



Parenting and Late Adolescents' Well-Being in Greece, Norway, Poland and Switzerland: Associations with Individuation from Parents

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Abstract

Cross-cultural studies focusing on individuation and parent-child relationships during late adolescence in the European context are sparse. This study investigated relationships between maternal and paternal responsiveness, demandingness and autonomy granting and late adolescents' subjective well-being in Greece, Norway, Poland, and Switzerland. Additionally, the role of psychological, functional, and financial aspects of adolescents' individuation in these relationships were assessed. Late adolescents (18–20-years-old, $N = 745$) reported on their parents' behaviors and themselves. Structural models with latent constructs were applied to test the hypothesized relationships. Results showed that in all four countries, maternal and paternal autonomy granting and responsiveness were positively associated with adolescents' well-being. No significant results were found for demandingness. Further, the study found that psychological and functional connectedness with mothers and financial connectedness with fathers partially explained the associations between parenting behaviors and adolescents' well-being. The results indicate more similarities than differences across Europe in the associations between parenting on late adolescents' outcomes. More importantly, the study points out that maternal and paternal parenting may play different roles in late adolescence.

Keywords Parenting · Late adolescents · Well-being · Individuation · Europe

The quality of parenting makes up an important developmental context influencing adolescents' adjustment, even in late adolescence (Zarrett and Eccles 2006). Yet, unlike the early and middle adolescence, the influence of differential

parenting practices on late adolescent well-being is relatively less examined, especially in cross-cultural context. Furthermore, there is paucity of cross-cultural research focusing on potential psychological mechanisms explaining these relationships (Li et al. 2010; Richman and Mandara 2013), especially in the European context. Despite the interconnected history, institutions and cultures, one can observe a remarkable diversity within Europe. Yet, unlike American or Asian cultural contexts, the European one has been somewhat neglected in terms of systematic cross-cultural studies on the universal and culture specific patterns of parenting and late adolescents' outcomes. Investigating the similarities and differences in the associations between parenting, parent-child relationships and European adolescents' outcomes adds to the exiting cross-cultural and developmental literature.

Late adolescence, the transitional period into adulthood, is characterized by many developmental tasks (Arnett 2007; Plunkett et al. 2007; Suldo and Huebner 2004; Zarrett and Eccles 2006). These multiple changes may affect late adolescents' well-being and consequently their adjustment and

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outcomes across the life-span. Given that subjective well-being can act as a buffer against many negative outcomes (e.g., Caprara et al. 2006; Eccles et al. 1996; Plunkett et al. 2007), undersanding factors affecting late adolescents' well-being is crucial. Following Caprara and Steca (2006), subjective well-being is conceptualized as a multi-dimensional construct encompassing adolescents' overall life satisfaction and self-esteem.

The quality of parenting makes up an important developmental context influencing adolescents' adjustment, even in late adolescence (Zarrett and Eccles 2006). One of the most salient aspects of parent-child interaction that will be investigated in the present study is parenting. Specifically, we focus on dimensions of parenting. This is because measuring parenting dimensions as compared to parenting styles is considered a better methodological approach to comparing parenting practices across the cultures (Stewart and Bond 2002). Traditionally the literature distinguished between two main dimensions of parenting: responsiveness and demandingness (Maccoby and Martin 1985). However, other dimensions have also been suggested (e.g., Barber et al. 2005; Grolnick and Ryan 1989; Schaefer 1965). Of particular relevance here is autonomy granting defined as parental encouragement of child's individuality and self-expression (Silk et al. 2003).

From the cross-cultural perspective, research indicates that high parental responsiveness has a universally positive effects on adolescent outcomes, including their well-being (Carlo et al. 2018; Hoskins 2014; Pinquart 2017; Rohner and Khaleque 2010; Schwarz et al. 2012). Further, research has revealed that in individualistic and in developing collectivistic cultures parental demandingness is negatively whereas autonomy granting is positively associated with adolescent adjustment (e.g., Hoskins 2014; Leung et al. 2004; Liew et al. 2014; Pinquart 2017; Suldo and Huebner 2004). These findings are in accordance with Kağıtçıbaşı's (2011) cross-cultural perspective, which states that in the individualistic, as well as in the industrialized collectivistic cultures, development of child's autonomy is a desired socialization goal.

The empirical evidence regarding the unique effects of parenting responsiveness, autonomy granting and demandingness on late adolescents' subjective well-being in the four European countries under study is scarce. Yet, the single-country research implies that parenting styles characterized by high warmth, responsiveness and encouragement of autonomy are positively associated with adolescents' outcomes in these countries, including self-esteem, identity and personality development, emotional and behavioral adjustment, and career-decisions (e.g., Antonopoulou et al. 2012; Brand et al. 2009; Koumoundourou et al. 2011; Ostafińska-Molik and Wysocka 2015; Sznitman et al. 2018; Tabak and Zawadzka 2016;

Valend et al. 2015). The lack of solid cross-cultural evidence emphasizes the need for more comparative research on the effects of parenting on late adolescents' subjective well-being across Europe.

Despite the recent increased interest in the father's role, it is still not a standard in studies on parent-adolescent relationships that unique aspects of maternal and paternal parenting are considered. Many studies have investigated only maternal parenting or have used composite scores of maternal and paternal parenting (e.g., Galambos et al. 2003; Rote and Smetana 2016; Smokowsky et al. 2015). The few that have differentiated between maternal and paternal influences on adolescents' adjustment have revealed inconsistent results. Some showed similar effects of paternal and maternal parenting (Murray et al. 2014; Rodrigues et al. 2016; Stutz and Schwarz 2014) others showed differences (Fosco et al. 2012; McGrath and Repetti 2000; Milevsky et al. 2007). Also, some studies indicate that the relationships with mothers tend to be closer, whereas fathers are viewed as authority figures (Branje et al. 2013; Klimes-Dougan et al. 2007; Lamb and Lewis 2013). Other studies show that both maternal support and control are more salient than paternal support and control (e.g., Mastrotheodoros et al. 2018; Yang et al. 2008). On the other hand, Gecas and Schwalbe (1986) reported that both paternal control and support, but only maternal support were significantly correlated with adolescents' well-being. Hence, whether mothers and fathers contribute in unique or similar ways to adolescent development remains to be systematically examined.

Individuation from parents is considered as the central developmental task of adolescence that has significant impacts on later life outcomes, including academic achievements, emotional adjustment, and love relationships (Collins and Steinberg 2006; Moore 1987; Schultheiss and Blustein 1994; Zimmer-Gembeck and Collins 2003). The empirical evidence implies that development of individuation continues throughout emerging adulthood (e.g., Inguiglia et al. 2015; Koepke and Denissen 2012; Saraiva and Matos 2012). In fact, late adolescence is often considered a crucial period for individuation, when youth has established a coherent sense of their identity (Blos 1979). This is also the time when the separation from parents happens not only on psychological level but also in reality (Geuzaine et al. 2000). Therefore, it seems essential to focus on individuation in late adolescence as a key variable associated with the effects of parenting on late adolescents' outcomes.

