Conceptualizations of the Family Context: New Insights Gained by Capturing Daily Variability in Cohesion and Conflict

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Abstract

In this study, we evaluate whether the use of dynamic characteristics of the family provides new and important information when conceptualizing the family context of adolescents. Using 21 days of daily diary data from adolescents (*N*=151; 61.59% female; *mean age* = 14.60 years) in two-caregiver households, we quantified between-family differences in the extent to which their experiences of family cohesion and conflict fluctuate from day to day. We included these estimates of consistency in family cohesion and conflict, along with traditional survey assessments of dispositional family cohesion and conflict, in a latent profile analysis to identify subgroups of families with distinct combinations of dispositional and consistency in family cohesion and conflict. We next assessed how these profiles were differentially associated with emotion regulation, internalizing symptoms, problem behaviors, and well-being at baseline and at a 12-month follow-up. Results revealed four distinct family profiles with unique associations with outcomes. By considering both dispositional and consistency in family cohesion and family conflict and how these four factors cluster within families to differing degrees, we better capture the richness of the family context and highlight the implications for understanding its role in adolescent well-being.

Keywords: family cohesion; family conflict; intraindividual variability; intensive repeated measures; latent profile analysis

Introduction

The family is the earliest and most potent interpersonal context shaping adolescent well-being, in large part because of the role it serves in socializing emotional development and the development of emotion regulation capacities (Morris et al., 2007; Thompson & Meyer, 2007; Fosco & Grych, 2013; Eisenberg et al., 1998). In addition, the quality of family relationships and interactions are featured prominently in models of adolescent risk for psychopathology (Ary et al., 1999; Grych & Fincham, 1990; Patterson, 2015; Restifo & Bögels, 2009). Consistent with a family systems theoretical perspective, a variety of family processes occurring in family-level, interparental, parenting, parent-child, and sibling relationships are well-documented contributors to adolescent well-being (Fosco & LoBraico, 2018). Comprehensive approaches to assessing multiple dimensions of the family from multiple perspectives are now considered a best practice in family-based interventions (Josephson & AACAP Work Group on Quality Issues, 2007). Taken together, this work underscores the importance of characterizing the family context of adolescents as completely as possible in the service of understanding well-being and in guiding family-based interventions.

Here, we pose questions guided by advances in the measurement and analysis of family life that may offer new insights into concepts of the family context. Expanding on traditional approaches that rely on single-occasion family assessments capturing dispositional levels of family risk or protective factors, we evaluated whether methods employing intensive repeated measures provide additional information about relatively short-term changes or fluctuations in family functioning that would make it possible to consider between-family differences in the degree of consistency they each experience in aspects of family functioning (e.g., how consistently cohesive a family is). This view, advanced by work in the area of intraindividual

variability (Nesselroade, 1991; Ram & Gerstorf, 2009), may provide complementary information to more typical considerations of individual differences in dispositional family functioning (e.g., how cohesive a family is generally). We sought to understand if *consistency*, as a dynamic characteristic of family life, adds additional, important information to our conceptualization of the family context. Consistency was operationalized as the degree of intrafamily variability across days, ranging from highly variable (i.e., inconsistent) to highly stable (i.e., consistent).

In this study, we focused on two well-established indicators of family health: family-level cohesion and conflict. Cohesive families have strong emotional bonds among family members and have supportive, caring, and affectionate interactions (Moos & Moos, 1974; Olson et al., 1983). Family conflict refers to the presence of arguments, hostility, criticism, and anger that creates a stressful family environment (Straus, 1979). These dimensions of the family – although reliably negatively correlated – are conceptually and empirically distinct and have unique implications for adolescent well-being (Forgatch & DeGarmo, 1999; Fosco et al., 2012). Families that are high in cohesion and low in conflict support adolescents' emotion regulation development (Eisenberg et al., 1998; Fosco et al. 2012; Thompson & Meyer, 2007). Relatedly, there is compelling evidence that adolescents in more cohesive families are at considerably lower risk for developing internalizing and externalizing problems (Deng et al., 2006; Gabalda et al., 2010; Lucia & Breslau, 2006) and adolescents in high-conflict families are at elevated risk for both internalizing and externalizing problems (Benson & Buehler, 2012; Formoso et al., 2000).

Turning to dynamic characteristics of the family, the degree of *consistency* in family functioning may also impact adolescent well-being. Highly inconsistent families, marked by fluctuations in their levels of cohesion and/or conflict from day to day, may be experienced as unpredictable in a way that can undermine adolescent's emotion regulation because of the

context demands requiring them to constantly adapt to a changing family context (Repetti et al., 2011). Moreover, diminished self-regulatory abilities confer risk for psychological maladjustment (Ellis et al., 2011; Moilanen et al., 2018; Sijtsema et al., 2013). Families that exhibit high levels of inconsistency in parental monitoring (Lippold et al., 2016) or in parental warmth or hostility (Lippold et al., 2018) during early adolescence place adolescents at elevated risk for internalizing and externalizing problems. Day-to-day inconsistency in parents' monitoring knowledge, use of positive reinforcement, warmth, and parent-adolescent connectedness all are associated with long-term risk for emotional and behavioral health outcomes up to a year later (Fosco et al., in press; Lippold et al., 2015; Lippold et al., 2016). However, to our knowledge, family cohesion and conflict have not been evaluated in terms of their inconsistency across days; nor have such dynamic characteristics of the family been evaluated *holistically* – in conjunction with dispositional indicators of family functioning – when conceptualizing the family context.

A holistic assessment entails considering the integrated nature of multiple domains of family functioning within persons (e.g., an individual with certain configurations of multiple aspects of family function including levels of dispositional cohesion *and* dispositional conflict) and treating the person, rather than the variable, as the unit of interest (Magnusson, 1999; Magnusson & Cairns, 1996). Findings to date have identified the relative contributions of cohesion and conflict to adolescent well-being on average, examining one dimension of family functioning at a time while controlling for other dimensions. Experiences of family cohesion and conflict, however, do not occur in isolation. Indeed, families may be characterized by differing combinations of co-occurring dispositional levels and degrees of consistency of cohesion and conflict that may have implications for adolescent well-being. In predicting adolescent well-

being, it may be important to consider not only the presence of adequate cohesion and assess for conflict, but also to consider the consistency of the family context. This emphasis on how particular patterns of co-occurrence of risk and protective factors within persons is the purview of a person-centered (versus variable-centered) approach (Bergman & Magnusson, 1997). A person-centered approach is uniquely suited to gain a holistic conceptualization of the family; instead of analyzing the associations among variables, we examine patterns of functioning within families to capture the multidimensional nature of family life.

