

2 **The Jingle–Jangle Fallacy in Adolescent Autonomy in the Family:**
3 **In Search of an Underlying Structure**

4 **Stijn Van Petegem · Maarten Vansteenkiste ·**
5 **Wim Beyers**

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8 **Abstract** The construct of autonomy has a rich, though
9 quite controversial, history in adolescent psychology. The
10 present investigation aimed to clarify the meaning and
11 measurement of adolescent autonomy in the family. Based
12 on theory and previous research, we examined whether two
13 dimensions would underlie a wide range of autonomy-
14 related measures, using data from two adolescent samples
15 ($N = 707$, 51 % girls, and $N = 783$, 59 % girls, age range
16 = 14–21 years). Clear evidence was found for a two-
17 dimensional structure, with the first dimension reflecting
18 “volition versus pressure”, that is, the degree to which
19 adolescents experience a sense of volition and choice as
20 opposed to feelings of pressure and coercion in the parent-
21 adolescent relationship. The second dimension reflected
22 “distance versus proximity”, which involves the degree of
23 interpersonal distance in the parent-adolescent relationship.
24 Whereas volition related to higher well-being, less problem
25 behavior and a secure attachment style, distance was
26 associated mainly with more problem behavior and an
27 avoidant attachment style. These associations were not
28 moderated by age. The discussion focuses on the meaning
29 of adolescent autonomy and on the broader implications of
30 the current findings.

31
32 **Keywords** Autonomy · Independence ·
33 Self-determination theory · Distance · Attachment ·
34 Adolescence

Introduction

For decades now, the construct of autonomy has received
attention in diverse fields of psychology, including devel-
opmental (e.g., Zimmer-Gembeck and Collins 2003), cross-
cultural (e.g., Kagitçibasi 2005) and personality psychology
(Ryan and Deci 2006). Yet, the question of how to define and
measure autonomy exactly and whether it yields adjustment
benefits is not resolved. One of the main problems concerns
the conceptual confusion regarding the construct of auton-
omy, with theorists defining autonomy in different ways and,
as a consequence, drawing different conclusions about the
“same” construct. This problem further increases by the fact
that prevailing operationalizations of autonomy often fail to
match the proposed concept of autonomy. Indeed, although
several measures are said to tap into autonomous function-
ing, they relate sometimes barely or even negatively to each
other. Such confusion seems almost as old as the discipline
of psychology itself, and is referred to as the “jingle–jangle
fallacy” (Marsh 1994), with the jingle fallacy pertaining to
the belief that scales with the same name measure the same
construct (Thorndike 1904) and the jangle fallacy relating to
the assumption that two scales with different names measure
different constructs (Kelley 1927).

Two decades ago, Ryan and Lynch (1989) already
argued that the construct and measurement of autonomy
needs clarification. In spite of this call, it seems that even
experts in the field sometimes have a hard time to see the
wood for the trees. Therefore, the first aim of the present
study was to gain insight in the multitude of meanings of
autonomy by examining the structure underlying a broad
range of autonomy measures that tap into both healthy as
well as dysfunctional types of autonomy. Specifically,
based on theorizing and recent empirical research (e.g.,
Ryan and Deci 2006; Vansteenkiste et al. 2005), we tested

A1 S. Van Petegem (✉) · M. Vansteenkiste · W. Beyers
A2 Department of Developmental, Personality and Social
A3 Psychology, Ghent University, Henri Dunantlaan 2,
A4 9000 Ghent, Belgium
A5 e-mail: stijn.vanpetegem@ugent.be
A6 URL: www.voppsy.ugent.be

69 whether the variation in autonomy measures can be cap- 119
 70 tured by two underlying dimensions, that is, autonomy 120
 71 when defined as independent versus dependent functioning 121
 72 and autonomy when defined as volitional versus pressured 122
 73 functioning. The second goal of the study was to relate 123
 74 these retained dimensions to several indicators of psycho- 124
 75 social functioning, including subjective well-being, prob- 125
 76 lem behavior and attachment to the parents.