Several authors have emphasized the need to differentiate between facets of individuation. For instance, Hoffman (1984) proposed functional, emotional, attitudinal, and conflictual independencies; Buhl (2008) suggested a model that comprised emotional, behavioral, and cognitive aspects of connectedness and individuality, respectively. In cross-

cultural research three facets of individuation (financial, functional, and psychological) proposed by Gavazzi et al. (1999) have been widely studied. In this model, financial connectedness refers to monetary reliance on parents, functional connectedness reflects the degree of dependence on parents for daily care and companionship, whereas psychological connectedness refers to loyalty and obligation towards parents and the degree of emotional dependence on parents. Empirical evidence has underlined the relevance of such distinctions by demonstrating that different facets of individuation vary in their impact on youth development and well-being (e.g., Dwairy and Achoui 2010; Gavazzi et al. 1999; Kalsner and Pistole 2003; Mendonça and Fontaine 2013).

Family system theory postulates that adolescent individuation is affected by patterns of parent-adolescent interactions (Demo et al. 1987; Sabatelli and Anderson 1991). Personality developmentalists have linked adolescent individuation with adolescent well-being (Flemming and Anderson 1986; Rice et al. 1990). Thus, it is reasonable to assume that the level of individuation from parents may be indirectly related to parenting behaviors and adolescent outcomes.

According to the individuation theory, the successful individuation from parents occurs when parents encourage age-appropriate independency while continuing to provide adequate love, support, and empathy (Fousiani et al. 2014; Grotevant 1998; Ryan et al. 2006; Youniss and Smollar 1985). In fact, empirical evidence indicates that low levels of behavioral control and high levels of autonomy granting with continuous high levels of parental responsiveness promote individuation development (e.g., Hare et al. 2014; Inguglia et al. 2015; Kocayörük et al. 2015; Ratelle et al. 2012; Walper and Schwarz 2001; Wu et al. 2015). Thus, one could expect that in the four European countries under study lower levels of demandingness and higher levels of autonomy granting and responsiveness should be associated with adolescent individuation from parents.

As far as the effects of different facets of individuation on adolescents' well-being are concerned, research indicates that in Western industrialized societies late adolescents' psychological autonomy is positively related to their well-being (e.g., Inguglia et al. 2015; Kocayörük et al. 2015; Zupančič et al. 2014). In terms of the financial and functional individuation from parents, findings are inconclusive with some studies showing positive and some negative effects for these two aspects of individuation on late adolescents' well-being (e.g., Copp et al. 2017; Fingerman et al. 2012; Watson et al. 2016). From the developmental perspective one could argue that for late adolescents in Western societies functional and financial connectedness with parents may be perceived as a source of still necessary parental support while transitioning to adulthood (Arnett 2007).

Lack of empirical evidence regarding the effects of different facets of individuation on late adolescents' well-being in Europe emphasizes the need for further research.

Greece, Norway, Poland, and Switzerland differ remarkably with respect to the living conditions of young people (Eurostat 2015), as well as family values related to parent-adolescent relationships (e.g., Alsaker and Flammer 2014; Salmela-Aro and Schoon 2008). They represent different parts of the European continent, which have been shaped by different types of Christian religion, different political and social systems and thereby different kinds of related values. They also represent different socioeconomic contexts within the European continent, which offer youth different types of opportunities for gaining independence from parents, or timing of key decisions regarding education and vocational career.

The theoretical approach of the developmental niche (Super and Harkness 1986) suggests that the parent-child relationships are influenced by socio-economic conditions and values in the respective society. The cultural orientation of *individualism* and *collectivism* (I-C) has been widely used to explain cultural differences in socialization goals, or parent-child relationships (Hofstede 2001). The in-group collectivism is one of the aspects of I-C proposed by the GLOBE study (House et al. 2004) and it refers to the family collectivistic practices. On the 7-point scale of in-group collectivism (practices), Greece (5.27) and Poland (5.52) are characterized by the middle position while the position of Scandinavian countries (3.66) and Switzerland (3.97) are relatively low. Similarly, with respect to the Traditional vs. Secular-Rational Values assessed in the World Value Survey (2015), Greece and Poland are relatively similar in their tendency towards more traditional values, emphasizing for instance the importance of parent-child ties. Switzerland and especially Norway are higher in secular-rational values. According to data from the EU (Eurostat 2015), the living conditions of young people in the four countries differ remarkably. Again, Greece and Poland, and Switzerland and Norway, respectively, show rather similar patterns with higher percentages of unemployed young people for Greece and Poland and lower numbers in Norway and Switzerland.

These patterns of values and living conditions should correspond to differences between the four countries in the functioning of family systems, parenting behaviors, parent-adolescent relations etc. However, as outlined above, the associations between different facets of parenting and adolescent outcomes, such as individuation and well-being, often show similar patterns in cross-cultural comparisons. Therefore, comparative empirical research is needed to better understand cultural similarities and differences across Europe in the effects of parenting on late adolescent outcomes.

This study takes a cross-cultural perspective to investigate direct and indirect relationships between parenting dimensions of responsiveness, demandingness and autonomy granting and late adolescents' individuation and subjective well-being in Greece, Norway, Poland, and Switzerland. We expect that in all four countries responsiveness and autonomy granting will be positively, whereas demandingness will be negatively associated with adolescents' well-being (*H1*, e.g., Hoskins 2014; Liew et al. 2014; Pinquart 2017; Schwarz et al. 2012; Suldo and Huebner 2004). Further, we predict that in all four countries responsiveness and autonomy granting will be positively, whereas demandingness will be negatively associated with individuation from parents (*H2*, e.g., Inguglia et al. 2015; Kocayörük et al. 2015; Wu et al. 2015). Since the existing empirical findings do not show consistent results in terms of the direction of the associations between facets of individuation and adolescents' outcomes or whether one can expect any cross-cultural differences in these effects (e.g., Fingerman et al. 2012; Kocayörük et al. 2015; Watson et al. 2016; Zupančič et al. 2014), we will take an exploratory approach to the analysis of these associations (*Q1*). Further, we expect that the relations between parenting dimensions and adolescents' well-being will be indirectly related to adolescents' individuation (*H3*, e.g., Demo et al. 1987; Flemming and Anderson 1986; Hoffman 1984; Rice et al. 1990). Finally, to contribute to the on-going discussion the study will also evaluate unique effects of maternal and paternal parenting.

Method

Participants

Seven hundred and forty-five adolescents (52% females) were recruited from Greece, Norway, Poland, and Switzerland. The samples were comparable across the countries with respect to sociodemographic characteristics (see Table 1). The participants were on average 18-years-old and, most came from middle income families. In Norway, Poland, and Switzerland high school/vocational school students were recruited, in Greece first year university students. This was because the objective was to recruit 18–20-year-olds, and in Greece youth of such ages already attends university. To minimize the differences, in Norway, Poland, and Switzerland adolescents in their last year of high school were recruited whereas in Greece we recruited 1st year university students at the beginning of their first semester. As far as participants' parents are concerned, there were no major differences between the countries. Most fathers were between 41-and 65-years-old and most mothers were between 35-and 55-years-old. The majority of parents had

vocational/high school or higher education and was employed.

