oncology patients. *Journal of Pediatric Psychology Advance Access, 10*, 1-11.
- Maurice-Stam, H., Oort, F., Last, B., & Grootenhuis, M. (2008). Emotional functioning of parents of children with cancer: The first five years of continuous remission after the end of treatment. *Psycho-Oncology, 17*, 448-459.
- Minuchin, S. (1974). *Families and family therapy*. Boston, MA: Harvard University Press.
- Mirnic, Z., Vargha, A., Tòth, M., & Badgy, E. (2010). Cross-cultural applicability of Faces IV. *Journal of Family Psychotherapy, 21*, 17-33.
- Murray, L., Halligan, S. L., Adams, G., Patterson, P., & Goodyer, I. M. (2006). Socioemotional development in adolescents at risk for depression: The role of maternal depression and attachment style. *Developmental Psychopathology, 18*, 489-516.
- Noller, P. (1994). Relationships with parents in adolescence: Process and outcome. In R.

- Montemayor, G. R. Adams, & T. P. Gullotta (Eds.), *Personal relationships during adolescence* (pp. 37-77). Thousand Oaks, CA: Sage.
- Olson, D. H. (1995). *Family Satisfaction Scale*. Minneapolis, MN: Life Innovations.
- Olson, D. H. (2008). *FACES IV Manual*. Minneapolis, MN: Life Innovations.
- Olson, D. H., & Gorall, D. M. (2003). Circumplex Model of Marital and Family Systems. In F. Walsh (Ed.), *Normal family processes* (3rd ed., pp. 514-548). New York, NY: The Guilford Press.
- Olson, D. H., Russell, C. S., & Sprenkle, D. H. (1989). *Circumplex Model: Systematic assessment and treatment of families*. New York, NY: Haworth Press.
- Olson, D. H., Sprenkle, D. H., & Russell, C. (1979). Circumplex model of marital and family systems: I. Cohesion and adaptability dimensions, family types, and clinical applications. *Family Process, 18*, 3-28.
- Olson, D.H. (2000). Circumplex models of marital and family systems. *Journal of Family Therapy, 22*, 144-167.
- Olson, D.H. (2011). FACES IV and the Circumplex Model: Validation Study. *Journal of Marital and Family Therapy, 37*, 1, 64-80.
- Onnis, L. (ed.). (2010). *Creating bondings, healing bondings*. Turin: Bollati Boringheri.
- Rivero, N., Martinez-Pampliega, A., & Olson, D. H. (2010). Spanish adaptation of the Faces IV Questionnaire: Psychometric characteristics. *The Family Journal: Counseling and Therapy for Couples and Families, 18*(3), 288-296.
- Scabini, E., & Cigoli, V. (2006). *Family identity: ties, symbols, and transitions*. Mahwah, NJ: Erlbaum.
- Scabini, E., & Galimberti, C. (1995). Adolescents and young adults: A transition in the family. *Journal of Adolescence, 18*, 593-606.
- Sloper, P. (2000). Predictors of distress in parents of children with cancer: A prospective study. *Journal of Pediatric Psychology, 25*, 79-91.
- Steinberg, L., & Morris, A. S. (2001). Adolescent development. *Annual Review of Psychology,*

52, 83-110.

- Steinberg, S. J., & Davila, J. (2008). Romantic functioning and depressive symptoms among early adolescent girls: The moderating role of parental emotional availability. *Journal of Clinical Child and Adolescent Psychology*, 37, 350-362.
- Sunday, S., Labruna, V., Kaplan, S., Pelcovitz, D., Newman, J., & Salzinger, S. (2008). Physical abuse during adolescence: Gender differences in the adolescent's perception of family functioning and parenting. *Child Abuse and Neglect*, 32, 5-18.
- Tafà, M. (2007a). Faces III. In S. Mazzoni, & M. Tafà (Eds.), *Intersubjectivity in the family. Methods for the observation and the assessment of family relationships* (pp. 163-179). Milan: Franco Angeli.
- Tafà, M. (2007b). Parent Adolescent Communication scale. In S. Mazzoni, & M. Tafà (Eds.), *Intersubjectivity in the family. Methods for the observation and the assessment of family relationships* (pp. 180-189). Milan: Franco Angeli.
- Tafà, M., & Baiocco, R. (2009). Addictive behaviour and family functioning during adolescence. *American Journal of Family Therapy*, 37(5), 388-395.
- Younnis, J., & Smollar, J. (1985). *Adolescent relations with mothers, fathers and friends*. Chicago, IL: University of Chicago Press.