The Present Study

In this study, we sought to build on prior work that has relied primarily on variable-centered methods to both underscore the importance and expand our understanding of the role of family cohesion and conflict for adolescent adjustment by including assessments of the degree of inconsistency in cohesion and conflict within families across a 21-day period. We applied latent profile analysis to identify family subgroups that differ in their constellations of levels of and inconsistency in family cohesion and conflict to learn more about how these aspects of family life co-occur. We then examined how the identified profiles conferred risk for difficulties in emotion regulation, internalizing problems, problem behaviors, and well-being in order to evaluate the consequences of family contexts characterized by differences in patterns of co-occurring dispositional and inconsistency in cohesion and conflict. Based on prior theoretical and empirical findings regarding the impacts of family contexts marked by inconsistency on adolescent emotion regulation, and the known associations of both emotion regulation and cohesion and conflict with adolescent adjustment, we hypothesized: (1) families high in dispositional levels of cohesion, low in dispositional levels of conflict, and exhibiting consistency in both cohesion and conflict would exhibit low rates of difficulties in emotion

regulation, internalizing problems, and problem behaviors, and high rates of well-being; (2) families exhibiting profiles with low levels of dispositional cohesion, high levels of dispositional conflict, and high inconsistency in cohesion and conflict would exhibit high rates of difficulties in emotion regulation, internalizing problems, and problem behaviors, and low levels of well-being.

Method

We made use of data from the Family Life Optimizing Well-being (FLOW) Study, an intensive longitudinal study designed for the study of day-to-day intraindividual variability across a range of domains of functioning in parents and their adolescent children, including emotions, family functioning, and well-being. We provide details relevant to the present analyses below and direct readers to existing work for a more comprehensive overview of the protocol (Fosco & Lydon-Staley, 2017). Institutional Review Board approval was obtained at The Pennsylvania State University.

Participants

Participants were 151 families of 9th and 10th grade adolescents (93 female, 58 male) recruited through high schools in Pennsylvania. Families were eligible for participation if they met six criteria: (1) a family with one 9th or 10th Grade student, (2) status as a "two-parent" family, defined as having two caregiving adults living in the same house for at least two years, (3) adolescents were required to live in one household continuously, (4) all participants were required to able to read and write English fluently, (5) internet access and means to complete daily surveys at home, and (6) consent and assent to participate from the parent and adolescent, respectively. Adolescent participants were between 13 and 16 years of age (M = 14.60, SD = 0.83) and identified (via parent report) as White (83.4%), Asian (4.6%), African American/Black

(4.6%), Native American/American Indian (0.7%), Hispanic/Latino (0.7%), Multiracial (5.3%), missing information (0.7%). Caregivers (92.7% mothers, 4.64% fathers, 1.30% stepmothers, 0.7% aunts, 0.7% foster mothers) had an average age of 43.4 (*SD*=6.9) years, self-identified as White (90.1%), Asian (3.3%), African American/Black (2.6%), Native American/American Indian (0.7%), Hispanic/Latino (0.7%), Multiracial (2.0%), and missing information (0.7%), and the majority of parents were married (88.70%). Caregivers had a yearly family income ranging from '$20,000' to '$125,000 or more' (*Median* = '70,000-79,999'). Caregivers' education spanned graduate or professional training (23.2%), college degree (27.8%), associate's degree or > one year college (30.5%), and high school degree or similar (15.2%), less than a high school degree (2.7%), or missing information (0.7%). One participant did not have data on dispositional levels of family cohesion and family conflict. As such, we made use of data from 150 participants in the current analyses.

Procedure

Families were recruited through emails sent to parents from school principals. After confirming that the family met inclusion criteria and upon receipt of parent consent and adolescent assent, an email was sent to the adolescent with a baseline survey which contained the scales related to global family functioning and well-being, as well as demographic questionnaires. Once the adolescent completed the baseline survey, the caregiver received his/her baseline survey which also contained scales on family functioning and demographics. Upon completion of the baseline survey, a 21-day daily diary protocol was initiated. Links to daily questionnaires were emailed separately to parents and adolescents at 7:00 PM each night in their time-zone, followed by a reminder text message or phone call to notify that the survey links had been sent. Participants were instructed to complete the daily survey before going to bed, although

access links remained open until 9:00 AM the next morning. In cases where participants completed surveys the following morning, they were instructed to report on the previous day. The surveys included questions on family functioning (e.g., cohesion and conflict) in addition to question on school experiences and emotion items not examined in the present manuscript. Of the 151 families, 10 adolescents did not complete the 12-month assessment. Demographic (e.g., age, sex, family income), baseline family factors (e.g., parent-child relationship), and baseline adolescent factors (e.g., anxiety, antisocial behavior) revealed only two predictors of attrition: younger parents ($t(141) = -1.98$, $p=.05$) and low adolescent anxiety ($t(32.40) = -7.16$, $p<.001$).

Measures

We made use of adolescents' reports of daily family cohesion and family conflict from the daily diary component of the study as well as demographic, emotion regulation, internalizing problems, problem behaviors, and well-being characteristics from the baseline and 12-month surveys completed by the adolescent participants. All means, standard deviations, and measure reliabilities (α) are presented in Table 1, to save space. All of these scales exhibited acceptable reliability in the current sample.

Inconsistency in Family Cohesion and Conflict. To capture inconsistency in family cohesion and conflict, an intraindividual standard deviation of the 21-day time series was calculated for cohesion and conflict for each family. Adolescents provided daily ratings of family cohesion and conflict using a slider scaled 0 (“Not at All”) to 10 (“A Lot) in 0.1 increments. Cohesion was assessed using three items from the Family Environment Scale (Bloom, 1985) that fit with a daily timescale, “Family members really helped and supported one another”, “There was a feeling of togetherness in our family”, and “Family members really backed each other up.” Family conflict was assessed using two items drawn from the shortened Family Environment

Scale (Bloom, 1985) to fit with a daily timescale, “Family members criticized one another”, and “Family members fought”.

Dispositional Family Cohesion and Conflict. Global assessments of family cohesion and conflict were measured using Bloom’s (1985) short form of the Family Environmental Scale (Moos & Moos, 1974), collected at the baseline assessment. Reflecting dispositional tendencies of the family, this measure asked adolescents to rate five items about family cohesion and five items about family conflict in the last month.

