The Family of Origin Scale in Greece

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Abstract

The present study examined the factor structure of the Family of Origin Scale (FOS) with a Greek population. A 7-factor solution using principal components analysis with oblique (oblimin) rotation emerged. The findings in general support the psychometric properties of the FOS, which may be used for research purposes in Greece.

Keywords: Family of Origin Scale, Factor analysis, University students, Greece

1. Introduction

There has been an increased interest in multicultural and international topics in the field of family counseling. A topic of interest has been the family of origin and its impact on people's lives across cultures. The family of origin often becomes the blueprint by which people make decisions on how relationships are to be conducted and perceived, and it is one of the most important influences in a person's psychological development (Harvey & Bray, 1991). Literature on ethnicity and families suggests that different cultural groups may demonstrate specific ways of family functioning and experience differently the family of origin (McGoldrick, Giordano & Garcia-Preto, 2005).

The Family of Origin Scale (FOS; Hovestadt, Anderson, Piercy, Cochran, & Fine, 1985) is a measure which has received considerable interest in relation to the topic of family research in the United States (Gavin & Wambolt, 1992; Lee, Gordon & O'Dell 1989; Mazer, Mangrum, Hovestadt & Brashear, 1990). The FOS is designed to measure perceived levels of psychological health in one's family of origin (Hovestadt et al., 1985). The scale assesses the retrospective perceptions adult members have of their family when they were growing up. Family systems theories made several theoretical assumptions and the FOS was developed to validate empirically some of these ideas (Bowen, 1978; Framo, 1976, 1992).

The original FOS assessed autonomy and intimacy, two interwoven concepts of family life (Yelsma, Hovestadt, Anderson & Nilsson, 2000). Several studies have examined the psychometric properties of the measure (Gavin & Wamboldt, 1992; Kline & Newman, 1994; Lee, Gordon & O'Dell, 1989; Mazer et al., 1990; Saunders, Schudy, Searight, Russo, Rogers & Manley, 1994). Yelsma et al. discussed the controversy which developed on whether the FOS was a multidimensional or unidimensional measure. Saunders et al., 1994 stated that the FOS could be used as a global indicator of communication in the family of origin. Gavin and Wamboldt's (1992) factor analytic study found that the first factor explained 43% of the variance. The first factor seemed to describe how pleasant, warm and easy going about conflict the family was. Lee's et al. study (1989) explained 40% of the variance, and it was suggested that the FOS measures family communication. According to Manley, Wood, Searight, Skitka, and Russo (1994) the FOS yields a unitary factor. Their results also validated Hovestad et al.'s (1985) original theoretical constructs. Yelsma et al. (2000) stated that there is enough evidence that one major construct materializes from the original 40 item FOS.

Interest in the study of the Greek family began in the 1960s with the Vassilious who created the first systemically-oriented institute in Athens, which focused on therapy, research and training (Sakkas, 1994a, 1994b; Vassiliou, 1990). The Greek family has experienced several transformations in the past 50 years. Following World War II and a Civil War, approximately half of the population in the early 1950's migrated from small communities to urban cities and many others immigrated to the US, Canada, Germany and Australia. Research

has been conducted on the psychosocial changes of the Greek Family, and its transformation from an extended family structure and emphasis on the ingroup to the nuclear family structure with a child centered focus (Georgas 1999, 2000; Katakis, 1998; Papadiotis & Softas-Nall, 2006).

Georgas (1999, 2000) presented an ecosocial model on the psychosocial differentiation of the Greek individual and discussed family bonds, structure and functions. Despite the evidence that collective values are diminishing in Greece, in comparison to other Northwestern European countries, the presence of the extended Greek Family is still very strong (Georgas, 1999). The transformations of the Greek family have created tensions of whether one should behave as an individual or as a member of a family (Katakis, 1998; Papadiotis & Softas-Nall, 2006; Softas-Nall, 2003), and issues are raised which directly relate to one's family of origin.