Procedure

The data was collected in metropolitan areas in Greece (Athens), Norway (Bergen), Poland (Warsaw), and the German part of Switzerland (Basel). Adolescents provided information about themselves and their parents. Participants filled out questionnaires during their classes or lectures. Questionnaires were always handed out by the teacher/lecturer, who had been previously acquainted with the assessment tool and the procedure. The first author was present during data collection

Measures

All questionnaires were available in English. The Greek, Norwegian, Polish, and German versions were prepared using the translation back-translation method (Brislin 1970). In each country two independent translators/native speakers worked on preparing language versions of the original questionnaires. Firstly, one person translated the instrument from English to the native language. Then, a second independent person translated the new language version back into English. Finally, the original and new English translations were compared and some minor modifications to the new language translations were made.

Parenting was assessed with the Parenting Style Inventory II, PSI-II (Darling and Toyokawa 1997). It is a 15-item measure assessing: responsiveness (5 items) defined as the degree of positive affection, support and emotional sensitivity in parent-child relationship (e.g., *I can count on my mother to help me out if I have a problem*); demandingness (5 items) defined as the degree of strictness and behavioral standards expressed by parent for their children (e.g., *If I don't behave my mother/father will punish me*); autonomy granting (5 items) defined as the degree to which parent allows and encourages their children to develop their own ideas and beliefs (e.g., *My father/mother doesn't believe I have a right to my own point of view*). Respondents evaluated mothers and fathers separately on the 5-point Likert scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. Darling and Toyokawa (1997) reported good reliabilities ($\alpha > 0.70$) for the measure. In this study the reliabilities were acceptable (see Table 2).

Adolescents' individuation was assessed via the Multi-generational Interconnectedness Scale, MIS (Gavazzi et al. 1999). It is a 31-item measure assessing psychological (15 items), financial (8 items), and functional (8 items) connectedness between an adolescent and his/ her family. The MIS reflects the respondent's personal level of individuation based on the belief that the individuation may be

Table 1 Demographic characteristics for adolescents and their parents

	Greece <i>N</i> = 195	Norway <i>N</i> = 171	Poland <i>N</i> = 184	Switzerland <i>N</i> = 195
Age				
Mean (SD)	18.17 (0.38)	18.04 (0.20)	18.21 (0.41)	18.45 (0.85)
Range	18–19	18–19	18–19	18–20
Gender				
Male	90 (46.2%)	101 (59.1%)	80 (43.5%)	88 (45.1%)
Female	105 (53.8%)	70 (40.9%)	104 (56.5%)	107 (54.8%)
Adolescent education				
High school	-	86 (50.3%)	124 (67.4%)	183 (93.8%)
Vocational	-	85 (49.7%)	60 (32.6%)	12 (6.2%)
University	195 (100%)	-	-	-
Fathers' age				
Ages 35–45	17 (8.7%)	42(24.5%)	64 (34.8%)	25 (12.8%)
Ages 46–55	136 (69.8%)	111 (65%)	102 (55.5%)	132 (67.7%)
Ages 56–65	38 (19.5%)	18 (10.5%)	18 (9.7%)	34 (17.5%)
Ages 66–75	4 (2%)	-	-	4 (2%)
Mothers' age				
Ages 35–45	70 (35.9%)	70 (40.9%)	96 (52.2%)	44 (22.6%)
Ages 46–55	118 (60.5%)	94 (55%)	82 (44.6%)	137 (70.3%)
Ages 56–65	7 (3.6%)	7 (4.1%)	6 (3.2%)	14 (7.1%)
Ages 61–65	-	-	-	-
Fathers' education				
Primary	13 (6.7%)	15 (8.8%)	1 (0.5%)	15 (7.7%)
Secondary	21 (10.8%)	-	2 (1.1%)	8 (4.1%)
Vocational	24 (12.3%)	59 (34.5%)	90 (48.9%)	67 (34.4%)
High school	41 (21%)	26 (15.2%)	62 (33.7%)	5 (2.6%)
University	96 (49.2%)	71 (41.5%)	29 (15.8%)	98 (51.2%)
Mothers' education				
Primary	9 (4.9%)	10 (5.8%)	-	12 (6.2%)
Secondary	14 (7.7%)	-	3 (1.6%)	20 (10.2%)
Vocational	9 (4.9%)	37 (21.7%)	56 (30.5%)	85 (43.6%)
High school	63 (34.2%)	54 (31.6%)	79 (42.9%)	20 (10.2%)
University	89 (48.3%)	70 (40.9%)	46 (25%)	58 (29.8%)
Fathers' employment				
Employed	154 (79%)	164 (95.9%)	159 (86.4%)	180 (92.3%)
Unemployed	10 (5.1%)	7 (4.1%)	17 (9.2%)	15 (7.7%)
Retired	31 (15.9%)	-	7 (3.8%)	-
Mothers' employment				
Employed	108 (58.6%)	164 (95.9%)	146 (79.3%)	153 (78.5%)
Unemployed	63 (34.3%)	7 (4.1%)	36 (19.6%)	42 (21.5%)
Retired	13 (7.1%)	-	2 (1.1%)	-
Family economic status (from 1-low to 5-high) Mean (SD)	3.34 (0.66)	3.48 (0.71)	3.24 (0.63)	3.44 (0.72)

inferred from the degree of connectedness between self and family members (Lopez and Gover 1993). Psychological connectedness refers to loyalty, obligation, and guilt experienced towards parents as well as degree of

psychological and emotional dependence on parents (e.g., *I rely on my mother's/father's approval to let me know when I am doing things right*). Financial connectedness reflects the monetary reliance on parents (e.g., *My mother/father*

Table 2 Internal consistencies (Cronbach's alphas) for all measures by country

	Greece	Norway	Poland	Switzerland
PSI-II Mother responsiveness	0.71	0.76	0.81	0.83
PSI-II Father responsiveness	0.78	0.80	0.82	0.78
PSI-II Mother autonomy granting	0.65	0.78	0.78	0.72
PSI-II Father autonomy granting	0.60	0.72	0.77	0.72
PSI-II Mother demandingness	0.73	0.72	0.70	0.71
PSI-II Father demandingness	0.60	0.61	0.60	0.70
MIS-Psychological connectedness with mother	0.80	0.80	0.80	0.76
MIS-Psychological connectedness with father	0.77	0.74	0.81	0.72
MIS-Financial connectedness with mother	0.86	0.86	0.79	0.90
MIS-Psychological connectedness with father	0.82	0.78	0.87	0.98
MIS-Functional connectedness with mother	0.77	0.78	0.80	0.82
MIS-Functional connectedness with father	0.77	0.78	0.81	0.82
RSES	0.80	0.77	0.79	0.83
SWLS	0.79	0.79	0.80	0.85

Note: PSI Parenting Style Inventory, MIS Multigenerational Interconnectedness Scale, RSES Rosenberg Self-Esteem Scale,

SWLS Satisfaction with Life Scale

help me pay for major life expenses). Functional connectedness refers to the degree of dependence on parents for daily care, companionship, and recreation (e.g., *I am involved in hobbies with my mother/father*). Respondents were asked to rate their interconnectedness with mothers and fathers separately on the 5-point Likert scale ranging from 1 = *never* to 5 = *always*. The MIS has proven to be valid and reliable ($\alpha > 0.80$, Gavazzi et al. 1999). In this study Cronbach's alphas were satisfactory (see Table 2).