77 Autonomy as Independence

78 The first approach defines autonomy as independence or 126
 79 self-reliance, that is, the extent to which one behaves, 127
 80 decides, or thinks without relying on others (Steinberg 128
 81 2002). The opposite of autonomy then involves depen- 129
 82 dence or reliance on others. During adolescence, the focus 130
 83 is often on the context of the parent-adolescent relation- 131
 84 ship, that is, autonomy is seen as independence from the 132
 85 parents as opposed to dependence on the parents. This 133
 86 definition is typically adhered to by influential develop- 134
 87 mental theorists and researchers (e.g., Darling et al. 2008; 135
 88 Smetana et al. 2004; Steinberg 2002). Because of physical, 136
 89 cognitive and social changes that characterize this life 137
 90 period, adolescents are expected to function increasingly 138
 91 independently (Zimmer-Gembeck and Collins 2003). This 139
 92 normative process would be manifest in several domains of 140
 93 adolescents' functioning, including the behavioral, cogni- 141
 94 tive and emotional domains (e.g., Steinberg 2002; Zimmer- 142
 95 Gembeck and Collins 2003). As the cognitive component is 143
 96 conceptually less clear and relatively understudied in the 144
 97 developmental literature (but see e.g., Beckert 2007), we 145
 98 focused on the more well-established components of 146
 99 behavioral and emotional independence. 147

100 *Independent decision making* represents a commonly 148
 101 used indicator and a clearly visible manifestation of 149
 102 behavioral independence (e.g., Smetana et al. 2004). 150
 103 Independent decision making relates to the question who 151
 104 decides about a range of daily issues and activities, like the 152
 105 choice of clothing or whether you do chores at home. 153
 106 Whereas unilateral parental decision making indicates 154
 107 complete dependence, adolescent alone decision making 155
 108 reflects complete independence, and joint decision making 156
 109 moderate independence. Previous research (e.g., Smetana 157
 110 et al. 2004) clearly points to a normative increase with age 158
 111 in independent decision making, particularly for decisions 159
 112 relating to personal issues (Qin et al. 2009; Smetana 2000; 160
 113 Smetana et al. 2004). Another indicator of behavioral 161
 114 independence is *functional independence* (Hoffman 1984), 162
 115 which is defined as the extent to which adolescents are 163
 116 capable of managing practical and personal affairs without 164
 117 soliciting parental help. In addition to this frequently 165
 118 studied behavioral component, independence is said to 166

119 have *emotional* manifestations as well (Hoffman 1984; 120
 121 Steinberg 2002; Zimmer-Gembeck and Collins 2003). 122
 123 Emotional independence refers to adolescents' freedom 124
 125 from excessive needs for approval, closeness and emo- 126
 127 tional support of the parents. Previous research (e.g., Rice 128
 129 1992) found emotional independence to increase with age, 130
 131 though most studies sampled university students. 132

133 As behavioral and emotional independence are supposed 134
 135 to be manifestations of healthy independent functioning 136
 137 (Zimmer-Gembeck and Collins 2003), one may expect 138
 139 these facets to be associated positively to each other and to 140
 141 relate similarly to external variables. However, there is 141
 142 little research explicitly addressing the interrelations 142
 143 between these different facets. The few studies that tapped 143
 144 into both aspects of independent functioning (e.g., Beyers 144
 145 and Goossens 1999) found only slightly positive relation- 145
 146 ships. As for the association with psychosocial functioning, 146
 147 previous research is rather equivocal and unclear. For 147
 148 instance, even though independence may be expected to 148
 149 yield beneficial correlates during adolescence, independ- 149
 150 ent decision making has been found to relate mainly to 150
 151 more problem behavior (e.g., Kuhn and Laird 2011; Van 151
 152 Petegem et al. 2012). The adjustment correlates of func- 152
 153 tional and emotional independence are not straightforward 153
 154 either, with some studies reporting that these variables are 154
 155 associated with more adjusted functioning (e.g., Beyers and 155
 156 Goossens 2003) and others reporting a null or even a 156
 157 negative association (e.g., Garber and Little 2001; Lopez 157
 158 et al. 1988). 158

159 To account for the above findings, researchers increas- 159
 160 ingly advocated studying adolescent autonomy in a differ- 160
 161 entiated manner, thereby taking a more balanced approach. 161
 162 Specifically, to become a self-sufficient adult, independent 162
 163 behavior is considered only healthy when manifested in a 163
 164 developmentally appropriate manner. For instance, inde- 164
 165 pendent decision making over personal issues have been 165
 166 shown to be beneficial for early adolescents, whereas inde- 166
 167 pendence over moral and conventional issues should be 167
 168 obtained only by late adolescence (Smetana et al. 2004). 168
 169 Hence, both the age as well as the social domain needs 169
 170 to be considered to understand whether independence is 170
 171 healthy. 171