Outcome Variables. Adolescent provided ratings of all outcome variables. We grouped outcomes into four domains: emotion regulation, internalizing symptoms, problem behaviors, and well-being.

Emotion Regulation. Three aspects of emotion regulation were measured. Emotion regulation deficits were measured using The Difficulties in Emotion Regulation Scale Short Form (DERS-SF; Kaufman et al., 2016), a short version of the Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004). The total scale was scored to provide a score indicating the frequency with which emotion dysregulation is typically experienced, with scores ranging from 1 ("Almost never") to 5 ("Almost always").

A positive emotion regulation scale was developed for the purposes of the present study. Five items were included in the scale, with participants endorsing questions such as “It is easy for me to feel happy” and “I get so excited that I sometimes annoy other people” (reverse-scored) on a 1 to 5 scale ranging from “Almost Never” to “Almost Always”. Higher scores indicated a greater ability to experience, maintain, and regulate positive emotions effectively.

Emotional reactivity was measured using the Emotion Reactivity Scale (Nock et al., 2008). The original 21-item scale shows good internal consistency and is made up of three

subscales (sensitivity, intensity, and persistence). The scale was shortened by selecting two items from the sensitivity, intensity, and persistency subscales by selecting items with the highest factor loadings (Nock et al., 2008) and minimizing repetitiveness (e.g., “When I experience emotions, I feel them strongly/intensely” and “I experience emotions very strongly”). Participants responded to items on a 1 to 5 scale ranging from “Almost Always Untrue” to “Almost Always True”, with higher scores indicating greater emotional reactivity.

Internalizing symptoms. Depression was measured using the depression subscale of the Revised Child Anxiety and Depression Scale Short Version (RCADS-SV; Ebesutani et al., 2012). The measure was scored indicating the frequency with which symptoms of depression were experienced, with scores ranging from 1 ("Never") to 4 ("Always"). Higher values on this scale reflected higher levels of depressive symptoms.

Anxiety was measured with the 7-item Generalized Anxiety Disorder – 7 scale (GAD-7; Spitzer et al., 2006). Adolescents rated how often in the last two weeks they experienced symptoms (e.g., “feeling nervous, anxious, or on edge”), from *Not at all* (1), *Several Days* (2), *More than Half of the Days* (3), *Nearly Everyday* (4).

Emotional symptoms were measured with the emotional symptoms subscale of the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1998). Adolescents rated each item of the SDQ on a 3-point scale from *Not true* (1), *Somewhat true* (2), *Certainly true* (3). Higher scores indicate more serious problems.

Problem behaviors. We used the conduct problems subscale of the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1998; 2001) to provide an indication of problem behaviors. Adolescents rated each item of the SDQ on a 3-point scale from *Not true* (1), *Somewhat true* (2), *Certainly true* (3). Higher scores indicate more serious problems.

Antisocial behavior was assessed using the 10-item Antisocial Behavior Scale (Dishion & Kavanaugh, 2003). Ten items assessed the frequency with which an individual has engaged in aggressive and delinquent behavior in the previous month using a 6-point scale, ranging from 1 = Never to 6 = more than 20 times. Items focused on behaviors such as staying out all night without parents' permission, skipping school, without an excuse, getting into fights, and purposely damaging property.

Well-being. Three aspects of well-being were measures: flourishing, life satisfaction, and psychological well-being. The Flourishing Scale (Diener et al., 2010) consists of 8 items describing important aspects of human functioning, including positive relationships, feelings of competence, and having meaning and purpose in life. Each item is answered on a 1-7 scale ranging from "Strong Disagreement" to "Strong Agreement". A total score was created, providing an indication of overall social-psychological well-being.

Life satisfaction was measured with 6 items consisting of the 5-item Mental Health Inventory-38 (Viet & Ware, 1983) and one item "Were you satisfied with your life" from The Satisfaction with Life Scale (Diener et al., 1985). Participants endorsed each item on a 1-6 scale ranging from "None of the Time" to "All of the Time".

Psychological well-being was measured using a 24-item shortened version of the Psychological Well-Being Scale adapted from the Ryff scale, tapping into environmental mastery, personal growth, positive relationships, purpose in life, and self-acceptance (Ryff & Keyes, 1995; Ford et al., 2013). Participants endorsed each item on a 1-5 scale ranging from "Strongly Disagree" to "Strongly Agree" with higher scores indicating higher well-being.

Data Analysis

Data analysis consisted of identifying latent profiles of dispositional and inconsistency in

family cohesion and conflict using latent profile analysis, determining whether adolescent age and gender were associated with profile membership, and examining associations between profile membership and outcomes of interest, including emotion regulation difficulties, internalizing symptoms, problem behaviors, and well-being at both baseline and 12-month follow-up. Latent profile analysis is a person-centered approach that matched our interest in capturing the co-occurrence of dispositional and inconsistency in family cohesion and conflict within the families of adolescents. LPA focuses on identifying subgroups of individuals with similar patterns of co-occurring characteristics (i.e., profiles), rather than focusing on single variables or interactions among variables across all individuals within a sample. LPA is a type of mixture model that uses manifest items to divide a population into mutually exclusive and exhaustive latent classes (i.e., profiles; Gibson, 1959; Lazarsfeld & Henry, 1968). Outputs of interest of LPA are the latent profile membership probabilities, which describe the distribution of profiles in the population, and the item-response means (and variances), which describe the profile-specific item means (and variances). Profiles are named and interpreted based on the pattern of item means.

Models with 1-7 profiles were compared. The final model was selected based on the Akaike information criterion (AIC; Akaike, 1974), Bayesian information criterion (BIC; Schwarz, 1978), sample-size adjusted BIC (a-BIC; Sclove, 1987), entropy (Celeux & Soromenho, 1996), and a bootstrapped likelihood ratio test (McLachlan & Peel, 2000), as well as the stability and interpretability of the models. Lower values for AIC, BIC, and a-BIC were taken as evidence more optimal balance between model fit and model parsimony, higher values for entropy indicated higher classification utility, and a significant bootstrapped likelihood ratio test indicated better model fit compared to a model with one fewer profile. Emphasis was also placed

on the utility and theoretical interpretation of a solution. All models were estimated using Mplus version 8.1 and model identification for all models was checked with 1,000 initial stage starts and 100 final stage starts.