Adolescents' Subjective Well-being

The Rosenberg's Self-Esteem Scale, RSES (Rosenberg 1965) is a 10-item measure of the overall self-esteem defined as a positive and negative orientation towards oneself. The RSES comprises five positively worded (e.g., *On the whole, I am satisfied with myself*) and five negatively worded (e.g., *I certainly feel useless at times*) items. Respondents were asked to rate each item using 5-point Likert scale from 1 = *strongly disagree* to 5 = *strongly agree*. The scale has proven to be reliable ($\alpha > 0.70$) and valid (Rosenberg 1965). Cronbach's alphas in this study were satisfactory (see Table 2). The Satisfaction with Life Scale, SWLS (Diener et al. 1985) is a 5-item measure of a person's global judgment of life satisfaction (e.g., *In most ways my life is close to my ideal*). Respondents were asked to rate each item using 5-point Likert scale from 1 = *strongly disagree* to 5 = *strongly agree*. The authors reported good reliability ($\alpha > 0.80$) and validity of the measure (Diener et al. 1985). Cronbach's alphas were also good in this study (see Table 2).

Data Analyses

There were 0.02% data points missing. The Full Information Maximum Likelihood procedure was applied to handle missing data that has been proven to outperform traditional methods (Enders 2010). Nearly all variables showed significant multivariate skew and kurtosis. A review of squared Mahalanobis' distances (D) indicated six multivariate outliers, which were removed from further analysis yielding a final sample of $N = 739$.

In the first step, using multi-group CFA in Mplus v.7.2 (Muthèn and Muthèn 1998–2016), we evaluated the equivalence of measures between the countries to establish whether meaningful cross-cultural comparisons could be made. Equivalence of measure means that the cross-cultural score differences on the indicators of the particular construct correspond to the differences in the underlying trait or ability (Byrne and Watkins 2003). Equivalence was assessed via three common steps: (i) test of configural invariance, (ii) test of metric invariance, and (iii) test of scalar invariance. The full description of results goes beyond the scope of this paper (they are included in the Supplementary Materials). The metric invariance was supported for all measures, which represents necessary and sufficient condition for conducting valid cross-cultural comparison of the relationships between constructs.

Next, the relationships between the variables were tested via multi-group SEM also in Mplus. In the SEM analyses, for the scales that consisted of five or more indicators (PSI-II Responsiveness, MIS, SWLS, and RSES) we formed item parcels as the indicators of latent constructs in order to control for inflated measurement errors and improve the

Table 3 Assessment of the model testing the relationships between maternal/paternal parenting and adolescents' well-being

Model	χ^2	<i>df</i>	$\Delta\chi^2$	Δdf	CFI	SRMR	RMSEA	RMSEA 90% CI
Model for mothers								
Free estimated model	404.91***	241			0.932	0.068	0.061	0.050–0.071
Measurement invariance								
All factor loadings constrained equal except from loadings for parcel 3 of SE	430.57***	256	25.61 ^a	15	0.927	0.077	0.061	0.051–0.071
Invariance of structural paths								
All paths and all loadings except from loadings for parcel 3 of SE constrained equal	437.66***	265	33.33 ^a	24	0.928	0.079	0.060	0.049–0.069
Model for fathers								
Free estimated model	422.89***	241			0.919	0.071	0.061	0.054–0.074
Measurement invariance								
All factor loadings constrained equal except from loadings for parcel 3 of SE	443.25***	256	21.32 ^a	15	0.916	0.078	0.063	0.053–0.073
Invariance of structural paths								
All paths except from the path from RES to WB and all loadings except from loadings for parcel 3 of SE constrained equal	456.56***	262	33.90 ^a	21	0.913	0.079	0.064	0.054–0.073

Note: All models based on $N = 184$ for Poland, $N = 195$ for Greece, $N = 171$ for Norway, and $N = 195$ for Switzerland

χ^2 chi-square, *df* degrees of freedom, *CFI* comparative fit index, *SRMR* standardized root mean square residual, *RMSEA* root mean square error of approximation, *CI* confidence interval, *SE* self-esteem, *RES* responsiveness, *WB* well-being

*** $p < 0.001$

^aas compared with the free estimated model

psychometric properties of the variables (Little et al. 2002). Each parcel represented an average of two or three individual items. For all analyses we employed MLR estimator, which produces standard errors and fit indices that are robust in relation to non-normality of observations (Beauducel and Herzberg 2006). The chi-square (χ^2) goodness-of-fit statistic, the CFI, the RMSEA with 90% CIs, and the SRMR indices were used to evaluate model fit. For an acceptable fit RMSEA and SRMR should be < 0.08 and $CFI > 0.90$ (Hu and Bentler 1999). Greater weight was given to the incremental/approximate fit indices than to the significance of the χ^2 because χ^2 values are known to be sensitive to sample size (Cheung and Rensvold 2002). If needed, models were re-specified based on Modification Indices and inspection of standardized residuals. For multi-group comparisons we applied χ^2 difference test ($\Delta\chi^2$) using the formulas developed for scaled chi-square when MLR estimator is used (Satorra and Bentler 1994). Following Cheung and Rensvold (2002), the nonsignificant χ^2 test indicates path-invariance (equality) across groups. To test the indirect associations, we applied a bootstrap method with 2000 bootstrap samples (Shrout and Bolger 2002).

Results

In terms of the direct associations between parenting and adolescents' well-being (*HI*), the SEM analyses were

conducted separately for maternal and paternal parenting. The overview of the models is presented in Table 3 and the magnitude of the relationships is presented in Table 4. As far as maternal parenting is concerned, no significant differences between the countries were found. Maternal autonomy granting and responsiveness were universally positively related to late adolescents' well-being. In terms of fathers, paternal autonomy granting was significantly and positively correlated with adolescents' well-being in all four countries. Further, in Greece and Norway a significant positive relationship was also found between paternal responsiveness and adolescents' well-being. For Poland and Switzerland, this relationship was also positive but did not reach significance levels. No significant effects for maternal or paternal demandingness were found.

In the next step the hypothesized indirect associations were tested. The overview of the analyses is presented in Tables 5 and 6 and the models are graphically displayed in Figs. 1 and 2. Both models, for mothers and fathers, showed good fit to the data. We will describe the results starting from the associations between parenting and individuation and between individuation and adolescents' well-being. Next, we will describe the indirect correlations.

