



Development of Family Adaptability and Cohesion from Adolescence to Young Adulthood and Associations with Parental Behavior

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Abstract

Previous research has demonstrated the influence of family functioning on developmental outcomes but only a few studies have addressed the normative changes of family functioning during adolescence. While there is evidence that family adaptability is stable, findings regarding the development of family cohesion levels are controversial. The focus on the association of family functioning with parenting behavior has also been quite limited. Some studies have revealed that an authoritative parenting style is connected with better family functioning, but only a small body of research has analyzed the association with the main dimensions of parenting behavior. The current study investigated developmental trajectories of family adaptability and cohesion from adolescence to young adulthood. The impact of sex, number of siblings, marital status, socioeconomic status and parenting behavior was studied in a sample of $N = 619$ participants from a longitudinal Swiss study at two measurement times. Repeated measures ANOVAs and cross-sectional linear regression models were used to analyze the data. There was a significant developmental decline in perceived family cohesion but no change in adaptability from adolescence to young adulthood. In addition, there was a significant main effect of socioeconomic status on adaptability and of parental divorce on cohesion. Boys experienced a significantly steeper decline in family cohesion than girls. Adaptability and cohesion were predicted by perceived parental acceptance and psychological control at both measurement times while cohesion was also significantly predicted by perceived parental structure. The findings reflect normative developmental processes in the transition period.

Keywords Adaptability · Cohesion · Family functioning · Adolescence · Young adulthood

Highlights

- Family adaptability remains stable from adolescence to young adulthood but is affected by socioeconomic status.
- Family cohesion declines over this period and is influenced by sex and parental divorce.
- Higher perceived parental acceptance and lower psychological control predicts higher family adaptability and cohesion.
- Perceived parental structure is positively correlated with family cohesion.

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Adolescence is a developmental period marked by individual cognitive, physical, emotional and social changes and additional factors such as relationships with family members, family structure, and family functioning also impact on development and well-being (Gauze et al., 1996; Rask et al., 2003; Uruk et al., 2007). The Family Adaptability and Cohesion Evaluation Scales (FACES) represent a widely used tool of assessment in research for measuring the constructs of family adaptability and cohesion (Baer, 2002; Everri et al., 2015; Hamilton & Carr, 2016; Olson, 2008; Parra et al., 2015). Family adaptability or flexibility relates to the ability of the family to adapt to leadership, role

relationships and rules in response to stressful events. Cohesion is defined as the emotional bonds that family members have towards each other. According to Olson (2008) unbalanced, i.e., very low or excessive levels of adaptability or cohesion can lead to dysfunctional family systems.

The study of the impact of adaptability and cohesion on various psychological outcomes such as self-esteem, adjustment, behavioral and emotional problems, hopelessness or other psychological outcomes (Cruz et al., 2014; Farrell & Barnes, 1993; Gorbett & Kruczek, 2008; Guassi Moreira & Telzer, 2015; Jagers et al., 2015; Joh et al., 2013; Parra et al., 2015) has gained substantial attention (Lucia & Breslau, 2006; Richmond & Stocker, 2006; Smets & Hartup, 1988; Uruk et al., 2007). In contrast, changes to these constructs during adolescence have not been studied as intensively and the available findings are controversial. Parra et al. (2015) argued that families may have acquired stable family functioning during childhood, but changes could occur to these structures later during ordinary adolescent development. These authors found increasing levels of cohesion from early adolescence to emerging adulthood, with the lowest cohesion levels in early adolescence. However, there were no changes in adaptability over the course of adolescence. Additional evidence for stable adaptability was observed in cross-sectional study by Scabini and Galimberti (1995). In contrast, two other studies by Feldman and Gherig (1988) and Baer (2002) revealed a significant decline in cohesion levels through adolescence.

Various factors might have an effect on these developmental processes. Findings of a potential impact of the sex of the adolescent are controversial. Some studies found evidence for a possible influence on cohesion with either adolescent girls perceiving higher levels of cohesion than boys (Scabini & Galimberti, 1995) or vice versa (Jagers et al., 2015), while other studies failed to find any differences (Feldman & Gherig, 1988; Parra et al., 2015). To our knowledge there are no studies supporting a possible effect of sex on adaptability (Parra et al., 2015; Scabini & Galimberti, 1995). Since family functioning also involves additional family members and their relationships, it is conceivable that variables such as educational level of the parents, socioeconomic status (Mirnic et al., 2010; Tsamparli & Halios 2019), marital status (Baer, 1999; Waldren et al., 1990), or the presence of other siblings (Byrd et al., 1993; Tsamparli & Halios, 2019) may exert an influence on the development of family functioning.