Once the number of profiles was selected ands profile were identified, effects of gender and age on profile membership were tested simultaneously using baseline-category multinomial logistic regression. To examine the associations between profile membership and outcomes of interest, modal assignment and adjustment for classification error using the "BCH approach" (Bakk & Vermunt, 2016), was used. This approach is currently recommended for predicting continuous outcomes from profile membership (Bakk & Vermunt, 2016; Dziak et al., 2016). The BCH approach classifies individuals to profiles based on posterior probability and adjusts the outcome analysis that uses these classifications for classification error. Associations between profile membership and outcomes are expressed as pairwise differences between profiles in the means of the outcomes conditional on latent profile membership.

Results

Descriptive statistics for key study variables are shown in Table 1. Model fit information and model selection criteria are shown in Table 2. The BIC was minimized for the 6-profile model, although practical decrements stopped around the 4-profile model. The AIC and the a-BIC were not minimized. The bootstrapped likelihood ratio test suggested the 7-profile model (i.e., the last model with a significant *p*-value). Entropy ranged from 0.79 (3-profile model) to 0.89 (2-profile model). To further aid in model selection, we examined the profile-specific item means across all profiles in all models (supplemental figure 1). Based on the extent to which profiles were consistently identified across models and theoretical interpretability of profiles (including evaluation for redundant profiles), the four-profile model was selected for

interpretation and further analysis.

Description of the profiles

Parameter estimates and within-profile item means are presented in Table 3. Profile 1 (*n*=41) was characterized by high levels of cohesion, low levels of conflict, and consistency in both cohesion and conflict (Figure 1). We labeled them *consistent-cohesive*. Profile 2 (*n*=11) was characterized by low dispositional cohesion, high dispositional conflict, and inconsistency in cohesion and conflict. We labeled them *inconsistent-conflictual*. Although this profile was relatively small, it appeared across many models with similar prevalence. Profile 3 (*n*=21) was characterized by average levels of dispositional cohesion and conflict but inconsistency in both cohesion and conflict. We labeled them *inconsistent*. Profile 4 (*n*=77) was characterized by average levels of all four items. We labeled them *average functioning*. No significant pairwise differences emerged for age and gender across profiles (all *p*s > .05).

Associations between profile membership and outcomes

Results of analyses examining associations between profile membership and outcomes at baseline are shown in Table 4. Results of analyses examining associations between profile membership and outcome levels at 12-month follow-up are shown in Table 5. We describe the results below, grouping findings into sections based on whether outcomes related to emotion regulation, internalizing symptoms, problem behaviors, or well-being.

Profile membership and associations with emotion regulation. At baseline, profile membership was a significant predictor of difficulties in emotion regulation, χ^2=30.27, *p*<.001, reactivity, χ^2=52.84, *p*<0.001, and positive emotion regulation, χ^2=35.01, *p*<0.001. Following up the significant associations, the *consistent-cohesive* and *average functioning* groups had fewer difficulties in emotion regulation and less emotional reactivity than both the *inconsistent-*

conflictual and *inconsistent* groups. For positive emotion regulation, the *consistent-cohesive* group had fewer difficulties regulating positive emotions relative to the three other groups. Both the *inconsistent-conflictual* and the *inconsistent* groups had greater difficulties in positive emotion regulation relative to the *average functioning* group.

At the 12-month follow-up, profile membership was associated with difficulties in emotion regulation, χ^2=22.83, p<.001, emotional reactivity, χ^2=34.63, p<.001, and positive emotion regulation, χ^2=23.10, p<.001. The *inconsistent-conflictual* and *inconsistent* groups exhibited greater difficulties in emotion regulation relative to the *consistent-cohesive* group. In addition, the *inconsistent-conflictual* group showed greater emotion regulation difficulties relative to the *average functioning* group.

Profile membership and associations with internalizing symptoms. At baseline, profile membership was a significant predictor of depressive symptoms, χ^2=26.49, p<.001, anxiety, χ^2=22.98, p<.001, and emotional symptoms, χ^2=35.75, p<.001. Following up the significant associations, the *consistent-cohesive* group had lower levels of depression relative to all other groups. Further, the *inconsistent-conflictual* group had higher levels of depression relative to the *average functioning* group. For anxiety, both the *consistent-cohesive* and *average functioning* groups had lower levels of anxiety relative to the *inconsistent-conflictual* and the *variable* groups. For the experience of emotional symptoms, the *consistent-cohesive* group had lower levels of emotional symptoms relative to all other groups. Both the *inconsistent-conflictual* and the *inconsistent* groups had higher levels of emotional symptoms relative to the *consistent-cohesive* group.

At the 12-month follow-up, profile membership was associated with depression, χ^2=12.88, p=.005. Both the *inconsistent-conflictual* and the *inconsistent* groups had higher

levels of depression relative to the *consistent-cohesive* group. In addition, the *inconsistent-conflictual* group had significantly higher levels of depression relative to the *average functioning* group. Profile membership was not associated with anxiety, χ^2=4.41, *p*=.22. Profile membership was associated with emotional problems, χ^2=12.62, *p*=.006, such that the *consistent-cohesive* group had fewer emotional problems than the *inconsistent-conflictual*, the *inconsistent*, and the *average functioning* groups.

Profile membership and associations with problem behaviors. At baseline, profile membership was a significant predictor of antisocial behavior, χ^2=14.34, *p*=.002, and conduct problems, χ^2=28.69, *p*<0.001. Following up the significant associations, the *average functioning* group exhibited greater antisocial behavior relative to the *consistent-cohesive* group. For conduct problems, the *consistent-cohesive* group exhibited lower conduct problems relative to the other three groups. Both the *inconsistent-conflictual* and *inconsistent* groups exhibited higher levels of conduct problems relative to the *average functioning group*.

At the 12-month follow-up, profile membership was not associated with antisocial behavior. There was a significant association between profile membership and conduct problems, χ^2=9.58, *p*=.02, such that both the *inconsistent-conflictual* and *inconsistent* groups had greater conduct problems relative to the *consistent-cohesive* group.

Profile membership and associations with well-being. At baseline, profile membership was a significant predictor of flourishing, χ^2=28.15, *p*<.001, life satisfaction, χ^2=10.54, *p*=.01, and psychological well-being, χ^2=41.79, *p*<0.001. Following up the significant associations, the *consistent-cohesive* group exhibited greater flourishing and life satisfaction relative to the other three groups. The *inconsistent-conflictual* group exhibited lower flourishing and life satisfaction relative to the *average functioning group*. A similar pattern emerged for psychological well-

being except that the *inconsistent group* showed lower well-being relative to the *average functioning* group.