Table 1. Sorted rotated factor loading matrix for the 42 items in 6 scales (maximum likelihood analysis with direct oblimin oblique rotation)

N. Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
CO7	0.70				
F2	0.63				
F14	0.61				
CO13	0.61				
F20	0.59				
CO25	0.57				
C6	-0.56				
R23	0.56				
C18	-0.55				
F32	0.56				
CO37	0.54				
CO19	0.54				
F8	0.53				
F38	0.52				
CO31	0.46				
CO1	0.42				
F26	0.32				
E40		0.59			
E34		0.58			
E16		0.54			
E22		0.50			
E28		0.48			
E4		0.48			
E10		0.31			
C12			0.71		
C30			0.66		
C24			0.57		
C42			0.56		
C36			0.52		
R5				0.77	
R11				0.77	
R17				0.63	
R35				0.63	
R29				0.47	
R41				0.39	
D21					0.62
D33					0.60
D39					0.56
D27					0.56
D15					0.49
D9					0.42
D3					0.41
Eigenvalues	7.42	3.40	2.30	1.64	1.28
% explained variance	17.67	8.09	5.47	3.91	3.06

Note. Coefficients less than .25 are omitted from the table. D=Disengaged; CO=Balanced Cohesion; E=Enmeshed; F=Balanced Flexibility; R=Rigid; C=Chaotic.

Table 2. Descriptive statistics and correlations among FACES IV dimensions

Scales FACES IV	M	SD	Alpha	2	3	4	5	6
1. Cohesion	26.96	5.12	0.73	<u>0.70**</u>	-0.55**	0.08	-0.19*	-0.14*
2. Flexibility	25.66	4.54	0.68	1	-0.39**	-0.10*	-0.31*	-0.15*
3. Disengaged	16.88	4.96	0.63		1	0.14*	<u>0.02</u>	<u>0.40**</u>
4. Enmeshed	16.47	4.36	0.67			1	0.38**	<u>0.23**</u>
5. Rigid	20.77	4.69	0.68				1	<u>0.35**</u>
6. Chaotic	16.93	4.78	0.69					1

Note. *p <.05. **p <.001

Table 3. Age and gender differences

Scales		M	SD	F
Age				
1. Cohesion	13-15 years	27.42 ^a	0.29	3.53*
	16-18 years	26.48 ^b	0.24	
	19-22 years	27.06 ^b	0.21	
2. Flexibility	13-15 years	26.08	0.25	2.52
	16-18 years	25.23	0.21	
	19-22 years	25.71	0.19	
3. Disengaged	13-15 years	16.24	0.28	2.35
	16-18 years	17.04	0.23	
	19-22 years	17.12	0.20	
4. Enmeshed	13-15 years	17.04 ^a	0.24	9.61**
	16-18 years	16.23 ^b	0.20	
	19-22 years	16.10 ^b	0.18	
5. Rigid	13-15 years	21.56 ^a	0.26	14.06**
	16-18 years	20.84 ^b	0.21	
	19-22 years	20.20 ^b	0.19	
6. Chaotic	13-15 years	17.27	0.27	2.24
	16-18 years	16.97	0.22	
	19-22 years	16.73	0.20	
Sex				
1. Cohesion	Females	27.42	0.21	11.72**
	Males	26.55	0.19	
2. Flexibility	Females	25.92	0.19	4.99*
	Males	25.43	0.17	
3. Disengaged	Females	16.10	0.21	28.45**
	Males	17.50	0.18	
4. Enmeshed	Females	15.84	0.18	25.67**
	Males	17.08	0.16	
5. Rigid	Females	20.31	0.19	27.72**
	Males	21.43	0.17	
6. Chaotic	Females	16.79	0.20	3.52
	Males	17.19	0.18	

Note. Age group main effect. Tukey test ($p < .001$): a>b; * $p < .05$; ** $p < .001$

Table 4. Relationship between Family Communication, and Satisfaction, Parent/Peer Attachment, and FACES IV scale scores

FACES IV	Family Communication	Family Satisfaction	IPPA-G	IPPA-P
1. Cohesion	0.72**	0.64**	0.37**	0.16*
2. Flexibility	0.66**	0.59**	0.22**	0.12*
3. Disengaged	-0.47**	-0.47**	-0.34**	-0.18*
4. Enmeshed	-0.13**	-0.11*	-0.22**	-0.11*
5. Rigid	0.18*	-0.15*	-0.12*	0.10*
6. Chaotic	-0.11*	-0.16*	-0.34**	-0.15*