Besides these rather external and non-behavioral factors, there is evidence that parenting behavior is also associated with family functioning (Everri et al., 2015; Henry et al., 2006; Mupinga et al., 2002). These associations are plausible as the three most common dimensions of parental behavior, namely, acceptance and support, structure and

monitoring and psychological control include features overlapping with the dimensions of family functioning (Baumrind, 2016; Olson & Gorall, 2006). Therefore, accepting and supportive parenting behavior might lead to closer emotional bonds and, consequently, higher levels of family cohesion. Furthermore, adaptability might be linked to the parenting dimension of behavioral control (e.g., structure, parental monitoring and supervision). Various studies revealed that a rather authoritative parenting style as represented by high acceptance and support (encouraging and supporting behavior), high structure (supervision, behavioral control, rule setting and monitoring), and low psychological control (punishing behavior, mistrust and rejection) leads to more cohesive family bonds or higher family functioning (Matejevic et al., 2014; Mupinga et al., 2002; Olson & Gorall, 2006). However, there is only limited information about the impact of each of the main dimensions of parental behavior on family adaptability and cohesion. A study by Henry et al. (2006) found diverging results for different factors of parental behavior and family functioning. Parental acceptance and support had the highest impact on family adaptability and cohesion while parental monitoring or structure had only a small effect. Based on rather limited evidence, it is likely to assume that psychological control is negatively correlated with adaptability and cohesion (Carvalho et al. 2018).

Given the above mentioned limitations of preceding research findings, the present study had two major aims. First, with a specific interest in developmental trajectories during the transition period from late adolescence to young adulthood, the study focused on changes of perceived family adaptability and cohesion. Secondly, the associations of perceived family functioning and parental behavior were studied, and the impact of sex, socioeconomic status, number of siblings, and marital status were controlled for in the analyses. It was hypothesized that adaptability would be stable while cohesion levels will decrease from adolescence to young adulthood. Additionally, we assumed an impact of socioeconomic status, number of siblings and marital status, but not of sex on developmental changes in family adaptability and cohesion. We also hypothesized that higher levels of perceived parental acceptance and structure would predict higher levels in family adaptability and cohesion, while we assumed that psychological control would be negatively correlated with both family functioning variables.

Method

Participants

The sample was based on an original cohort of $N = 1110$ preadolescents and adolescents aged 11–17 forming the

Table 1 Descriptive sample statistics

	<i>N</i>	%
Girls	352	56.9
Boys	267	43.1
Divorced parents		
At T1	133	21.5
At T2	97	15.7
Siblings	574	92.7
Single child	45	7.3
One sibling	283	45.7
2+ siblings	291	47.0
Socioeconomic status		
Lower class	82	13.2
Lower middle class	365	59
Upper middle class	123	19.9
Upper class	49	7.9

longitudinal Zurich Adolescent Psychology and Psychopathology Study (ZAPPS). The cohort was a stratified randomized school-based sample representing the 12 counties of the canton of Zurich in Switzerland, which was studied longitudinally in 1994, 1997, 2001, 2004, and 2015–2018. A comprehensive description of the original sampling procedure can be found in Steinhausen et al. (1997).

The sample of the present study included only those individuals who participated in the two waves of data collection in 1997 and 2001 and had a complete data-set as far as the measures of the present study were concerned. Whereas all assessments at the beginning of the survey in 1994 were performed at the schools of the participants, the data in 1997 were predominantly collected again at the schools. However, questionnaires had to be mailed to a smaller part of older participants at this time and to the entire cohort in 2001 because of having left school. At each stage of the longitudinal study, some subjects dropped out from the sample (e.g., after leaving school and / or not responding to mailed questionnaires). Systematic drop-out analyses of the samples participating in the first three waves of multi-dimensional assessments in 1994, 1997, and 2001 revealed that older adolescent males with predominantly more externalizing problems as indicated by the screener of the study, the Child Behavior Checklist (CBCL, Achenbach, 1991), were more likely to drop out from the study. However, all differences were relatively small in magnitude and became easily significant because of the large sample size.