It has been suggested that studies should examine differences in family affective expression in diverse ethnic groups and cultures (Yelsma et al., 2000). The purpose of the present study is to research the structural characteristics and psychometric properties of the FOS with Greek participants, and to determine its utility as a research instrument for that culture. Research questions include whether the FOS with a Greek population has a unidimensional or multidimensional construct, and how it compares to previous studies. It is hoped that the findings will contribute to the literature exploring the usefulness of this instrument with another culture.

2. Method

2.1 Participants

Three hundred and six Greek university students, 81 males and 225 females, aged 18-29 years ($M = 21.00$, $sd = 1.88$) participated in the study. Ninety five percent of the participants reported that their parents were married (94%) or remarried (1%), 2.0% had divorced parents, 1.3% had separated parents, and 1.7% had widowed parents. In terms of siblings, 63% had one more sibling in the family, and 28% had two siblings in the family. Finally, 51% of them were the first child in the family. All participants reported to be Greek in nationality, from middle-class income families, and studying a variety of subjects.

2.2 Instrument and Procedure

Family of Origin Scale (FOS). The FOS (Hovestadt et al., 1985) is a 40-item self report inventory comprised of two sets of 20 questions that differ by positive or negative scaling; each question type consists of two identical items, except for differences in wording (i.e., positive or negative). The items are theoretically grouped into the hierarchy of ten subscales, two superordinate dimensions, and a global measure, which reflects a respondent's perception of his or her family-of-origin health. The two primary concepts are "Autonomy" and "Intimacy", which are seen as existing in an optimal balance and as necessary for psychological health.

The Autonomy concept contains the following five subscales: Clarity of Expression, Responsibility, Respect for Others, Openness to Others, and Acceptance of Separation and Loss. These subscales reflect the respondent's perception of family members' capacity for clear, effective, and responsible communication as well as family's perceived capacity to openly address events such as interpersonal loss and the family's tolerance for individual differences. The Intimacy concept consists of the subscales: Mood and Tone, Range of Feelings, Conflict Resolution, Empathy for others, and Trust subscales. These subscales assess the respondent's perception of the family climate as cohesive and supportive and address family members' perceived conflict resolution abilities and interpersonal sensitivity (Hovestadt et al., 1985; Lee et al., 1989).

The 20 negative scaled items were reverse scored in order to achieve a uniform direction. Therefore, each item had a highest family health response of 5 and a lowest response of 1 yielding a possible range of 40-200 for the individual's global score. In Hovestadt's et al. (1985) the FOS demonstrated high test-retest reliability over a two-week period with undergraduate and graduate psychology students ($r = .97$, $p < .001$). The scale has also been found to demonstrate sufficient concurrent (Gavin & Wamboldt, 1992) and discriminant validity (Lee et al., 1989; Searight, Manley, Binder, Krohn, Roger & Russo, 1991).

The present study was undertaken in a different language and cultural setting than the context of the original instrument development. The researchers followed the methodology proposed in cross-cultural research (e.g., van de Vijver & Hambleton, 1996, Ægistóttir, Gerstein & Cinanbaş, 2008), which includes a procedure of mutual translation in Greek language by two bilingual individuals (Brislin, 1986), followed by a back-translation to English by two different bilingual individuals. For validity control, the translated version was examined by two experts in the field of family therapy and developmental psychology that spoke both languages. The translators were familiar with the Greek culture, the construct addressed, and the principles of assessment (Hambleton & de Jong, 2003; van de Vijver & Hambleton, 1996). Finally, a pilot study on the translated version was carried out with 25 university students in order to control for possible problems in terms of language and items content

comprehension.

In the current study, participants were asked to recall the family when they were 12 to 15 years of age as they completed the FOS. Participants voluntarily completed the research in the beginning of class sessions. The classes were randomly selected from all departments of the university.