172 Additionally, as is increasingly stressed during the last 172
 173 decades (e.g., Allen et al. 1994; Collins and Repinski 1994; 173
 174 Cooper and Grotevant 2011; Youniss and Smollar 1985), a 174
 175 crucial task for adolescents is to strive towards an opti- 175
 176 mal balance between increased independence and the 176
 177 maintenance of a positive relationship with parents. This is 177
 178 because, for some adolescents, this striving for indepen- 178
 179 dence can come at the expense of relational functioning such 179
 180 that adolescents detach themselves from their parents. 180
 181 *Detachment* entails feelings of disengagement, rejection and 181

171 mistrust towards the parents and has been differentiated
 172 from healthy manifestations of independence (Beyers et al.
 173 2003). The associations between detachment and external
 174 variables are much more straightforward, as detachment
 175 consistently relates negatively to indicators of psychosocial
 176 functioning (e.g., Lamborn and Groh 2009). In the present
 177 research, we included measures assessing both healthy as
 178 well as dysfunctional manifestations of independence to
 179 examine whether they tap into one or more underlying
 180 dimensions, as well as to investigate how they relate to
 181 measures of autonomy when defined as volition.

182 Autonomy as Volition

183 Within the second perspective on autonomy, that is largely
 184 rooted in the framework of Self-Determination Theory
 185 (SDT, Ryan and Deci 2000), autonomy is defined as self-
 186 endorsed or *volitional functioning* and refers to the extent
 187 to which one acts upon personal interests, values and goals.
 188 When functioning autonomously, individuals experience a
 189 sense of personal choice, volition and psychological free-
 190 dom (Ryan and Deci 2000). Volition is contrasted with
 191 pressured functioning, in which case one feels obliged or
 192 seduced to act in a certain way. Although one may feel
 193 forced to meet external demands, one can put oneself under
 194 pressure as well, for instance by buttressing activity
 195 engagement with feelings of guilt, shame or contingent
 196 self-worth. In both cases, the behavior is perceived as alien
 197 and is accompanied with feelings of inner conflict and
 198 stress (Deci and Ryan 2000).

199 According to SDT, volitional functioning increases as
 200 people grow older, at least under supportive conditions
 201 (Deci and Ryan 2000). Generally, this claim is confirmed
 202 (Sheldon et al. 2006), though not in all life domains (e.g.,
 203 the academic domain, Gottfried et al. 2001). With regards
 204 to the association with psychosocial functioning, auton-
 205 omy defined as volitional functioning is supposed to yield
 206 adaptive outcomes (Deci and Ryan 2000). As demonstrated
 207 in several empirical studies, self-endorsed functioning has
 208 been found to relate to a wide range of positive outcomes,
 209 whereas pressured functioning has been shown to relate to
 210 a negative pattern of psychosocial functioning (for over-
 211 views, see Ryan et al. 2006; Vansteenkiste et al. 2010).
 212 Further, whereas independence is conceived as an age-
 213 specific striving that is especially prominent during ado-
 214 lescence, autonomy when defined as volition is supposed to
 215 be critical across ages. This is because volition is said to
 216 represent an innate human need, whose satisfaction should
 217 be beneficial across ages and cultures, a claim that is
 218 confirmed increasingly (e.g., Chirkov et al. 2003; Sheldon
 219 et al. 2006).

220 In addition, within this view, autonomy is said to
 221 yield a different connection with relatedness. Whereas

independence sometimes may come at the cost of a warm
 relationship with the parents (i.e., in case of detachment),
 volitional functioning is supposed to be fully compati-
 ble with relatedness and attachment, and even mutually
 reinforcing (Ryan et al. 2006; Soenens and Vansteenkiste
 2005). Thus, an autonomy-supportive relationship with the
 parents is supposed to facilitate relatedness, and vice versa.
 In line with this claim, considerable research has shown
 already that the security of attachment in adolescents par-
 tially depends upon the support of one's volitional func-
 tioning, which confirms that both constructs are mutually
 strengthening rather than mutually exclusive (La Guardia
 et al. 2000; Ryan and Lynch 1989).