Sample characteristics of the present study are summarized in Table 1. The overall sample size was $N = 619$ and the mean age at time 1 was 14.85 ($SD = 0.08$) and at time 2 it was 18.45 ($SD = 0.94$). Due to selective attrition, there

were significantly more girls ($\chi^2 = 11.67$, $p = 0.001$) in the sample. The vast majority of 95.0% ($N = 588$) participants were native Swiss. Further descriptions of the social variables used in the analyses can be found in Table 1.

Measures

The present study was based on two questionnaires measuring family functioning and perceived parental behavior. The Family Adaptability and Cohesion Evaluation Scales (FACES) III were originally developed by (Olson et al., 1985) with the intention to measure perceived family functioning, namely, family adaptability and cohesion and were conceptually based on the Circumplex Model of Family Functioning (Olson et al., 1979).

The translated German version of the scales is a 20-item self-report questionnaire with each question answered on a 5-point scale (from “almost never” to almost always). Adaptability is defined as the ability of the family system to change in response to stress and comprises four subscales: control/family leadership, discipline, role allocation and rules. Cohesion refers to the degree of emotional bonding within the family and includes six subscales: emotional bond, family boundaries, time management, friendships, decision making and leisure activities. These two main dimensions were also well replicated in factor analyses based on data from the ZAPPS samples collected in 1997 and 2001. Reliability coefficients for the samples used in the current study amounted to $\alpha = 0.61$ – 0.62 for adaptability and $\alpha = 0.86$ – 0.89 for cohesion.

The second questionnaire named Zurich Perceived Parental Behavior Inventory (PPBI) originally consisted of 32 items (Reitzle et al., 2001). The three scales of the inventory were separately assessed for mothers and fathers based on items with response scales ranging from 0 to 3 (from “not true” to “always true”) at both measurement times. Confirmatory factor analysis in the original ZAPPS sample revealed three factors explaining 34 % of the variance for mothers and 35% of the variance for the fathers. Five items were excluded from one of the three scales due to low discriminatory power or redundancy, so that the final questionnaire contained 27 items (Reitzle et al., 2001).

The three identified scales were named “acceptance” (e.g., “my mother /father praises me when I do something good”) including 12 items, “psychological control” (e.g., “my mother/father easily becomes upset if I do not do what she/he says”) including 9 items and “structure” (e.g., “my mother/father has clear rules for my behavior”) including 6 items. The scale “acceptance” included comforting, affectionate, encouraging and supporting behavior as well as acceptance towards the child. “Psychological control” was comprised of inconsistencies in handling unwanted behavior, punishing behavior through psychological pressure,

Table 2 Descriptive statistics of adaptability, cohesion, and parental behavior scores at two times

	Total				Girls			Boys			Sex differences	
	<i>N</i>	Mean	SD	Range	Mean	SD	Range	Mean	SD	Range	<i>T</i>	<i>p</i>
Adaptability T1	619	19.63	5.33	1.73–34	19.60	5.64	1.73–34	19.67	4.89	6–30	0.16	0.87
Adaptability T2	619	19.97	5.11	1–36	20.27	5.26	1–36	19.57	4.88	4–32	–1.71	0.09
Cohesion T1	619	24.45	6.83	2–40	24.17	7.19	2–40	24.83	6.33	5–39	1.19	0.24
Cohesion T2	619	23.63	7.19	2–40	23.89	7.55	2–40	23.29	6.69	2–38	–1.02	0.31
Acceptance T1	616	24.91	5.78	3–36	25.06	6.02	3–36	24.72	5.46	7–36	–0.71	0.48
Acceptance T2	614	26.41	5.79	3.5–36	26.76	5.76	4.5–36	25.95	5.80	3.5–36	–1.71	0.09
Psychological Control T1	616	6.55	4.27	0–25.5	6.34	4.49	0–25.5	6.83	3.96	0–22	1.43	0.15
Psychological Control T2	614	4.63	3.77	0–21.5	4.47	3.85	0–21.5	4.84	3.65	0–16	1.21	0.23
Structure T1	616	10.44	3.40	1–18	10.25	3.45	1–18.0	10.68	3.31	2–18	1.55	0.12
Structure T2	614	8.52	3.47	0.5–18	8.59	3.54	0.5–18	8.43	3.36	1–16.5	–0.57	0.57

mistrust and rejection. The third scale “structure” reflected clear rules-setting, supervision, and monitoring behavior by the parents. Reliability coefficients for the current sample were $\alpha = 0.60$ – 0.62 for acceptance, $\alpha = 0.70$ – 0.72 for psychological control, and $\alpha = 0.68$ – 0.70 for structure.