2.3 The Statistical Analyses

The present study was fundamentally a replication of the analyses carried out by Lee et al. (1989) as well as Ryan, Kawash, Fines & Powell (1994) in order to evaluate the scale factoring in a different cultural and language setting. In order to examine the structural characteristics of the FOS, an exploratory factor analytic procedure (EFA) was employed to discover the factor structure and to examine internal reliability. It should be additionally noted that most of the studies that factor analysed the FOS have chosen as the main factor analytic procedure the exploratory technique of principal components analysis with orthogonal varimax rotation solution (Ryan et al., 1994; Kline & Newman, 1994; Mazer et al., 1990; Gavin & Wamboldt, 1992; Lee et al., 1989) although there are exceptions (Manley et al., 1994).

3. Results

3.1 Descriptive Statistics

A beginning step examined the item and total score distributions for the data collected in this study. Table 1 presents item-level descriptive statistics of means, standard deviations, skewness, and kurtosis values as well as item-total correlations of each of the FOS items. The assumption of normality appeared justified since no skewness or kurtosis screening produced a value that exceeded the +2 to -2 range for skewness and +3 to -3 range for kurtosis, which are required for the data to be considered as normally distributed (Hutcheson & Sofroniou, 1999).

The mean FOS total score for all the participants was 146.3 (*sd*= 23.56), and the means were 143.4 (sd=22.13) and 147.4 (sd=24.0) for males and females respectively. The internal consistency estimates for the total scale were computed. The Cronbach's alpha was found to be .95, a value that is considered sufficiently high. Analogous alpha values of .96 were found in the studies by Gavin and Wamboldt (1992) and Ryan et al. (1994). With regard to the item-total correlations, no item had a negative item-total correlation and all but one item-total correlation ranged from 0.28 to 0.74, and for 29 items these correlations were in the 0.40 to 0.69 range. Only for one item (item 8) the item-total correlation value was .16, a value marginally below .2, which is considered as a minimum sufficient limit for an item inclusion for further scale analyses since it is an indication of sharing little variance with the total scale score (Field, 2005). However, due to the sufficient sample size for scale analysis (Kim & Mueller, 1978; Lawley & Maxwell, 1971), it was decided to include the item in further analyses.

3.2 Factor Analyses

The structural characteristics of the 40 items of the FOS were examined through principal-components analysis (PCA) and maximum likelihood factoring (MLF). PCA was the standard procedures in the major previous studies using the FOS (Lee et al., 1989; Gavin & Wamboldt, 1992; Kline & Newman, 1994; Mazer et al., 1990). MLF was also used with caution since it was the factor extraction method performed in Ryan's et al. (1994) study. This caution was justified by the fact that according to some researchers (e.g., Srholec & Verspagen, 2008) this method requires multivariate normality of the data which is not a viable assumption for a dataset consisting of binary and Likert scale variables.

The interpretations of the factor loadings were based on the factor matrix after orthogonal rotation (Varimax), which was the preferred method in the majority of the studies reviewed, unless the factors highly correlate (higher than 0.50). In that case, use was made of the oblique rotation. As soon as a factor intercorrelation was very high, it was useful to re-examine the factor solution. Thus, each of these procedures was combined with orthogonal (varimax) and oblique (oblimin) rotations, with Kaiser normalization. Both solutions were used because orthogonal rotations, such as the most widely used varimax normalized rotation, are constrained to produce factor scores that are uncorrelated. However, more complex and recently developed oblique rotations do not impose this restriction (i.e., factors obtained using oblique rotations are not mutually uncorrelated). In addition, if the factors are truly uncorrelated, orthogonal and oblique rotation produce nearly identical results (Costello & Osborne, 2005).