Differentiating and Combining Both Perspectives

Although the differentiation between the different compo-
 nents of independence (i.e., emotional, behavioral, cogni-
 tive) is well-accepted in the adolescent literature, we suggest
 that the distinction between volition versus pressure can
 complement prevailing viewpoints on adolescent autonomy.
 Thus, rather than being antagonistic, we conceive them as
 complementary to provide a more encompassing view-
 point on adolescent autonomy. In line with this, theorists
 increasingly have stressed that both viewpoints on auton-
 omy are at least distinct, or even orthogonal (Kagıççibasi
 2005; Ryan and Deci 2006; Vansteenkiste et al. 2005). Thus,
 both dimensions of autonomy can be crossed such that four
 different combinations can be retrieved, which can be done
 in different domains (e.g., the emotional and behavioral
 domain, cf. Soenens and Beyers 2012).

To illustrate, in emotional distressing situations, ado-
 lescents may turn to the parents (reflecting dependence)
 because they value their relationship with the parents and
 feel comfortable doing so (volitional functioning) or
 because they feel pressured to do so, for instance, when the
 parents adopt a claiming attitude towards the adolescent
 (pressured functioning). Likewise, adolescents may decide
 not to rely on the parents in an emotionally distressing
 situation (reflecting independence) because they prefer
 relying on the romantic partner or on peers (volitional
 functioning) or because they have no other choice as the
 parents are unavailable (pressured functioning). A similar
 distinction can be made in the decision-making (i.e.,
 behavioral) domain, that is, adolescents may decide inde-
 pendently because they personally endorse doing so
 (volitional functioning) or because they have no other
 choice (pressured functioning). Likewise, adolescents may
 consult their parents and decide rather dependently because
 they value their parents' opinion (volitional functioning) or
 because they feel obliged to do so (pressured functioning).

In line with the above theoretical distinctions, a factor
 analytical study (Beyers et al. 2003) on two adolescent

273	samples pointed to the distinction between “separation”	may be maladaptive, whereas it may be adaptive for older	323
274	(primarily denoting emotional independence) and “agency”	adolescents (Dishion et al. 2004).	324
275	(primarily reflecting self-endorsement and volition), with		
276	both factors correlating only slightly. In a recent replication		
277	(Lamborn and Groh 2009), the same factorial structure was		
278	found. Moreover, when predicting adjustment, separation		
279	was unrelated or negatively related to adjustment, while		
280	agency was associated positively with psychosocial functioning.		
281	The difference between these two viewpoints on		
282	autonomy has been supported in several domains, including		
283	emerging adults’ living conditions (Kins et al. 2009),		
284	adolescents’ independent decision making (Van Petegem		
285	et al. 2012), and parents’ support of autonomy (Soenens		
286	et al. 2007). In each of these studies, the experience of		
287	volition was especially crucial in the prediction of psy-		
288	chosocial adjustment, as compared to the degree of inde-		
289	pendent functioning as such.		
290	Present Research		
291	Because previous work only included a limited number of		
292	measures tapping into both autonomy definitions, the first		
293	aim of the present investigation was to test whether two		
294	dimensions (i.e., independence vs. dependence and volition		
295	vs. pressure) would underlie a wide range of scales that are		
296	stated to measure healthy or pathological aspects of ado-		
297	lescent autonomy. Identifying the core dimensions under-		
298	lying these autonomy measures would allow for a better		
299	grip on their specific meaning, that is, does the measure		
300	primarily assess volition (vs. pressure), independence (vs.		
301	dependence), or rather a combination of both? Moreover,		
302	as the developmental literature on autonomy especially		
303	stresses the role of age, we also tested for the robustness of		
304	our findings by directly comparing the obtained solu-		
305	tion in adolescents of different ages (i.e., middle vs. late		
306	adolescents).		
307	A second aim involved investigating the association		
308	between the retained dimensions and indicators of psy-		
309	chosocial functioning (i.e., subjective well-being and		
310	problem behavior). Based on theorizing and research dis-		
311	cussed above (e.g., Van Petegem et al. 2012), we expected		
312	the volition dimension to yield adaptive correlates. By		
313	contrast, independence was hypothesized to be related to		
314	more problem behavior and unrelated to well-being.		
315	Additionally, we tested whether the associations between		
316	the one dimension and the outcome variables would be		
317	qualified by the other dimension. For instance, would it be		
318	the case that independence is especially or only beneficial		
319	when enacted volitionally? Finally, we also tested the		
320	potentially moderating role of age as especially the effects		
321	of independent functioning may depend on the age of the		
322	participants, that is, independence for younger adolescents		
		Study 1	325
		In Study 1, we administered eight measures to investigate	326
		the underlying structure of adolescent autonomy (Aim 1).	327
		Whereas some measures were expected to tap into either	328
		independence versus dependence or volition versus pres-	329
		sure as such, others were expected to constitute a combi-	330
		nation of both dimensions. The Method section presents the	331
		specific measures as well as what aspects of autonomy they	332
		are hypothesized to tap into. As for Aim 2, we inspected	333
		associations with indicators of subjective well-being (i.e.,	334
		self-esteem, depressive symptoms, vitality) and problem	335
		behavior (alcohol abuse, deviant behavior).	336
		Method for Study 1	337
		Participants and Procedure	338
		Participants were 707 Belgian adolescents from 9th through	339
		12th grade, ranging in age between 14 and 20 years ($M =$	340
		16.5 , $SD = 1.2$), reflecting a typical Belgian sample of	341
		youngsters. Both genders were distributed almost equally	342
		(49 % boys) and most participants came from intact families	343
		(76 %). At school, 60 % of the participants followed an	344
		academic track, 23 % a technical and 17 % a vocational	345
		track. Data were collected at four different high schools	346
		during a regular class period. Participation was voluntary	347
		and anonymity was guaranteed through standard informed	348
		consent. 691 participants (97.7 %) provided complete data,	349
		resulting in 0.6 % missing data. As Little’s (1988) MCAR-	350
		test produced a normed χ^2 of 1.50, data are likely to be	351
		missing at random (Bollen 1989) and are dealt with using	352
		multiple imputation with the Expectation Maximization	353
		(EM) algorithm (Schafer 1997).	354
		Measures	355
		Questionnaires were selected to cover the hypothetical	356
		(combinations of) dimensions as much as possible as well	357
		as to include frequently used measures of autonomy (see	358
		e.g., Beckert 2012). All questionnaires were completed by	359
		the participants in their native language, which is Dutch.	360
		Most of the measures were available in Dutch; when this	361
		was not the case the scales were translated through a pro-	362
		cedure of back translation. Unless otherwise mentioned,	363
		the participants answered on a 5-point Likert-type scale,	364
		ranging from 1 (“Completely untrue”) to 5 (“Completely	365
		true”). Total scores for each scale were computed by	366
		averaging across the items.	367