In a recent publication (Spitz et al., 2019), the scales were renamed parental acceptance, psychological control, and structure in order to simplify the terminology and align with the conceptualization of recent research (Grolnick & Pomerantz, 2009; Soenens & Vansteenkiste, 2010; Steinberg, 2001). Additionally, we calculated an average sum score for both parents.

In addition to the two questionnaire scales, sex and three social variables were used for the present analyses. These variables included socioeconomic status (SES), number of siblings, and marital status (divorced vs. non divorced) and were based on a detailed questionnaire on social, family, and life circumstances at the time of the assessment during adolescence in 1997. Socioeconomic status was classified according to the profession and education of the main bread winner into four strata, namely, lower class, lower middle class, upper middle class, and upper class.

Data analysis

A series of repeated measures two-factorial analyses of variance (ANOVA) were computed to study changes in family structure from adolescence to young adulthood with adaptability and cohesion scores as dependent measures. In each analysis, time was considered as the first dichotomized (1997 and 2001) factor while sex, SES, number of siblings, and the presence of parental divorce were separately analyzed each as the second stratified factor with a potential additional impact.

In the second part of the analyses, linear regression models were conducted for each assessment to predict family adaptability and cohesion scores based on the three

parental behavior scales. Besides sex, the social variables of SES, number of siblings, and marital status were also included in the regression models. Categorical variables, such as sex, SES and marital status were dummy coded. For SES, lower middle class was used as a reference category.

All analyses were performed by using SPSS—package for Windows version 23 (IBM Corp. Released, 2015) Missing values occurred only among the parental behavior scales and amounted to <1% of the subjects, The respective cases were excluded in the analyses.

Results

Detailed descriptive statistics of the FACES III and the PPBI scales at the two times can be found in Table 2. There were no significant sex differences in any of the scales across time. Table 3 shows means and standard deviations for adaptability and cohesion stratified for sex, SES, number of siblings, and parental divorce. As Figs. 1 and 2 and Table 4 indicate, repeated measures ANOVAs revealed different results for adaptability and cohesion. Time did not have a significant impact on adaptability in any of the analyses, indicating that it is a rather stable construct in this time period. Furthermore, neither sex, nor number of siblings, nor parental divorce had a significant main effect on adaptability. However, there was a significant main effect of SES ($F(3,615) = 4.04$, $p = 0.007$), meaning higher SES resulted in higher adaptability scores in the sample. All interactions between time and the other four variables were non-significant. In contrast to adaptability, cohesion showed a significant decline in all analyses from adolescence to young adulthood. Among the various social variables, only divorce had a significant main effect in terms of decreasing cohesion scores. There was a significant interaction with sex indicating that boys perceived stronger decline in cohesion

than girls over time. No significant interaction was found for SES, number of siblings or parental divorce.

The findings from cross-sectional linear regression models are presented in Tables 5 and 6 and show a significant regression equation at both times for perceived adaptability (T1: $F(9615) = 13.87, p < 0.001$; T2: $F(9613) = 15.83, p < 0.001$), and cohesion (T1: $F(9615) = 50.36, p < 0.001$; T2: $F(9615) = 39.49, p < 0.001$). At both times, the explained variance (R^2) of the model was lower for adaptability ($R^2 = 0.18$ and $R^2 = 0.19$, respectively) than for cohesion ($R^2 = 0.42$ and $R^2 = 0.37$, respectively). In the regression model for adaptability, perceived parental

acceptance (both $p < 0.001$) and psychological control ($p = 0.02$; $p < 0.001$) were significantly associated at both measurement times. Higher perceived parental acceptance and lower parental psychological control was associated with higher adaptability scores. Structure did not significantly associate with adaptability. Among the other variables considered in the equation, at time 2 upper class compared to lower class ($p = 0.01$) was significantly and positively associated with adaptability. Additionally, the number of siblings was negatively ($p = 0.02$) and parental divorce was positively ($p = 0.003$) associated with adaptability at time 2.