The most important criterion for determining the appropriate number of factors was factor adequacy. With respect to the communality values for the items, items loading lower than 0.15 were removed in principle. In cases of doubt, the item was kept and the extent to which it contributed to the reliability was examined. The analysis was set to produce a variety of factor-solutions using the above described approaches. A 7-factor solution using principal components analysis with oblique (oblimin) rotation emerged. This particular solution

extracted components similar to those that had emerged in other studies with similar analytic methodology. Item communalities (h^2), which are a measure of variance explained by the extracted factors, were sufficiently high (i.e., all but one found to be well above .45). There were several adequate to strong loaders (>.50) and a restricted number of "crossloading" items, and no factor with less than three items. With regard to the final seven components solution, Kaizer's criterion seems to be accurate since the sample size exceeds 250 and the average communality (.607) after extraction is greater than 0.6 (Field, 2005).

This seven-factor solution, a solution similar to that of Ryan et al. (1994), Mazer et al. (1990), and Kline and Newman (1994) studies, accounted for 60.72% of the total variance. The individual items retained in the model and factor loadings are presented in Table 2, together with the communalities (h^2), eigenvalues and the percentage of variance explained. Each factor was then interpreted by examining item content and pattern of coefficients.

The 12 items in the first factor accounted for the larger share of the post-rotation variance (15.517%). The factor included the four items in the "Mood and Tone" subscale, three items from "Empathy", two items from "Conflict Resolution", and two items from the "Responsibility" subscale. The factor structure reflected "facilitation of family members' feelings" (Kline & Newman, 1994) and partially the hypothesized "Intimacy" concept.

The second factor, which accounted for 5.63% of the variance, emerged in others studies as well (e.g., Mazer et al., 1994; Ryan et al., 1994; Lee et al., 1989). The second factor was composed exclusively of the four items from the "Acceptance of Separation and Loss" subscale of the FOS, which is part of the Autonomy concept.

The third factor, which accounted for 4.07% of the total variance, corresponded almost entirely to the "Trust" scale of the FOS. The fourth factor, which accounted for 3.72% of the variance, contained all of the items from the "Respect for Others" subscale together with two items of "Openness to others" and three more items from three other subscales. The fifth factor, which accounted for 3.47% of the variance, consisted of two items of the "Responsibility" subscale and two more items of the "Clarity of expression" subscale. Both subscales were part of the "Autonomy" concept.

The last factors presented the most mixed pattern of component structure. More specifically, the sixth factor, which accounted for 3.23% of the variance, was primarily comprised of an item from the "Clarity of expression" subscale with the addition of an item from the "Range of Feelings" scale and one more from the "Openness to others" FOS subscales. The final factor accounted for 2.73% of the variance and was comprised of 5 items from five different subscales of the FOS. The items with the higher loadings were contained in the Autonomy concept and more specifically the "Empathy" and "Clarity of Expression" subscales.

3.2.1 Additional Analyses

In a second stage, we replicated a procedure performed in Lee's et al. (1989) and Ryan's et al. (1994) study in which a principal components analysis was carried out on the 10 FOS subscales scored in accordance with the test authors' instructions (Hovestadt et al., 1985).The ten composite/combination scores were produced by consolidating the four respective/constituent items of each subscale. According to Lee et al. (1989), confirmation of meaningful subscales in the FOS "might be indicated by the existence of a strong "general' factor, on which all the subscales load, with significant residual variance divided relatively equally among other factors representing the presumed subscales" (p. 25). Table 3 displays the FOS items that were combined into each new composite subscale score as well as the results of the PCA of the 10 FOS scales scored in accordance with the Hovestadt and colleagues' (1985) instructions.

The result indicated a single, clear "hyperstructure" with large loadings from each of the scales. This finding was virtually identical to that found by Lee et al. (1989) and Ryan et al. (1994), but unlike the five factor structure found by Manley et al. (1990).

4. Discussion

The present study is the first one to attempt researching the properties of a scale related to family of origin in Greece. Research conducted in Greece and focusing on family issues has not addressed family of origin in a questionnaire format, let alone looking into the psychometric properties of a scale. The present study and the findings on the psychometric properties support the utility of the FOS for the Greek culture.