At the 12-month follow-up, profile membership was associated with flourishing, χ^2=13.12, p=0.004, life satisfaction, χ^2=10.54, p=0.01, and psychological well-being, χ^2=18.33, p<0.001. The *inconsistent-conflictual* and *inconsistent* groups showed less flourishing and life satisfaction than the *consistent-cohesive* group. In addition, the *inconsistent-conflictual* group showed less flourishing and life satisfaction relative to the *average functioning* group. A similar pattern of results emerged for psychological well-being, with the additional finding that the *inconsistent* group had lower psychological well-being relative to the *average functioning* group.

Discussion

We took advantage of intensive longitudinal data containing rich information on fluctuations in family functioning from day to day and advances in analytic approaches capable of distilling these data (Ram & Gerstorf, 2009; Lanza, et al., 2013) to capture the dynamic and multidimensional nature of family life (Chung et al., 2009; Fosco & Lydon-Staley, 2017). Guided by theories of emotion regulation development within the family context, we sought to expand upon previous literature by examining which subgroups of families characterized by different patterns of co-occurring dispositional and inconsistency in cohesion and conflict confer risk for adolescent adjustment outcomes. Our analysis revealed four family subgroups exhibiting different constellations of cohesion and conflict. The first, *consistent-cohesive* group, was characterized by high levels of cohesion and low levels of conflict that were consistent across days. At the other extreme was the *inconsistent-conflictual* group, characterized by low dispositional cohesion, high dispositional conflict, and high inconsistency in both cohesion and conflict across days. Two more groups emerged: the third, *inconsistent* group, was characterized

by average levels of dispositional cohesion and conflict, but exhibited the highest inconsistency in cohesion and conflict. The last group, *average functioning* group, also was characterized by average levels of dispositional cohesion and conflict, but were consistent across days. These last two subgroups highlight inconsistency as a critical distinguishing factor among these family types that would be overlooked in traditional conceptualizations of the family context.

In examining how certain family profiles may confer risk for poor adolescent outcomes, a pattern of findings emerged such that adolescents in *consistent-cohesive* families had the fewest emotion regulation difficulties, internalizing problems and problem behaviors, and the highest well-being, relative to adolescents in the other three profiles. The *average functioning* group exhibited an intermediate level of strengths of difficulties, tending to be characterized by greater problems and fewer strengths than the *consistent-cohesive* group (e.g., more conduct problems, more emotional symptoms, and lower psychological well-being) but with fewer problems (e.g., fewer depressive symptoms) and more strengths (e.g., greater flourishing) relative to the *inconsistent-conflictual* and, although less often, the *inconsistent* group. The *inconsistent-conflictual* and *inconsistent* groups were marked by poorer functioning and fewer strengths than the *consistent-cohesive* and *average functioning* groups but they were not significantly different from one another on any indices. Only through considering constellations of dispositional levels of and consistency in cohesion and conflict within families, did a complete picture emerge about how the family context may correspond to adolescent emotion regulation, psychopathology, and well-being outcomes (Thompson & Meyer, 2007; Deng et al., 2006; Benson & Buehler, 2012).

That the *inconsistent-conflictual* group was the most at risk for poor outcomes is not surprising given that they exhibited the risks of high dispositional cohesion and conflict as well as the risks associated with higher than average inconsistency in cohesion and conflict. Even in

the context of dispositional average cohesion and conflict, the existence of higher than average fluctuations in cohesion and conflict in the *inconsistent* group seemed to undermine the protective effects of average relative to low levels of dispositional cohesion and high levels of dispositional conflict, with this group exhibiting poorer outcomes across a range of functioning relative to the *consistent-cohesive* group and, in many cases, the *average functioning* group. These findings highlight the added value of considering variability in family functioning when conceptualizing the family as a potential risk context. Findings support the notion that there is key information about adolescent risk for maladjustment within assessments that include questions about inconsistency in family functioning; the *inconsistent* group and the *average functioning* group would score similarly on a traditional risk screener that focuses solely on dispositional family functioning. Yet, as our findings indicate, the *inconsistent* group reflects significantly more risk for several poor adolescent outcomes relative to the *average functioning* group. Existing frameworks suggest that a highly inconsistent family context may undermine adolescent's emotion regulation due to constant demands to adapt to a changing family context (Repetti et al., 2011). In line with this perspective, the *inconsistent* group was repeatedly associated with greater emotion regulation difficulties relative to the *consistent-cohesive* and *average functioning* group at both baseline and the 12-month follow-up.

Limitations and outlook

The findings should be interpreted in light of the study's strengths and limitations. This study focused on two-caregiver families and the sample was generally high-functioning (generally cohesive and low in conflict) and White, and thus may be limited in generalizability. Future work should seek to replicate these results in samples that are more diverse in terms of risk, race, and family structure and may allow the identification of family profiles with high

dispositional conflict as well as consistency in conflict. This family profile consisting of high and chronic conflict is thought to be a particularly risky profile for adolescent well-being (Repetti et al., 2011). Holistic perspectives of the family emphasize that families are unique, differing with reference to the levels they exhibit across many aspects of family functioning (Magnusson, 1998; Magnusson, 2000). The latent profile analysis approach assumes that, despite the uniqueness of family functioning, it is appropriate to group families that are more similar to one another relative to families in different groups. This grouping reduces complexity, assumes some differences between families are sufficiently minimal as to be ignorable, and provides interpretable profiles between the two extremes of an aggregation that is applied to the entire population and an analysis of single families (Von eye & Bergman, 2003).

Conclusions

Using latent profile analysis, we identified four family profiles that differed in their patterns of dispositional levels and inconsistency in family cohesion and conflict. Adolescents in families that were consistently low in conflict and high in cohesion had the best outcomes in terms of emotion regulation, internalizing problems, problem behaviors, and well-being. Adolescents in families with high dispositional conflict, low dispositional cohesion, and high inconsistency across days exhibited the worst outcomes in these domains. Over 60% of the adolescents lived in families with average dispositional cohesion and conflict; however, those who also experienced high levels of inconsistency were at elevated risk for poorer outcomes than those who lived in consistent households. By considering both dispositional and daily inconsistency in family cohesion and family conflict and how these four factors cluster within families to differing degrees, we capture the richness of dynamic, multidimensional family life.