Cohesion was significantly associated with all three scales measuring perceived parental behavior, namely, positively with both acceptance ($p < 0.001$ at both measurement times) and structure ($p = 0.004$ and $p = 0.04$, respectively) and negatively with psychological control ($p < 0.001$ at both measurement times). In addition, there were significant associations with parental divorce ($p = 0.01$ and $p = 0.02$, respectively) indicating that adolescents with divorced parents experienced less family cohesion. Overall, parental acceptance had the strongest association with both family adaptability and cohesion. However, there was also a strong negative impact of psychological control on adaptability and cohesion measures.

The impact of the social variables on family structure was less relevant except for the few above mentioned associations with SES, number of siblings, and parental divorce. In particular, the size of the family as reflected by the number of siblings as well as sex had a minor influence only on both family structure variables at both times. On the other hand, parental divorce predicted higher adaptability and cohesion especially in young adulthood. However standardized beta values were still relatively small.

Table 3 Stratified means and standard deviations for socioeconomic status (SES), number of siblings, and parental divorce

	Adaptability T1		Adaptability T2		Cohesion T1		Cohesion T2	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
SES								
Lower class	19.08	5.60	18.64	4.72	24.19	7.61	23.22	6.93
Lower middle class	19.37	5.20	19.85	6.17	24.44	6.77	23.61	7.15
Upper middle class	20.29	5.62	20.55	5.24	24.09	6.63	23.77	7.81
Upper class	20.83	4.88	21.64	4.31	25.86	6.18	24.12	6.26
Number of siblings								
Single child	20.17	5.75	20.29	4.78	26.02	7.26	24.34	6.70
1 sibling	19.37	5.51	19.89	5.03	24.31	6.85	23.58	7.41
2+ siblings	19.79	5.09	19.99	5.24	24.35	6.74	23.38	7.07
Parental divorce								
Not divorced	19.72	5.22	19.96	5.09	24.86	6.65	24.01	7.02
Divorced	19.28	5.98	19.99	5.19	22.96	7.58	22.26	7.06

Fig. 1 Association of sex, socioeconomic status, number of siblings, and parental divorce with family adaptability across time

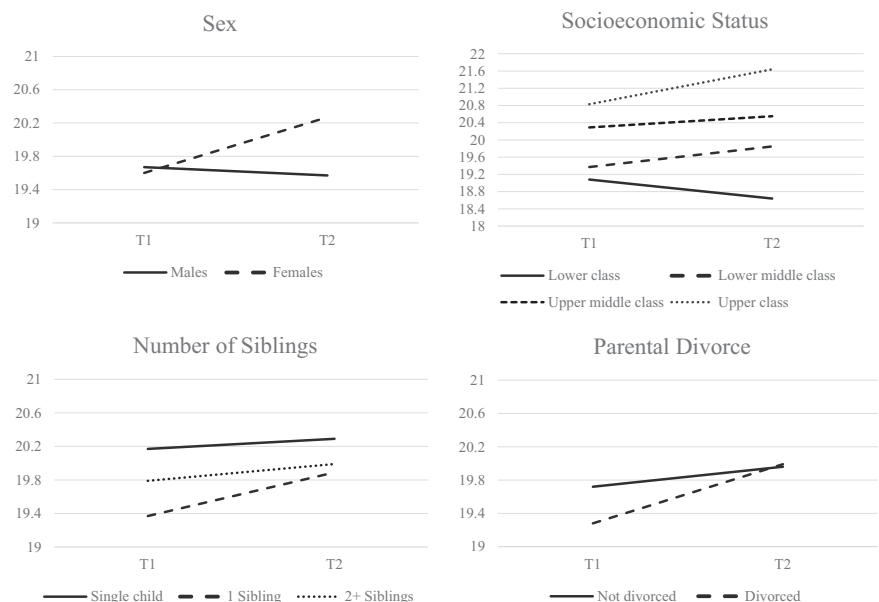


Fig. 2 Association of sex, socioeconomic status, number of siblings, and parental divorce with family cohesion across time