Based on the results the mean FOS total score for all the participants and the means for males and females are slightly different from those found in studies carried out in the US with non-clinical samples. For example, in Ryan's et al. (1994) study, the mean score for the non-clinical group was 136.2. Also, in Lee and colleagues (1989) study, the group of nonpatients revealed a mean of 149.4. Additionally, the current findings were in agreement with the latter study with regard to the non significant differences found between men and women's

total FOS scores.

The 12 items in the first factor included the four items in the "Mood and Tone" subscale, three items from "Empathy", two items from "Conflict Resolution", and two items from the "Responsibility" subscale. The factor structure reflected "facilitation of family members' feelings" (Kline & Newman, 1994) and partially the hypothesized "Intimacy" concept. Gavin and Wamboldt (1992) wrote that this first factor reflected "a general sense of how pleasant and warm the family was, as well as how facile the family was at resolving conflict" (p. 183). Ryan et al. (1994) suggested that this factor is primarily concerned with the emotional tone in the family distinguished along a warmth-coldness dimension. In addition, Lee et al. (1989), Mazer et al. (1990), and Gavin and Wamboldt (1992) found that the first factor accounted for between 39% and 43% of the post-rotation variance, and in the Ryan et al. (1994) study, the pre-rotation variance-accounted-for value for the first factor was 49.2%.

The second factor was confirmed in others studies as well (e.g., Mazer et al., 1994; Ryan et al., 1994; Lee et al., 1989), and included four items from the "Acceptance of Separation and Loss" subscale of the FOS, which is part of the Autonomy concept. The third factor matched the "Trust" scale of the FOS, which duplicated the fifth factor of the Mazer et al. (1990) study.

The fourth factor included all items from the "Respect for Others" subscale, two items of "Openness to others," and three more items from three other subscales. In other words, the factor is partially congruent with the "Autonomy" concept hypothesized by the test authors. The fifth factor incorporated two items from the "Responsibility" subscale and two items from the "Clarity of expression" subscale. Both subscales were part of the "Autonomy" concept.

The sixth factor was comprised of an item from the "Clarity of expression" subscale, an item from the "Range of Feelings" scale, and one more from the "Openness to others" subscales. The seventh factor contained items from five different subscales. The items with the higher loadings were contained in the Autonomy concept and more specifically the "Empathy" and "Clarity of Expression" subscales.

The ability to express one's views, opinions, and feelings, even though they may differ from those of parents and other family members, was the psychological construct which appeared as the dominant factor in all analyses on the FOS that have been reported. The unidimensionality of the FOS that has been suggested by Lee et al. (1989), and the present study may be a function of the use of retrospective perceptions.

The FOS in the Greek version can be used as a research tool to study the Greek family in relation to different populations. In addition, the FOS in the translated Greek format can be used as a supplement to clinical interviews when exploring family issues and making assessments to make treatment decisions. The FOS may also be used in University Counseling Centers with student populations in clinical sessions to encourage self awareness and resolution of issues with the family of origin. Tensions exist for this age group on whether to behave as an individual or as a member of a family in a culture that values family loyalty (Katakis, 1998; Papadiotis & Softas-Nall, 2006; Softas-Nall, 2003). Many issues are raised for young Greek adults which directly relate to one's family of origin and the FOS in the Greek version maybe used to promote clinical work on issues of differentiation.

The study is limited by the fact that the sample was comprised by students aged 18-29. Future research ought to examine the utility of the FOS by collecting data from clinical populations and different age groups. Given the fact that family values have drastically changed in Greece the past 30 years, conducting research with different age cohorts could shed light into multi-generational changes and processes.

Finally, when assessing family of origin issues with Greek participants, future research may consider the different factors that emerged in this study. Additional research would assist in confirming the factors that emerged and encourage any type of empirical research on the topic of family or origin.