In terms of correlations between parenting and individuation (*HI*) and between individuation and subjective well-being (*QI*), no significant country differences were found for maternal parenting. As Fig. 1 presents, in all four countries maternal responsiveness was significantly and

Table 4 Relationships between maternal/ paternal parenting and adolescents' well-being

	Estimate	SE	Estimate	SE
	Greece			
	Mothers		Fathers	
RES → WB	0.25**	0.08	0.32*	0.13
AUT → WB	0.20*	0.08	0.24**	0.09
DEM → WB	0.06	0.05	0.03	0.05
Norway				
	Mothers		Fathers	
RES → WB	0.19**	0.06	0.36**	0.09
AUT → SWB	0.20*	0.08	0.20**	0.06
DEM → WB	0.06	0.05	0.03	0.05
Poland				
	Mothers		Fathers	
RES → WB	0.26**	0.08	0.16	
AUT → SWB	0.21*	0.09	0.35**	0.12
DEM → SWB	0.06	0.06	0.03	0.05
Switzerland				
	Mothers		Fathers	
RES → WB	0.28**	0.02	0.16	0.12
AUT → WB	0.19*	0.08	0.24**	0.08
DEM → WB	0.07	0.07	0.04	0.08

Note: RES responsiveness, DEM demandingness, AUT autonomy granting, WB well-being, SE standard error

* $p < 0.05$, ** $p < 0.01$

positively associated with all facets of connectedness. Thus, the higher the maternal responsiveness was, the stronger was adolescents' psychological, financial and functional connectedness with mothers. On the other hand, maternal autonomy granting was negatively associated with psychological connectedness meaning that the higher the maternal autonomy support, the lower was adolescents' psychological connectedness. No significant relationships were found between maternal demandingness and connectedness. Furthermore, both psychological and functional connectedness were significantly and negatively associated with adolescents' well-being. Thus, the higher the adolescent psychological and functional connectedness with mothers was, the lower was their well-being. No significant effects were found for financial connectedness.

As far as fathers' parenting is concerned, the analyses revealed both similarities and differences between the countries. As Fig. 2 shows, in Norway, Poland and Switzerland paternal responsiveness was significantly and positively associated with psychological, financial and functional connectedness. This means that in Norway, Poland and Switzerland the higher the paternal responsiveness was, the higher the psychological, financial and functional connectedness was with fathers. In Greece,

however, paternal responsiveness showed significant and positive association with financial connectedness only. Furthermore, in Norway, Poland and Switzerland no significant relationships were found between paternal autonomy granting and connectedness. Yet, in Greece fathers' autonomy granting had significant and negative association with psychological and functional connectedness. Finally, in all four countries paternal demandingness was significantly and positively associated with psychological connectedness. As far as the relationships between connectedness with fathers and adolescents' well-being are concerned, financial connectedness with fathers was significantly and positively related to adolescents' well-being in each country. No significant relationships were found between psychological or functional connectedness with fathers and adolescents' well-being.

In terms of indirect associations (H3), the analysis indicated that maternal responsiveness had a negative indirect association with adolescents' well-being via strengthening psychological and functional dependence on mothers. Furthermore, maternal autonomy granting had a positive indirect association on adolescents' well-being by weakening psychological connectedness. As for the father's parenting is concerned, the analysis indicated that in each country paternal responsiveness had a positive indirect association with adolescents' well-being by the strengthening of financial support received from fathers.

Discussion

Little is still known with respect to cultural similarities and differences in the effects of parenting on late adolescents' individuation and subjective well-being in Europe. This study investigated these relationships in Greece, Norway, Poland and Switzerland. The findings indicate more similarities than differences between these four countries in terms of the relationships between parenting and late adolescents' outcomes. On the other hand, differences were found in the effects of maternal versus paternal parenting.

In terms of the associations between parenting and adolescents' well-being, the results confirmed our predictions in terms of responsiveness and autonomy granting, but not with regards to demandingness. The analysis showed that maternal parenting characterized by high responsiveness and autonomy granting as well as paternal parenting characterized by high autonomy support universally promoted late adolescents' well-being. Further, in Greece and Norway fathers' responsiveness was significantly and positively associated with adolescents' outcomes. In Poland and Switzerland, the association between fathers' responsiveness and adolescents' well-being was in the same direction (positive) but did not reach significance levels. In

Table 5 Assessment of the models of indirect associations

Model	χ^2	<i>df</i>	$\Delta\chi^2$	Δdf	CFI	SRMR	RMSEA	RMSEA 90% CI
<i>Model for mothers</i>								
Model for Poland								
With the error variances of parcel 2 of FIN_CON and of SE constrained to 0 due to Heywood cases	264.42***	175			0.922	.070	0.053	0.039–0.065
Model for Greece								
With added correlation between error terms of parcels 1 & 3 of SE	220.71***	172			0.955	0.075	.038	0.021–0.052
Model for Norway								
With the error variance of SE constrained to 0 due to a Heywood case	234.87***	174			0.943	0.065	0.046	0.030–0.061
Model for Switzerland								
Free estimated model	291.63***	173			0.913	0.084	0.059	0.047–0.071
Free estimated model	1176.33***	694			0.906	0.089	0.062	0.055–0.068
Measurement invariance								
All factor loadings constrained equal except from loadings for parcel 2 of FIN_CON, parcel 2 of PSY_CON and parcel 3 of SE	1210.68***	715	26.75 ^a	21	0.903	0.093	0.061	0.055–0.067
Invariance of structural paths								
All paths except from the paths from SE to FIN_CON & FUN_CON and all loadings except from loadings for parcel 2 of FIN_CON, parcel 2 of PSY_CON and parcel 3 of SE constrained equal	1244.03***	754	70.79 ^a	60	0.904	0.096	0.059	0.054–0.065
<i>Model for fathers</i>								
Model for Poland								
With the error variance of SE constrained to 0 due to Heywood case	270.58***	174			0.931	0.066	0.055	0.042–0.068
Model for Greece								
With added correlation between error terms of parcels 1 & 3 of SE	253.95***	172			0.912	0.078	0.050	0.036–0.062
Model for Norway								
With the error variance of SE constrained to 0 due to a Heywood case	270.58***	174			0.931	0.066	0.055	0.042–0.067
Model for Switzerland								
With the path from FUN_CON to RES fixed to 1 due to a Heywood case	312.26***	174			0.905	.092	.064	0.052–0.075
Free estimated model	1141.64***	694			0.905	.080	.059	0.053–0.065
Measurement invariance								
All factor loadings constrained equal except from loadings for parcel 2 of FIN_CON, parcel 2 of PSY_CON and parcel 3 of SE	1173.46***	715	31.29 ^a	21	0.902	0.085	0.059	0.053–0.065
Invariance of structural paths								
All paths except from the paths from AUT to PSY_CON, FIN_CON, FUN_CON, SE to PSY_CON & FUN_CON to WB and all factor loadings except from loadings for parcel 2 of FIN_CON, parcel 2 of PSY_CON and parcel 3 of SE constrained equal	1199.53***	742	60.30 ^a	46	0.903	0.080	0.058	0.052–0.064

Note: All models based on $N = 184$ for Poland, $N = 195$ for Greece, $N = 171$ for Norway and $N = 195$ for Switzerland

χ^2 chi-square, *df* degrees of freedom, *CFI* comparative fit index, *SRMR* standardized root mean square residual, *RMSEA* root mean square error of approximation, *CI* confidence interval, *SE* self-esteem, *FIN_CON* financial connectedness, *FUN_CON* functional connectedness, *PSY_CON* psychological connectedness, *AUT* autonomy granting, *RES* responsiveness, *WB* well-being