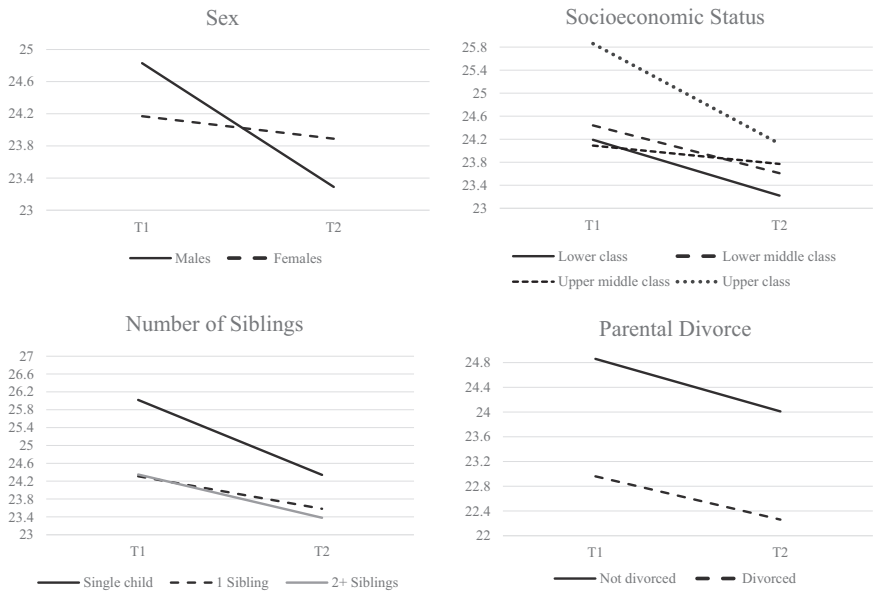


Table 4 Summary statistics of repeated analyses of variance for adaptability and cohesion

	Adaptability			Cohesion		
	F	df	p	F	df	p
<i>Model A</i>						
Time	1.65	1617	0.20	11.17	1617	0.001
Sex	0.79	1617	0.38	0.004	1617	0.95
Time*sex	3.03	1617	0.08	5.32	1617	0.02
<i>Model B</i>						
Time	0.94	1615	0.33	7.61	1615	0.006
SES	4.04	3615	0.007	0.48	3615	0.70
Time*SES	0.75	3615	0.52	0.56	3615	0.64
<i>Model C</i>						
Time	0.79	1616	0.38	7.7	1616	0.006
Number of siblings	0.48	2616	0.62	0.83	2616	0.44
Time*number of siblings	0.28	2616	0.76	0.39	2616	0.67
<i>Model D</i>						
Time	3.11	1617	0.08	5.55	1617	0.02
Parental divorce	0.22	1617	0.64	9.28	1617	0.002
Time*parental divorce	0.78	1617	0.38	0.06	1617	0.80

Discussion

The aim of the present study was to investigate developmental changes of perceived family adaptability and cohesion from adolescence to young adulthood. Additionally, the associations of perceived family functioning and the main dimensions of perceived parental behavior were analyzed. Our results support the first hypothesis that perceived family adaptability remained stable and perceived cohesion declined from adolescence to young adulthood. The findings are in line

with the results by Baer (2002) and Feldman and Ghering (1988) and also partially supportive of the findings by Scabini and Galimberti (1995) and Parra et al. (2015) regarding the stability of adaptability. The decline of perceived cohesion levels was in contrast to the results found by Parra et al. (2015). However, their study consisted of a smaller sample size and the increase of cohesion was mostly observable from early adolescence to middle adolescence.

Regarding the potential influence of sex, we found no effect on adaptability and only a significant interaction with perceived cohesion. The non-existent sex differences regarding adaptability are in line with studies by Parra et al. (2015) and Scabini and Galimberti (1995) and the significant interaction with cohesion may also reflect the contradicting results in previous research (Jaggers et al., 2015; Scabini & Galimberti, 1995). While both boys and girls showed a decline in cohesion during this age span, boys had a steeper decline. Girls experienced their families as less cohesive at the first measurement time but showed higher levels than boys at the second measurement time. According to these results, sex has an age-dependent influence on the perception of family cohesion.