- 368 *Independent Decision Making*
- 369 A variation of the Family Decision Making Scale (FDMS,
370 Dornbusch et al. 1985) was administered to assess inde-
371 pendent decision making. Participants answered the ques-
372 tion “who decides?” about 20 different issues (e.g., choice
373 of clothes, doing chores), thereby using a 5-point scale,
374 ranging from 1 (“Parents alone”) to 5 (“I alone”). Higher
375 scores thus indicated more decisional independence. The
376 scale was internally consistent ($\alpha = .85$). Decisional inde-
377 pendence is seen as a prototypical indicator of behavioral
378 independence (Smetana et al. 2004) and, therefore, was
379 expected to load primarily on the dimension reflecting
380 independence.
- 381 *Emotional Independence*
- 382 The Emotional Independence subscale of the Psychological
383 Separation Inventory (PSI, Hoffman 1984) is a measure
384 that is frequently used to assess an adolescent’s freedom
385 from excessive needs for parental approval, closeness, and
386 emotional support (e.g., “being away from my parents
387 makes me feel lonely”, reverse coded). In the present
388 study, we used a shortened 10-item version of the scale
389 (Luyckx et al. 2006), which had a good reliability
390 ($\alpha = .85$). As this is an indicator of emotional indepen-
391 dence, we expected this measure to load primarily on the
392 dimension of independence as well.
- 393 *Volition and Pressure*
- 394 Further, two subscales of the Self-Determination Scale
395 (SDS, Sheldon et al. 1996) were administered, each con-
396 sisting of 5 items. Specifically, we measured volition, that
397 is, the extent to which one experiences a sense of choice
398 and self-determination in one’s actions (e.g., “I always feel
399 like I choose the things I do”), and pressure, which reflects
400 alienated or controlled functioning (e.g., “I feel that I am
401 rarely myself”). Previous research has shown adequate
402 psychometric properties (e.g., Sheldon et al. 1996; Soenens
403 et al. 2007). In the present study, Cronbach’s alpha was .73
404 for volition and .72 for pressure. These measures were
405 hypothesized to represent the extreme points of the dimen-
406 sion of volition versus pressure.
- 407 *Emotional Reliance*
- 408 A 5-item version of the Emotional Reliance scale (ER,
409 Ryan et al. 2005) tapped into adolescents’ willingness to
410 turn to the parents in emotionally distressing situations
411 (e.g., “When I am alone or depressed, I would turn to my
412 parents”). As in previous research (e.g., Deci et al. 2006),
the scale was internally consistent ($\alpha = .81$). Emotional
reliance was expected to be an indicator of volitional
dependence, that is, willingly choosing to depend on the
parents.
- Emotional Connectedness*
- Adolescents also completed the Emotional Connectedness
subscale of the Multigenerational Interconnectedness Scale
(MIS, Gavazzi et al. 1999), which measures the extent to
which one is psychologically and emotionally dependent
upon the parents (e.g., “I choose friends that my parents
will like and feel comfortable with”). On the basis of
previous research (Dwairy et al. 2006), the scale was
limited to 10 items ($\alpha = .79$). This questionnaire was
hypothesized to measure a rather pressured form of
dependency, as the items refer primarily to motives such as
loyalty, obligation towards the parents and avoiding feel-
ings of guilt.
- Engulfment Anxiety*
- The participants then completed the 8-item Engulfment
Anxiety subscale of the Separation-Individuation Test of
Adolescence (SITA, Levine et al. 1986), which assesses the
extent to which the parents are perceived as overpowering
and intrusively controlling, thereby threatening adoles-
cents’ sense of independence and selfhood (e.g., “I can’t
wait for the day that I can live on my own and am free from
my parents”). Previous investigations have shown this
subscale to be psychometrically sound (e.g., Kruse and
Walper 2008), as was also the case in the present study
($\alpha = .84$). Engulfment anxiety was expected to reflect a
dysfunctional type of autonomy, that is, it was proposed as
an indicator of pressured independence.
- Oppositional Defiance*
- Finally, oppositional defiance was measured using a
recently developed scale (Vansteenkiste et al. 2012), which
was supplemented by other items measuring highly related
constructs (e.g., defiance, Finnegan et al. 1998). The
measure assesses compulsive noncompliance and a blunt
rejection of the parental authority (e.g., “I do exactly the
opposite of what my parents expect me to do”). The final
scale consisted of 8 items and had a good reliability
($\alpha = .85$). Conceptually, the construct of oppositional
defiance relates closely to the notion of psychological
reactance (Brehm 1966). Both are characterized by a ten-
dency to reject parental authority and, as such, involve an
orientation towards independence and maximizing dis-
tance. The type of independence that is achieved through