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Table 1. *Descriptive statistics and correlations of key study variables*

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Cohesion	-	-	-	-	-.26*	-.11	-.18*	-.23*	.45*	-.22*	.40*	.35*	.35*	-.18*	-.26*
2. Conflict	-.61*	-	-	-	.37*	.21*	.30*	.35*	-.34*	.36*	-.34*	-.34*	-.33*	.21*	.35*
3. Cohesion *iSD*	-.40*	.29*	-	-	.27*	.12	.22*	.29*	-.23*	.29*	-.18*	-.15	-.24*	.02	.10
4. Conflict *iSD*	-.35*	.47*	.64*	-	.33*	.19*	.28*	.38*	-.32*	.41*	-.28*	-.25*	-.32*	.09	.19*
5. Depression	-.31*	.43*	.19*	.28*	.50*	.69*	.66*	.70*	-.61*	.55*	-.57*	-.64*	-.63*	.20*	.20*
6. Anxiety	-.32*	.45*	.19*	.37*	.67*	.40*	.72*	.67*	-.57*	.59*	-.49*	-.58*	-.53*	.31*	.37*
7. SDQ Emo.	-.34*	.42*	.28*	.39*	.69*	.78*	.49	.69*	-.54*	.65*	-.49*	-.64*	-.59*	.20*	.42*
8. DERS-SF	-.35*	.40*	.27*	.38*	.65*	.74*	.73*	.56*	-.67*	.76*	-.56*	-.60*	-.65*	.29*	.46*
9. Positive E.R.	.43*	-.30*	-.31*	-.32*	-.45*	-.49*	-.49*	-.62*	.62*	-.55*	.71*	.66*	.74*	-.30*	-.42*
10. Emo React.	-.33*	.40*	.33*	.39*	.47*	.64*	.61*	.72*	-.49*	.62*	-.37*	-.52*	-.56*	.12	.27*
11. Flourishing	.46*	-.39*	-.23*	-.26*	-.54*	-.46*	-.52*	-.58*	.65*	-.37*	.51*	.81*	.86*	-.41*	-.53*
12. Life Satisf.	.46*	-.47*	-.29*	-.33*	-.65*	-.54*	-.59*	-.60*	.60*	-.42*	.84*	.53*	.80*	-.20*	-.40*
13. Psych WB	.37*	-.38*	-.31*	-.37*	-.59*	-.49*	-.59*	-.65*	.61*	-.44*	.72*	.73*	.60*	-.28*	-.43*
14. Antisocial	-.27*	.23*	.18*	.25*	.04	.23*	.12	.24*	-.36*	.14	-.30*	-.24*	-.09	.23*	.44*
15. SDQ Conduct	-.28*	.35*	.19*	.30*	.23*	.42*	.36*	.37*	-.37*	.29*	-.43*	-.34*	-.40*	.35*	.37*
Mean	4.23	1.69	1.10	1.46	1.54	1.62	1.62	2.05	3.38	2.75	5.95	4.73	3.80	1.09	1.25
SD	0.67	0.65	0.70	0.93	0.58	0.75	0.52	0.73	0.65	1.03	0.96	0.94	0.60	0.29	0.28
α	0.84	0.80	-	-	0.91	0.90	0.72	0.91	0.70	0.90	0.93	0.91	0.90	0.87	0.67
Mean (12-Month)	-	-	-	-	1.54	1.58	1.56	1.94	3.95	2.52	5.91	4.70	3.81	1.18	1.19
SD (12-Month)	-	-	-	-	0.63	0.77	0.53	0.78	0.73	1.04	0.98	1.01	0.66	0.55	0.29
α	-	-	-	-	0.92	0.94	0.83	0.93	0.68	0.92	0.95	0.93	0.92	0.95	0.67

Notes: Lower triangle indicates correlations at baseline. Upper triangle indicates correlations at 12-month follow-up. Diagonal indicates correlations between baseline and 12-month. Shaded rectangle indicates correlations between cohesion and conflict at baseline and outcomes at 12-month follow-up. *iSD* = intraindividual standard deviation; DERS-SF = Difficulties in Emotion Regulation Short Form; SDQ Emo = Emotional Symptoms; SDQ Conduct = Conduct Problems; Psych WB = psychological well-being; Life Satisf. = life satisfaction; Positive E.R. = positive emotion regulation; Emo React. = emotional reactivity. * p<.05.

Table 2.

Model Fit Information for Latent Profile Analysis

No. of Profiles	Log-likelihood	AIC	BIC	SSA-BIC	Entropy	BLRT
1	-661.42	1338.85	1362.93	1337.62	-	-
2	-597.86	1221.72	1260.86	1219.71	0.89	.000
3	-569.65	1175.30	1229.49	1172.52	0.79	.000
4	-550.88	1147.75	1217.00	1144.21	0.81	.000
5	-538.12	1132.25	1216.55	1127.93	0.82	.000
6	-524.20	1114.39	1213.74	1109.30	0.86	.000
7	-513.29	1102.59	1216.99	1096.73	0.87	.013

Note: Dashes indicate criterion was not applicable. AIC = Akaike information criterion; BIC = Bayesian information criterion; SSA-BIC = sample size adjusted BIC; BLRT =. Bootstrapped likelihood ratio test. The chosen solution is shaded in gray.

Table 3.

Parameter Estimates for the Four-Profile Model

		Within-profile means			
Profile Indicators	**Indicator *M* (*SD*s)**	**Consistent-Cohesive**	**Inconsistent-Conflictual**	**Inconsistent**	**Average Functioning**
Dispositional Cohesion	4.23 (0.67)	4.69^{b}	3.04^{a}	4.10	4.19
Dispositional Conflict	1.69 (0.65)	1.24^{a}	3.40^{b}	1.79	1.66
Cohesion Inconsistency	1.10 (0.70)	0.53^{a}	1.60^{b}	1.95^{b}	1.11
Conflict Inconsistency	1.36 (0.93)	0.38^{a}	2.38^{b}	2.72^{b}	1.38
Profile *N*s		41(27.33%)	11 (7.33%)	21 (14.00%)	77 (51.33%)

Notes: Within-item variances were constrained to be equal across profiles. Est^{a} Significantly lower than the overall item mean at $p<.05$. Est^{b} Significantly higher than the overall item mean at $p<.05$.