While the number of siblings did not have an impact on either family adaptability or cohesion, SES showed a significant main effect on perceived adaptability and parental divorce on perceived cohesion. Families with a higher SES were seen as more adaptable by their youth. This finding is in accordance with other studies indicating that a higher educational level and higher income of the parents was generally associated with lower parental stress and conflict and better coping strategies (Mirnics et al., 2010; Tsampanli & Halios, 2019). However, the present study failed to find similar associations with perceived family cohesion

Table 5 Cross-sectional prediction of adaptability and cohesion at Time 1

	<i>Adaptability</i>				<i>Cohesion</i>					
	<i>R</i> ²	β^a	95% CI		<i>p</i>	<i>R</i> ²	β^a	95% CI		<i>p</i>
			lower	upper				lower	upper	
	0.18					0.42				
Acceptance		0.37	0.11	0.18	<0.001	0.54	0.24	0.32	<0.001	
Psychological control		−0.11	−0.13	−0.01	0.02	−0.25	−0.27	−0.14	<0.001	
Structure		−0.08	−0.13	0.01	0.09	0.11	0.04	0.18	0.004	
Sex		−0.02	−1.01	0.06	0.58	−0.05	−0.16	0.11	0.09	
SES										
Lower middle class		0.07	−0.43	1.86	0.22	0.01	−1.10	1.33	0.85	
Upper middle class		0.09	−0.17	0.27	0.09	−0.04	−0.221	0.76	0.34	
Upper class		0.06	−0.49	2.94	0.16	0.02	−1.22	2.43	0.52	
Number of siblings		0.02	−0.27	0.50	0.56	−0.03	−0.59	0.24	0.40	
Parental divorce		0.07	−0.20	2.16	0.10	0.09	0.51	3.02	0.01	

^aStandardized Beta**Table 6** Cross-sectional prediction of adaptability and cohesion at Time 2

	<i>Adaptability</i>				<i>Cohesion</i>					
	<i>R</i> ²	β^a	95% CI		<i>p</i>	<i>R</i> ²	β^a	95% CI		<i>p</i>
			lower	upper				lower	upper	
	0.19					0.37				
Acceptance		0.33	0.09	0.16	<0.001	0.49	0.22	0.31	<0.001	
Psychological control		−0.18	−0.18	−0.06	<0.001	−0.27	−0.33	−0.18	<0.001	
Structure		0.02	−0.05	0.08	0.72	0.09	0.01	0.17	0.04	
Sex		0.04	−0.37	1.12	0.32	−0.003	−0.96	0.89	0.94	
SES										
Lower middle class		0.07	−0.51	1.99	0.24	0.001	−1.56	1.55	0.99	
Upper middle class		0.09	−0.25	2.58	0.11	−0.02	−2.09	1.42	0.70	
Upper class		0.12	0.58	4.03	0.01	0.001	−2.14	2.15	0.99	
Number of siblings		−0.09	−0.82	−0.09	0.02	−0.05	−0.78	0.13	0.16	
Parental divorce		0.12	0.51	0.25	0.003	0.08	0.26	2.69	0.02	

^aStandardized Beta

indicating that the ability to adapt leaderships and rules might depend on familial SES, rather than on the emotional bonds between family members.

Parental divorce did not have an influence on parental adaptability and it also did not change the decline in perceived cohesion, but adolescents with divorced parents generally showed lower levels of cohesion. This finding is in line with the results from other studies that have revealed lower levels of cohesion in single-parent or remarried families (Baer, 1999; Waldren et al., 1990) due to higher levels of conflict. In contrast, our results did not confirm the finding by Waldren et al. (1990) of lower adaptability levels in remarried families. However, we only had information about the marital status and no further information about the family structure (e.g., stepparents, new partner, remarriage). Furthermore, in our sample we did not observe any influence of the number of

siblings on either adaptability or cohesion. Other studies have revealed an effect of the presence of siblings on family functioning but they used other variables like quality of sibling relationships (Tsamparli & Halios 2019) or sibling position (Byrd et al., 1993). Therefore, one may assume that the number of siblings alone is less likely to exert an influence on family structure but rather the qualitative characteristics of the sibling relationship.