** $p < 0.01$, *** $p < 0.001$

^aas compared with the free estimated model

Table 6 Simple indirect effects for the relationships between parenting, individuation and adolescents' well-being, unstandardized estimates

Simple indirect effect	Estimate (95% Bootstrap CIs)	Estimate (95% Bootstrap CIs)	Estimate (95% Bootstrap CIs)	Estimate (95% Bootstrap CIs)
	Greece		Poland	
	Mothers	Fathers	Mothers	Fathers
RES → PSY_CON → WB	-0.15 (-0.29 to -0.05)	-0.01 (-0.17 to 0.08)	-0.15 (-0.29 to -0.05)	-0.05 (-0.14 to 0.02)
RES → FIN_CON → WB	0.05 (-0.02 to 0.12)	0.05 (0.01–0.08)	0.02 (-0.01 to 0.08)	0.05 (0.01–0.08)
RES → FUN_CON → WB	-0.18 (-0.39 to -0.05)	0.00 (-0.19 to 0.05)	-0.16 (-0.35 to -0.04)	0.01 (-0.14 to 0.09)
DEM → PSY_CON → WB	-0.02 (-0.04 to 0.00)	-0.03 (-0.10 to 0.01)	-0.02 (-0.04 to 0.00)	-0.03 (-0.10 to 0.010)
DEM → FIN_CON → WB	-0.00 (-0.01 to 0.00)	0.01 (-0.01 to 0.03)	-0.00 (0.01 to 0.00)	0.01 (-0.01 to 0.03)
DEM → FUN_CON → WB	-0.01 (-0.03 to 0.00)	0.00 (-0.03 to 0.02)	-0.01 (-0.03 to 0.00)	0.00 (-0.03 to 0.02)
AUT → PSY_CON → WB	0.05 (0.01–0.12)	-0.03 (-0.11 to 0.03)	0.05 (0.01–0.12)	0.01 (-0.01 to 0.04)
AUT → FIN_CON → WB	0.00 (-0.01 to 0.02)	0.02 (-0.00 to 0.06)	0.00 (-0.01 to 0.02)	0.01 (-0.01 to 0.03)
AUT → FUN_CON → WB	0.03 (-0.00 to 0.12)	0.00 (-0.05 to 0.07)	0.03 (-0.00 to 0.12)	-0.01 (-0.01 to 0.02)
	Norway		Switzerland	
	Mothers	Fathers	Mothers	Fathers
RES → PSY_CON → WB	-0.15 (-0.29 to -0.05)	-0.02 (-0.07 to 0.01)	-0.15 (-0.29 to -0.05)	-0.03 (-0.08 to 0.01)
RES → FIN_CON → WB	0.07 (-0.02 to 0.12)	0.05 (0.01–0.08)	0.10 (-0.04 to 0.22)	0.08 (0.01–0.14)
RES → FUN_CON → WB	-0.18 (-0.40 to -0.05)	0.01 (-0.12 to 0.09)	-0.18 (-0.40 to -0.05)	0.01 (-0.22 to 0.21)
DEM → PSY_CON → WB	-0.02 (-0.04 to 0.00)	-0.03 (-0.10 to 0.01)	-0.02 (-0.04 to 0.00)	-0.03 (-0.10 to 0.01)
DEM → FIN_CON → WB	-0.01 (-0.01 to 0.004)	0.01 (-0.01 to 0.03)	-0.01 (-0.01 to 0.01)	0.01 (-0.01 to 0.03)
DEM → FUN_CON → WB	-0.01 (-0.03 to 0.01)	0.00 (-0.03 to 0.02)	-0.01 (-0.03 to 0.01)	0.00 (-0.03 to 0.02)
AUT → PSY_CON → WB	0.05 (0.01 to 0.12)	0.01 (-0.01 to 0.04)	0.05 (0.01–0.12)	-0.01 (-0.05 to 0.02)
AUT → FIN_CON → WB	0.00 (-0.01 to 0.02)	-0.01 (-0.03 to 0.01)	0.00 (-0.01 to 0.02)	0.01 (-0.01 to 0.04)
AUT → FUN_CON → WB	0.03 (-0.01 to 0.12)	-0.01 (-0.01 to 0.02)	0.03 (-0.01 to 0.12)	-0.01 (-0.07 to 0.04)

Note: Significant effects in bold

ES responsiveness, DEM demandingness, AUT autonomy granting, PSY_CON psychological connectedness, FIN_CON financial connectedness, FUN_CON functional connectedness, WB well-being, CIs confidence intervals

other words, in Greece and Norway paternal autonomy granting and responsiveness were equally important for late adolescents' well-being, whereas in Poland and Switzerland the effects of paternal autonomy granting were more salient than the effects of the responsiveness. From the cross-cultural perspective this finding is difficult to explain, given that culturally Poland is closer to Greece and Switzerland to Norway (e.g., Hofstede 2001; House et al. 2004). However, looking at the age distribution, Polish and Swiss samples had higher percentage of 19-year-olds (21 and 28%) as compared to Greek and Norwegian samples (12 and 5%, respectively). Some research shows that paternal control rather than responsiveness is more salient in adolescence (Branje et al. 2013; Klimes-Dougan et al. 2007; Lamb and Lewis 2013). This study suggests that this might be specifically the case in later stages of late adolescence when the need for autonomy and independence is stronger.

Contrary to expectations, no significant associations between demandingness and late adolescents' well-being were found. Thus, setting strict rules might not play an important role for adolescents who legally have reached maturity. Nevertheless, the study shows that parental

responsiveness and autonomy granting still play an important role in late adolescence, which is consistent with the literature (e.g., Inguglia et al. 2015; Kocayörük et al. 2015).

With respect to the associations between parenting and adolescents' individuation, the results indicate that the three dimensions of parenting under study may play different roles in late adolescents' individuation. In terms of the two aspects of parental control (autonomy granting and demandingness), the results were consistent with H2 and with the existing literature (e.g., Fousiani et al. 2014; Inguglia et al. 2015; Kocayörük et al. 2015) in the sense that high autonomy granting and low demandingness support individuation in late adolescence. In terms of parental responsiveness and individuation, the results were in an opposite direction than expected. It has been argued that in Western cultures successful separation from parents occurs when parents encourage age-appropriate independence while continuing to provide love, support and empathy (e.g., Grotevant 1998; Hare et al. 2014; Ryan et al. 2006; Youniss and Smollar 1985). However, this study showed that high levels of maternal responsiveness were universally associated with high levels of adolescents' psychological,