Table 4.

Associations between profile membership and outcomes at baseline

Outcome	Consistent-Cohesive	Inconsistent-Conflictual	Inconsistent	Average Functioning
EMOTION REGULATION		*Mean (SE)*		
Difficulties in Emotion Regulation^{a}	1.70 (0.12)	2.71^{b}(0.21)	2.54^{b} (0.15)	$2.01^{c,d}$((0.09)
Emotional Reactivity^{a}	2.30 (0.17)	3.62^{b} (0.31)	3.70^{b} (0.15)	$2.61^{c,d}$ (0.13)
Positive Emotion Regulation^{a}	4.17 (0.10)	3.41^{b} (0.12)	3.31^{b} (0.16)	$3.85^{b,c,d}$ (0.08)
INTERNALIZING		*Mean (SE)*		
Depression^{a}	1.23 (0.06)	2.14^{b} (0.23)	1.62^{b} (0.16)	$1.60^{b,c}$ (0.08)
Anxiety^{a}	1.29 (0.10)	2.42^{b} (0.28)	2.11^{b} (0.22)	$1.56^{c,d}$ (0.09)
Emotional Symptoms^{a}	1.35 (0.07)	2.21^{b} (0.17)	1.96^{b} (0.11)	$1.60^{b,c,d}$ (0.06)
PROBLEM BEHAVIORS		*Mean (SE)*		
Antisocial Behavior^{a}	1.01 (0.01)	1.32 (0.18)	1.22 (0.12)	1.07^{b} (0.02)
Conduct Problems^{a}	1.09 (0.03)	1.52^{b} (0.13)	1.43^{b} (0.08)	$1.25^{b,c,d}$ (0.03)
WELL-BEING		*Mean (SE)*		
Flourishing^{a}	6.48 (0.12)	4.85^{b} (0.35)	5.68^{b} (0.27)	$5.89^{b,c}$ (0.11)
Life Satisfaction^{a}	5.29 (0.13)	3.59^{b} (0.27)	4.27^{b} (0.22)	$4.71^{b,c}$ (0.11)
Psychological Well − being^{a}	4.16 (0.10)	3.26^{b} (0.15)	3.36^{b} (0.10)	$3.79^{b,c,d}$ (0.07)

Notes: Outcome^{a}Latent profile membership is overall significantly associated with the outcome; Est^{b}Significantly different from *consistent-cohesive*; Est^{c}Significantly different from *inconsistent-conflictual*; Est^{d}Significantly different from *inconsistent*.

Table 5.

Associations between profile membership and outcomes at 12-month follow-up

Outcome	Consistent-Cohesive	Inconsistent-Conflictual	Inconsistent	Average Functioning
EMOTION REGULATION		*Mean (SE)*		
Difficulties in Emotion Regulation^{a}	1.60 (0.13)	2.54^{b} (0.18)	2.40^{b} (0.24)	1.92^{c} (0.10)
Emotional Reactivity^{a}	2.01 (0.19)	3.35^{b}(0.22)	3.40^{b} (0.25)	2.45^{c,d} (0.13)
Positive Emotion Regulation^{a}	4.30 (0.12)	3.37^{b} (0.19)	3.49^{b} (0.20)	3.96^{b,c,d} (0.09)
INTERNALIZING		*Mean (SE)*		
Depression^{a}	1.33 (0.91)	2.11^{b}(0.23)	1.75^{b} (0.18)	1.53^{c} (0.08)
Anxiety	1.48 (0.14)	1.94 (0.28)	1.90 (0.24)	1.51 (0.09)
Emotional Symptoms^{a}	1.33 (0.09)	1.91^{b}(0.17)	1.73^{b}(0.14)	1.60^{b} (0.07)
PROBLEM BEHAVIORS		*Mean (SE)*		
Antisocial Behavior	1.17 (0.11)	1.52 (0.26)	1.12 (0.04)	1.16 (0.08)
Conduct Problems^{a}	1.09 (0.04)	1.38^{b}(0.12)	1.26^{b} (0.08)	1.20 (0.04)
WELL-BEING		*Mean (SE)*		
Flourishing^{a}	6.29 (0.16)	5.04^{b} (0.38)	5.55^{b} (0.25)	5.91^{c} (0.12)
Life Satisfaction^{a}	5.00 (0.16)	3.89^{b} (0.37)	4.36^{b} (0.24)	4.75^{c} (0.13)
Psychological Well − being^{a}	4.13 (0.12)	3.31^{b} (0.21)	3.45^{b} (0.16)	3.81^{b,c,d} (0.08)

Notes: Outcome^{a}Latent profile membership is overall significantly associated with the outcome; Est^{b}Significantly different from *consistent-cohesive*; Est^{c}Significantly different from *inconsistent-conflictual*; Est^{d}Significantly different from *inconsistent*.