References

Ægistóttir, S., Gerstein, L. H., & Cinanbaş, D.C. (2008). Methodological issues in cross-cultural counseling research: Equivalence bias and translations. *The Counseling Psychologist, 36,* 2, 188-219.

Bowen, M. (1978). *Family Therapy in Clinical Practice.* New York: Aronson.

Brislin, R. W. (1986). The wording and translation of research instruments. In W. J. Lonner & J. W. Berry (Eds.), *Field methods in cross-cultural research* (pp. 137-164). Beverly Hills, CA: Sage.

Costello, A. B., & Osborne, J. (2005). Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical Assessment, Research & Evaluation, 10,* 1-9.

Field, A. (2005). *Discovering statistics using SPSS.* Beverly Hills, CA: Sage.

Framo, J. L. (1976). Family of origin as a therapeutic resource for adults in marital and family therapy: You can and should go home again. *Family Process,* 15, 193-210.

Framo, J. L. (1992). *Family of origin therapy: An intergenerational approach.* New York: Brunner-Mazel.

Gavin, L. A., & Wamboldt, F. S. (1992). A reconsideration of the family of origin scale. *Journal of Marital & Family Therapy,* 18, 179-188.

Georgas, J. (1999). Family as a context variable in cross-cultural psychology. In J. Adamopoulos, & Y. Kashima (Eds.), *Social Psychology and cultural context* (pp. 163-175). Beverly Hills: Sage.

Georgas, J. (2000). Psychodynamics of the Greek family: Similarities and differences with other countries. In A. Kalantzi-Azizi & E. Begevegis (Eds.), *Training and sensitivity issues for mental health professionals working with children and adults.* Athens: Ellinika Grammata. [in Greek]

Hambleton, R. K., & de Jong, J. H. A. L. (2003). Advances in translating and adapting educational and psychological tests. *Language Testing,* 20, 127-134.

Harvey, D. M., & Bray, J. H. (1991). Evaluation of an intergenerational theory of personal development: Family process determinants of psychological and health distress. *Journal of Family Psychology*, 4, 298-325.

Hovestadt, A. J., Anderson, W. T., Piercy, F. P., Cochran, S. W., & Fine, M. (1985). A family of origin scale. *Journal of Marital & Family Therapy,* 11, 287-297.

Hutcheson, G., & Sofroniou, N. (1999). *The multivariate social scientist.* Thousand Oaks, CA: Sage.

Katakis, C. (1998). *The three identities of the Greek family.* Athens: Ellinika Grammata. [in Greek]

Kim, J. O., & Mueller C. W. (1978). *Factor analysis: Statistical methods and practical issues.* Beverly Hills: Sage.

Kline, C. D., & Newman, I. (1994). Factor structure of the family-of-origin scale: Does this scale measure what its creators say it does? *Journal of Marital & Family Therapy*, 20, 47-52.

Lawley, D. N., & Maxwell, A. E. (1971). *Factor analysis as a statistical method.* London: Butterworths.

Lee, R. E., Gordon, N. G., & O'Dell, J. W. (1989). The validity and use of the family-of-origin scale. *Journal of Marital & Family Therapy*, 15, 19-27.

Manley, C. M., Wood, P. K., Searight, H. R., Skitka, L. J., & Russo, J. R. (1994). A latent variable model of the family-of-origin scale for adolescents. *Journal of Youth & Adolescence,* 23, 99-118.

Mazer, G. E., Mangrum, O. L., Hovestadt, A. J., & Brashear, R. L. (1990). Further validation of the family of origin scale: A factor analysis. *Journal of Marital & Family Therapy*, 16, 423-426.

McGoldrick, M., Giordano, J., & Garcia-Preto, N. (2005). *Ethnicity and family therapy*. New York: The Guilford Press.

Papadiotis, V., & Softas-Nall, L. (2006). *Family systemic therapy: Basic approaches, theoretical positions and practical applications.* Athens: Ellinika Grammata. [in Greek].