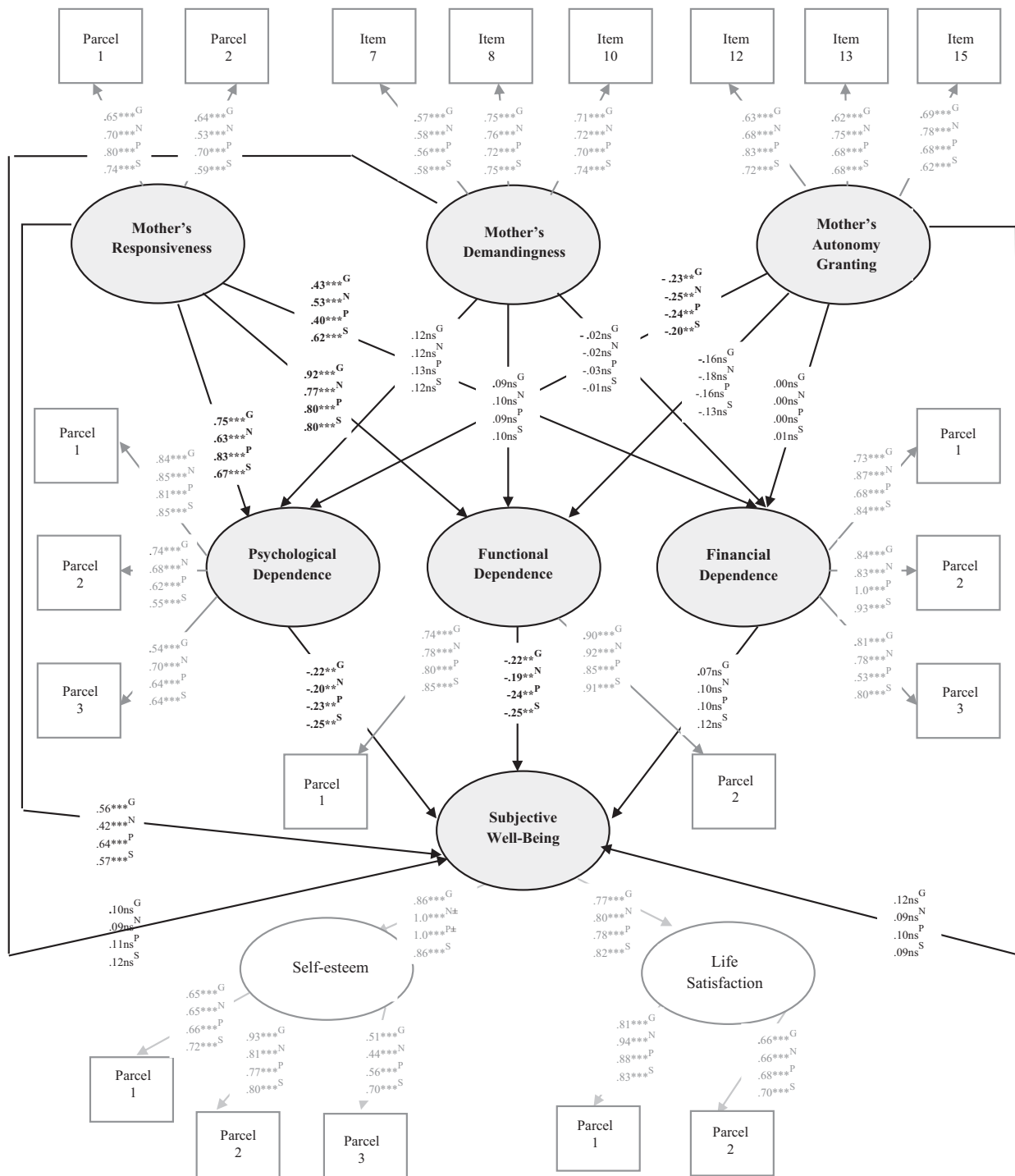


Fig. 1 Structural Model of the Relationships between Maternal Parenting, Individuation, and Adolescents' Well-Being in Greece, Norway, Poland, and Switzerland. Standardized Estimates. Note: χ^2 (754)

= 1244.03, $p < 0.001$; CFI = 0.904; SRMR = 0.096; RMSEA = 0.059 (90% CI 0.054–0.065); G Greece, N Norway, P Poland, S Switzerland; ± = Heywood case, *** $p < 0.001$

financial and functional dependence on mothers. In addition, in Norway, Poland and Switzerland paternal responsiveness promoted psychological, financial and functional connectedness and in Greece financial connectedness. This unexpected finding may suggest that high levels of parental

support may create an over-protective family environment that may not permit a late adolescent to develop as an individual apart from his/her parents (i.e., learn how to solve problems independently, make independent decisions, be self-reliant). Recent studies found negative impacts of

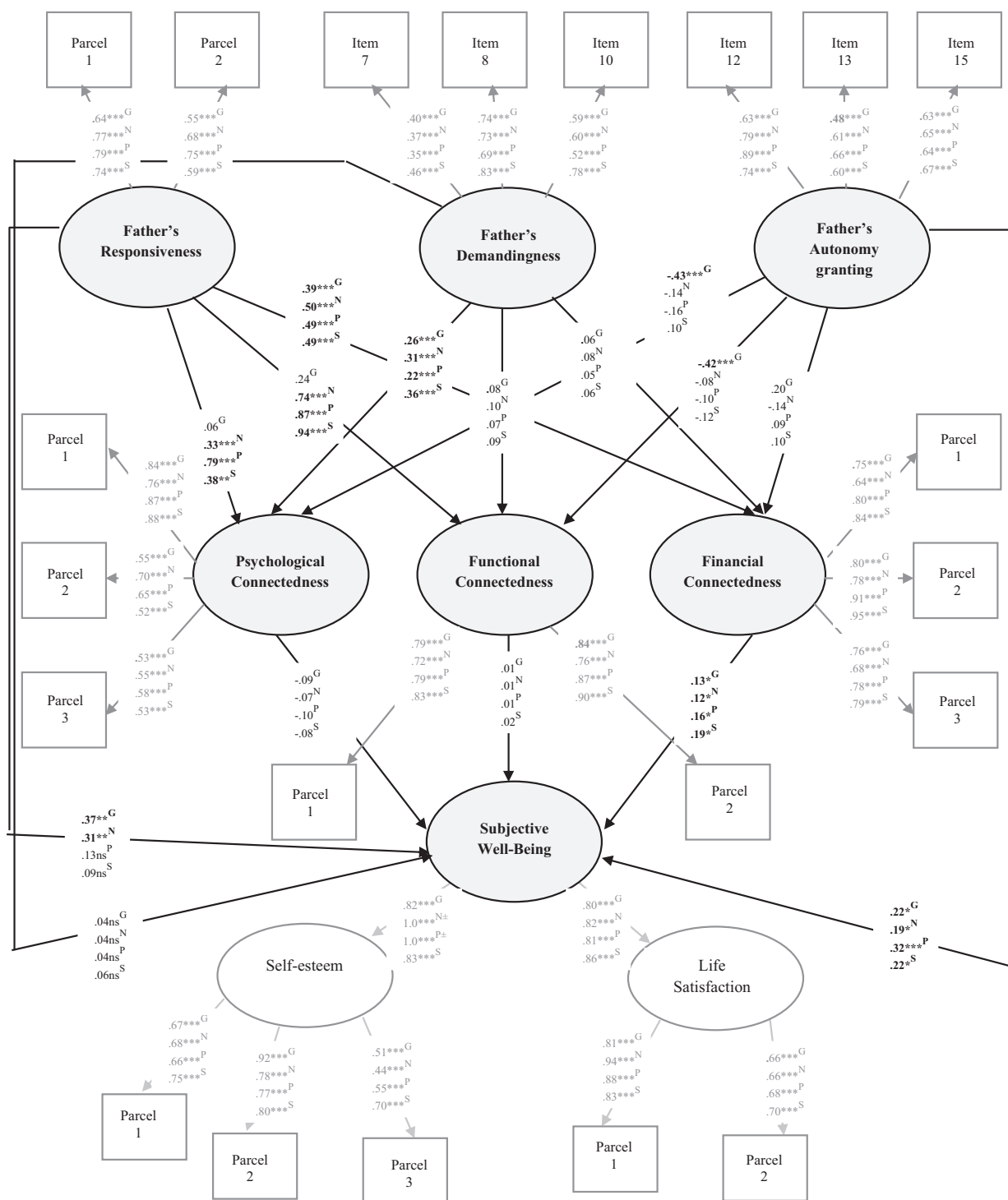


Fig. 2 Structural Model of the Relationships between Paternal Parenting, Individuation, and Adolescents' Well-Being in Greece, Norway, Poland, and Switzerland. Standardized Estimates. Note: χ^2 (742)