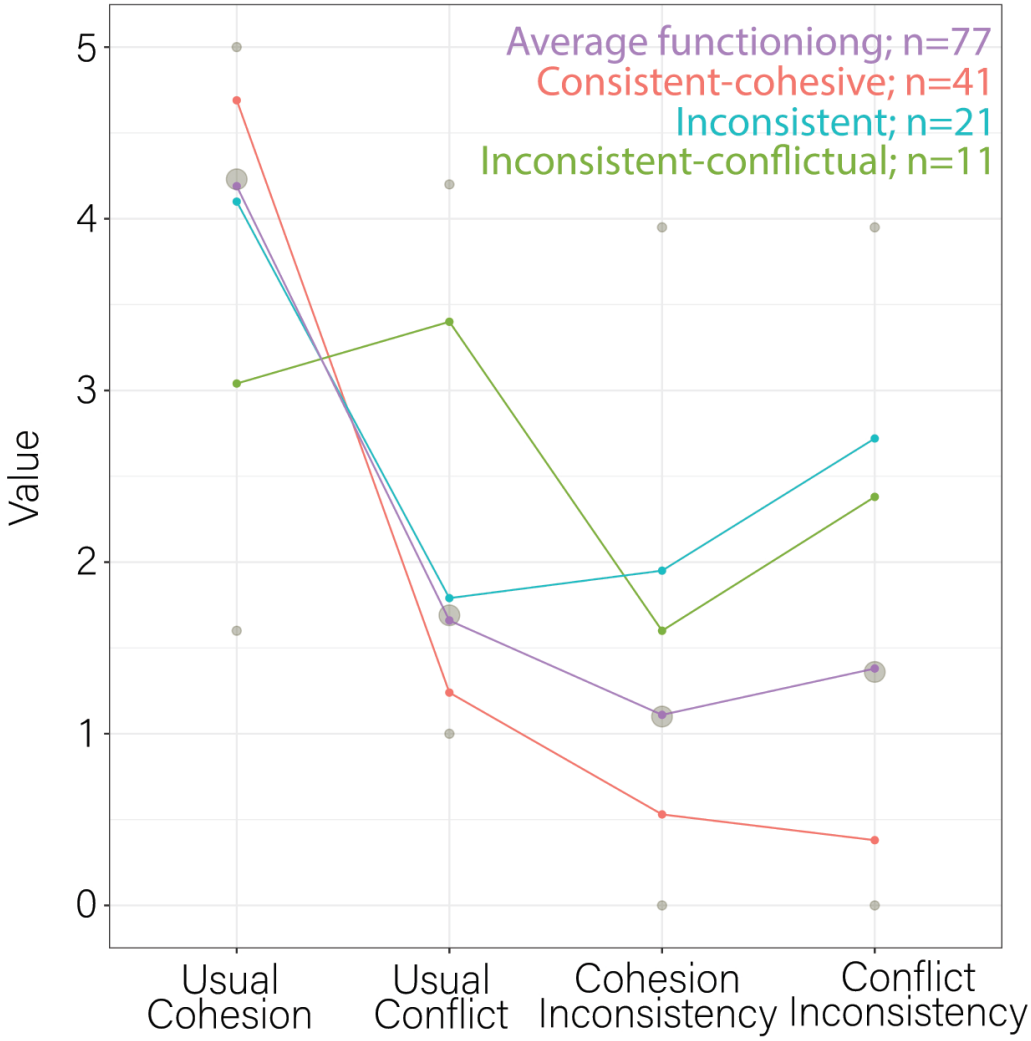

Figure 1. An illustration of four profile solution. Each colored line represents a profile characterized by different levels (y-axis) of four family functioning indicators (x-axis). Means of the profile indicators are indicated by the large, transparent circles. The minimum and maximum values of the profile indicators are indicated by the small, transparent circles.

SUPPLEMENTAL MATERIAL

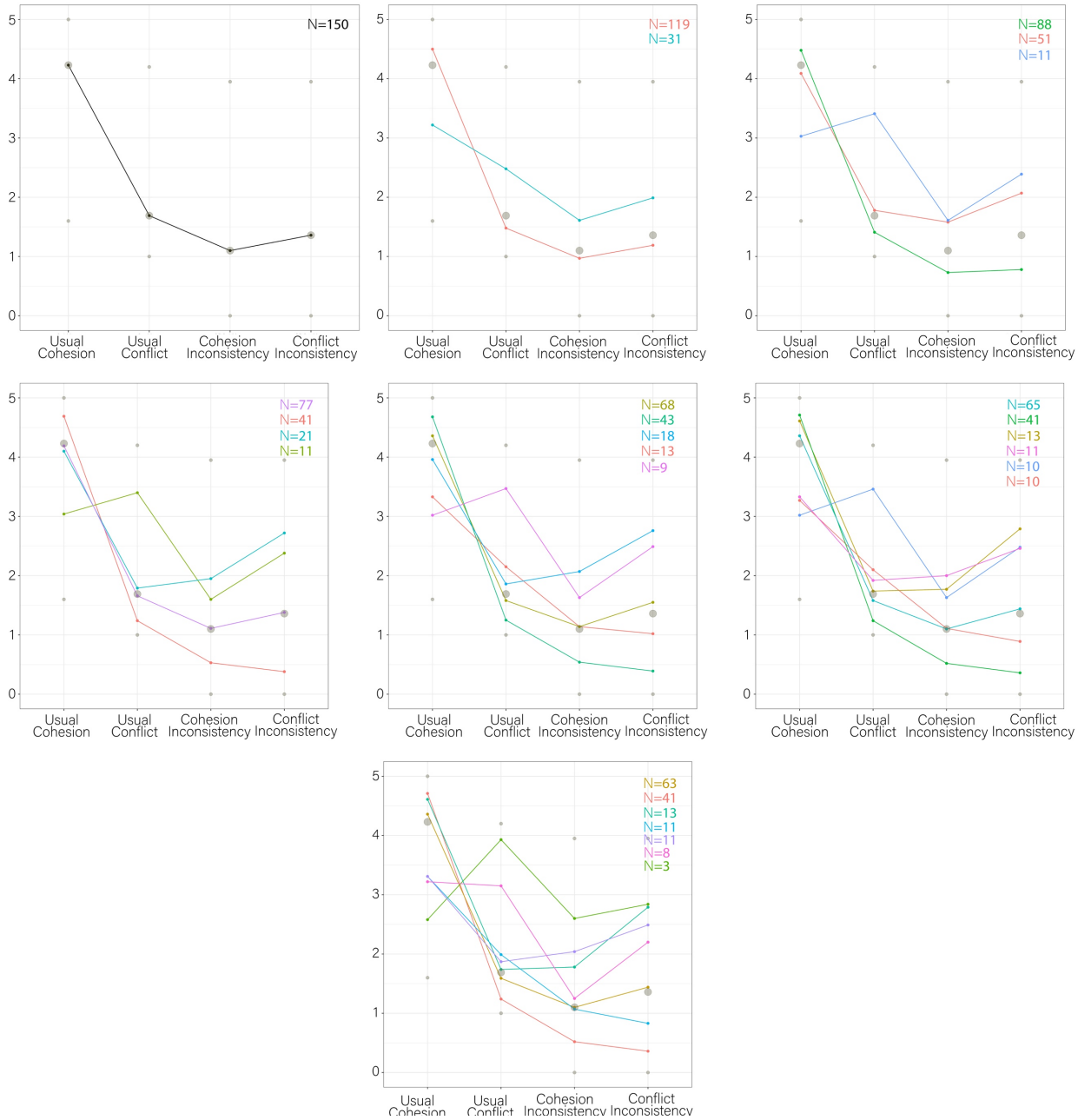

FIGURE S1. Plots of the profiles identified in each of the seven models. Each line represents a profile characterized by different levels (y-axis) of four family functioning indicators (x-axis). Means of the profile indicators are indicated by the large, transparent circles. The minimum and maximum values of the profile indicators are indicated by the small, transparent circles.