Ryan, B. A., Kawash, G. F., Fine, M., & Powel, B. (1994). The family of origin scale: A construct validation study. *Contemporary Family Therapy,* 16, 145-159.

Sakkas, D. (1994a). A discussion with psychiatrist George Vassiliou: Family and group therapy in the context of social psychiatry. *Psychiatry Issues,* 4-6. [in Greek]

Sakkas, D. (1994b). An interview with the Vassilious: The development of family therapy as we experienced it. *Tetradia Psychiatrikis,* 45, 11-21. [in Greek]

Saunders, V., Schudy, K. L., Searight, H. R., Russo, J. R., Rogers, B. J., & Manley, C. M. (1994). The factor structure of the family of origin scale with young adolescents. *Family Therapy,* 21, 1-10.

Searight, H. R., Manley, C. M., Binder, A. F., Krohn, E., Rogers, B., & Russo, R. (1991). The families of origin of adolescent drug abusers: Perceived autonomy and intimacy. *Contemporary Family Therapy,* 31, 71-81.

Softas-Nall, L. (2003). Reflections of forty years of family therapy, research and systemic thinking in Greece. In K. Ng (Ed.), *Global perspectives in family therapy: Development, practice and trends* (pp. 125-). New York: Brunner-Routledge.

Srholec, M., & Verspagen, B. (2008). *The voyage of the Beagle in innovation system land: Explorations on*

sectors, heterogeneity and selection. Maastricht, The Netherlands: United Nations University.

van de Vijvev, F. J. R., & Hambleton, R. K. (1996). Translating tests: Some practical guidelines. *European Psychologist, 1,* 89-99.

Vassiliou, G. (1990). On studying-researching family and group processes for thirty-five years. *Psychiatriki*, 1, 283-288. [in Greek]

Yelsma, P., Hovestadt, A. J., Anderson, W. T., & Nilsson, J. E. (2000). Family of origin expressiveness: Measurement, meaning, and relationship to alexithymia. *Journal of Marital & Family Therapy*, 26, 353-363.

Table 1. Item descriptive statistics and item-total correlations for the total sample

	Item	M	SD	Skewness	Kurtosis	Item-total correlation
1.	In my family, it was normal to show both positive and negative feelings.	4.24	0.789	-0.988	0.772	.34
2.	The atmosphere in my family usually was unpleasant.	4.10	1.015	-1.176	0.860	.64
3.	In my family, we encouraged one another to develop new friendships.	3.62	0.926	-0.341	-0.050	.54
4.	Differences of opinion in my family were discouraged.	3.99	1.016	-0.935	0.206	.50
5.	People in my family often made excuses for their mistakes.	2.93	1.016	0.216	-0.634	.43
6.	My parents encouraged family members to listen to one another.	3.96	0.925	-0.960	0.941	.66
7.	Conflicts in my family never got resolved.	4.06	0.949	-1.188	1.467	.62
8.	My family taught me that people were basically good.	3.15	1.036	-0.056	-0.753	.16
9.	I found it difficult to understand what other family members said and how they felt.	3.83	0.964	-0.828	0.356	.48
10.	We talked about our sadness when a relative or family friend died.	3.49	1.143	-0.332	-0.810	.55
11.	My parents openly admitted it when they were wrong.	3.09	1.099	-0.174	-0.804	.64
12.	In my family, I expressed just about any feeling I had.	3.29	1.194	-0.125	-1.068	.58
13.	Resolving conflicts in my family was a very stressful experience.	3.02	1.152	-0.026	-0.892	.60
14.	My family was receptive to the different ways various family members viewed life.	3.32	0.945	-0.216	-0.470	.57
15.	My parents encouraged me to express my views openly.	3.84	0.939	-0.669	0.080	.73
16.	I often had to guess at what other family members thought or how they felt.	3.12	1.092	-0.045	-0.982	.53
17.	My attitudes and feelings frequently were ignored or criticized in my family.	3.77	1.137	-0.811	-0.176	.68
18.	My family members rarely expressed responsibility for their actions.	3.91	0.976	-1.015	0.738	.63