The cross-sectional results of two measurement times regarding the influence of perceived parenting behavior on adaptability and cohesion revealed that generally both family functioning dimensions were predicted by perceived parental acceptance and perceived psychological control. Additionally, perceived cohesion was also predicted by perceived parental structure. While high supportive parenting behavior and low psychological control were

associated with a flexible family structure, the level of structure did not correlate significantly with family adaptability.

In contrast, perceived family cohesion was also predicted by lower levels of parental structure, but these results had relatively low beta values compared to parental acceptance. There was no evidence for an age effect. However, these analyses were cross-sectional and must be verified in a model based on longitudinal data. Our hypothesis about the associations between parental behavior and family functioning was partly confirmed. While there was an association of all three parenting dimensions with perceived family cohesion, only perceived parental acceptance and psychological control were significantly related to perceived family adaptability. There is a strong convergence of these results with findings from previous research (Carvalho et al., 2018; Henry et al., 2006; Matejevic et al., 2014; Mupinga et al., 2002; Olson & Gorall, 2006).

In terms of strengths and limitations, the present study profited from a large sample size, separate analyses of different characteristics of family structure and parental behavior, and the inclusion of two waves of data within a repeated measure design. However, it has to be acknowledged that the sampling procedure including the data collection at schools, the length of time that elapsed since the original survey administration in 1994, and the changes in sample composition across time do not allow the claim that the study was based on a representative sample at all stages of the survey. Furthermore, the reliability coefficients of the two measures of the present study were not fully satisfactory for all subscales at all measurement times. Future studies might overcome these limitations for the generalizability of findings of the present study.

Although the two measurement times marked the developmentally sensitive transition period from late adolescence to young adulthood, future research might benefit from a more fine-grained time pattern of the longitudinal design to study developmental trajectories in more detail starting in early adolescence, throughout the whole period of adolescence, and ending in middle adulthood when participants may have their own families. Although we included several correlates and potential determinants of family functioning, future research might include more detailed characteristics of the family structure like living with stepparents, remarriage, birth order or sex of the siblings.

In terms of implications, the findings of the present study strengthen the body of research on normative developmental changes of family functioning variables. It has also provided information about potential factors that may contribute to an improvement of family functioning. A general decline in cohesion is normal from late adolescence to young adulthood, and parental acceptance and support especially seems to predict higher family adaptability and cohesion. This

information can be used in counseling and treatment to safeguard against an overinterpretation of a decline in family cohesion in transition periods and to recognize that parental acceptance and support continue to be important factors in late adolescence in helping to maintain an adaptable family structure and higher levels of emotional bonding within the family.

In conclusion, the present study documents the developmental changes in perceived adaptability and cohesion from adolescence to young adulthood, as well as the impact of perceived parental acceptance, psychological control, and structure. Future studies might study these normative developmental trajectories over the entire adolescent period into advanced adulthood and include more detailed information regarding the family composition.

Author Contributions A.S. analyzed the data and wrote the first draft of the paper with input from both authors. H.-C.S. was the principal investigator of the project and supervised and revised the manuscript.

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Compliance with Ethical Standards

Conflict of interest A.S. reports no conflict of interest. In the past 3 years, H.-C.S. worked as a speaker for Medice and has received book royalties from Cambridge University Press, Elsevier, Hogrefe, Huber, Klett, and Kohlhammer publishers.

Ethical approval At the time of the first data collection for this study in 1994 and the first publication based on the Zurich Epidemiological Study of Child and Adolescent Psychopathology in 1998 and its later follow-up study called the Zurich Adolescent Psychology and Psychopathology Study (ZAPPS), no ethical committee existed at the study center or in the specific region, Switzerland, to give approval. The Principal Investigator of the original study assures that the involvement of the local school authorities (a governmental institution of the specific Swiss region) and the informed consent of the parents of all participating pupils should be regarded as an equivalent to the approval of an ethical committee, together with the past financial support of the project from the federal Swiss Science Foundation over several years. Furthermore, all authors declare that the present and earlier studies were conducted in compliance with the APA Ethical Principles. Several earlier articles based on this data have been published by various international journals in the past. The authors also declare that no retrospective ethical approval has been sought or requested in the past and that such a procedure could not be considered feasible or realistic given the circumstances.

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