= 1199.5, $p < 0.001$; CFI = 0.903; SRMR = 0.080; RMSEA = 0.058 (90% CI 0.054–0.064); G Greece, N Norway, P Poland, S Switzerland; ± = Heywood case. *** $p < .001$

over-involved and over-responsive parenting on late adolescent's outcomes (e.g., Givertz and Segrin 2014; Schiffrin et al. 2014; Kouros et al. 2017). Further, new empirical evidence suggests that parental support follows a curvilinear pattern during adolescence with initial decrease from early

to middle adolescence and stability thereafter (Mastrotheodoros et al. 2018). This implies that future studies should also investigate possible curvilinear relationships between parental support and adolescent outcomes.

This research revealed a differential role of Greek fathers' responsiveness and autonomy granting as opposed to Norwegian, Polish and Swiss fathers in terms of their associations with late adolescents' psychological and functional connectedness. The results showed that in Norway, Switzerland and Poland paternal responsiveness was significantly associated with late adolescents' functional and psychological connectedness with father, whereas in Greece it was paternal autonomy granting. Greece represents Mediterranean family model, where traditionally the father had the highest position and would hold control over their children (Georgas 1991). More recent research shows that although Greek fathers are perceived by their children as predominantly authoritative, they also score high on parental strictness (Antonopoulou et al. 2012). This could explain the more salient role of paternal autonomy granting rather than responsiveness for Greek late adolescents' individuation.

The analyses of indirect associations confirmed *H3* in the sense that they showed that the associations between parenting and late adolescents' well-being can be partially accounted for by the individuation from parents. The results showed that positive association between mothers' autonomy granting and adolescents' well-being was partially explained by psychological connectedness. In other words, high maternal autonomy granting supported lower levels of psychological dependence which in turn were associated with higher levels of adolescents' well-being. This finding again implies the salient role of mothers' autonomy granting for supporting positive adolescents' outcomes. It is also consistent with the previous literature indicating an important role of parental autonomy granting in the development of late adolescents' individuation and their well-being (e.g., Inguglia et al. 2015; Kocayörük et al. 2015; Liew et al. 2014; Ratelle et al. 2012).

In terms of parental responsiveness, the positive association between maternal responsiveness and adolescents' well-being was partially accounted for by psychological and functional connectedness. This indirect effect was in an opposite direction than the direct association. More precisely, the results showed that maternal responsiveness had universally positive association with adolescents' well-being. Yet, the analysis also indicated that maternal responsiveness promoted psychological and functional connectedness, which in turn were negatively associated with late adolescents' well-being. Literature shows that it is not uncommon to obtain direct and indirect effects with opposite directions/signs (i.e., inconsistent mediation; MacKinnon et al. 2007). This unexpected finding suggests that parental responsiveness, similarly to parental control, may be a multi-faceted construct. Some of its aspects such as acceptance, warmth and love are beneficial for adolescents' outcomes, while other components such as nurturing,

over-responsiveness, or over-involvement may stifle autonomy development and hence reduce adolescent well-being. Some scholars have recently argued that hyper-responsive and over-involved parenting may have detrimental effects on late adolescents' lives (e.g., Givertz and Segrin 2014; Nelson 2010; Schiffrin et al. 2014).

The study also showed that in all four countries paternal responsiveness indirectly promoted adolescents' well-being via sustaining financial support from fathers. This points out that, contrary to cross-cultural theories on individuation (e.g., Kağitçibaşı's 2011), some aspects of dependence on parents may be positive for youth outcomes during late adolescence. For instance, being financially dependent on fathers may not have a negative meaning for late adolescents. In fact, it may be perceived as a necessary in that stage of life parental support, when one is unable to financially support oneself due to prolonged education (Arnett 2007; Watson et al. 2016).

Finally, the important contribution of this study is the focus on unique aspects of maternal versus paternal parenting. The results imply that both maternal and paternal control have significant implications for the development of psychological independence in late adolescence. However, different aspects of maternal versus paternal control are salient in supporting psychological autonomy in late adolescence. This study suggests that maternal autonomy granting versus paternal demandingness are most salient factors in the context of late adolescents' individuation. This is consistent with the literature suggesting that maternal involvement/ support plays stronger role in mother-adolescent relationships whereas paternal control/ authority is more important for father-adolescent relationships (Branje et al. 2013; Klimes-Dougan et al. 2007; Lamb and Lewis 2013). More importantly, our study emphasizes that in parenting research the unique aspects of maternal versus paternal parenting should be investigate further.

Strengths and Limitations

Some limitations need to be taken into consideration when interpreting the results of this study. First, the cross-sectional design did not allow to investigate the causal directions of the effects. Specifically, it limited the ability to reliably assess the indirect effects (e.g., Maxwell and Cole 2007). Further, only adolescents' perspectives were surveyed and recent meta-analytic research indicates that parents and children very often do not agree with each other (Korelitz and Garber 2016). However, research also shows that during the course of adolescence parents' and adolescents' views on parenting become more similar (Mastrotheodoros et al. 2018). In addition, adolescents' self-reported on all measured constructs, which may have strengthened the relationships between the variables.

Finally, as the focus was on developmental age, in Norway, Poland and Switzerland high-school students were sampled, whereas in Greece first year university students. It might be argued that high-school versus university provide different developmental contexts. Future studies using longitudinal designs, samples at both high-school and university levels and multi-informant assessments are required to overcome the limitations of this study.

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Authors contributions AF: led the conception, design and drafting of the paper and led the analysis and interpretation of the data. BS, DLS and PB: made substantial contributions to the conception, design, writing and editing of the paper. KS: made substantial contribution to the analyses of the data and interpretation of results. All authors read and approved the final manuscript.

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Compliance with Ethical Standards

Conflict of Interest The authors (AF, BS, KM, DLS and PB) certify that they have no affiliations with or involvement in any organization or entity with any financial interest or non-financial interest in the subject matter or materials discussed in the manuscript.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Ethical approval was granted from the University of Social Sciences and Humanities in Poland prior to commencement of the study.

Informed Consent Informed consent was obtained from all individual participants included in the study.

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