19.	In my family, I felt free to express my own opinions.	3.75	1.042	-0.650	-0.201	.73
20.	We never talked about our grief when a relative or family friend died.	3.73	0.997	-0.457	-0.402	.56
21.	Sometimes in my family, I did not have to say anything but I felt understood.	3.52	1.022	-0.386	-0.571	.62
22.	The atmosphere in my family was cold and negative.	4.40	0.946	-1.881	2.377	.68
23.	The members of my family were not very receptive to one another's views.	3.64	1.030	-0.547	-0.541	.58
24.	I found it easy to understand what other family members said and how they felt.	3.56	0.897	-0.563	-0.237	.34
25.	If a family friend moved away, we never discussed or feelings of sadness.	3.53	0.922	-0.504	0.144	.45
26.	In my family, I learned to be suspicious of others.	3.40	1.094	-0.425	-0.533	.32
27.	In my family, I felt that I could talk things out and settle conflicts.	3.71	0.942	-0.590	-0.210	.74
28.	I found it difficult to express my own opinions in my family.	3.75	1.034	-0.788	-0.020	.72
29.	Mealtimes in my home usually were friendly and pleasant.	3.83	0.991	-0.610	-0.188	.63
30.	In my family, no one cared about the feelings of other family members.	4.39	0.795	-1.667	2.724	.55
31.	We usually were able to work out conflicts in my family.	3.83	0.936	-0.933	0.582	.65
32.	In my family, certain feelings were not allowed to be expressed.	3.80	1.040	-0.779	0.058	.68
33.	My family believed that people usually took advantage of you.	3.16	0.968	-0.154	-0.584	.29
34.	I found it easy in my family to express what I thought and how I felt.	3.46	1.104	-0.427	-0.633	.58
35.	My family members usually were sensitive to one another's feelings.	3.85	0.837	-0.774	0.616	.73
36.	When someone important to us moved away, our family discussed or feelings.	3.47	0.936	-0.276	-0.274	.56
37.	My parents discouraged us from expressing views different from theirs.	3.85	0.972	-0.885	0.409	.60
38.	In my family, people took responsibility for what they did.	3.71	0.870	-0.721	0.304	.66
39.	My family had an unwritten rule: don't express your feelings.	4.39	0.841	-1.459	1.905	.67
40.	I remember my family as being warm and supportive.	4.20	0.918	-1.391	2.140	.73

Table 2. Factor loadings and communalities based on a principle components analysis with oblimin rotation for the FOS items

Item	Components							h^2
	I	II	III	IV	V	VI	VII	
1							.45	.347
2	.53							.593
3				.51				.470
4		.75						.579
5					.63			.586
6							.31	.577
7	.56							.609
8						.82		.635
9							-.54	.641
10			-.85					.773
11					.45			.613
12				.48				.588
13				.34				.567
14				.68				.594
15		.59						.681
16					.44			.487
17		.56						.608
18	.53							.599
19		.51						.688
20								.809
21	.37		-.91					.475
22	.62							.684
23		.38						.424
24					.66			.663
25			-.81					.667
26						.67		.632
27		.40						.653
28		.40						.641
29	.41							.542
30	.71							.641
31	.62							.600
32		.56						.580
33						.83		.698
34				.62				.554
35	.37							.619
36			-.80					.732
37		.75						.635
38	.50							.603
39	.37							.533
40	.51							.668
Eigenvalues	15.122	2.277	1.626	1.489	1.388	1.293	1.093	
% of variance,	37.806	5.693	4.066	3.722	3.471	3.232	2.734	

Extraction Method: Principal Component Analysis

Note: Only factor loadings >.3 are presented