459 reactance is, however, pressured and conflicted in nature,
460 as it typically involves a blunt rejection of authority against
461 which one is reacting, that is, doing the opposite what is
462 expected (Brehm 1966; Fitzsimons and Lehmann 2004).
463 Because such actions are externally determined and not
464 based upon self-endorsed values and choices, reactance and
465 oppositional defiance were hypothesized to tap into a more
466 dysfunctional form of autonomy.

467 *Subjective Well-Being*

468 Three scales were administered to measure subjective well-
469 being. First, the 5-item global self-worth subscale of the
470 Self-Perception Profile for Adolescents (SPPA, Harter
471 1988) was administered to tap into feelings of self-worth.
472 The scale had a good reliability in the present study
473 ($\alpha = .82$; $M = 3.59$, $SD = .79$). Depressive symptoms
474 were assessed through a 6-item version of the Center for
475 Epidemiologic Studies-Depression Scale (CES-D, Radloff
476 1977). Adolescents rated how often they experienced
477 symptoms of depression during the past week (e.g., feeling
478 lonely) on a scale from 0 [“Rarely or none of the times
479 (less than one day)”] to 3 [“Most or all of the time (5 to
480 7 days)”]. The present version of the CES-D was internally
481 consistent ($\alpha = .80$; $M = .59$, $SD = .53$). Finally, vitality
482 was measured through the Subjective Vitality Scale (SVS,
483 Ryan and Frederick 1997). This scale counts 7 items and
484 assesses feelings of energy and vitality (e.g., “Currently, I
485 feel so alive I just want to burst”, $\alpha = .88$; $M = 3.17$,
486 $SD = .78$).

487 *Problem Behavior*

488 We also assessed problem behavior through two scales. The
489 Deviant Behavior Scale (DBS, Weinmann 1992) was used
490 to tap into rule-breaking behavior. The participants rated
491 their experience with 10 types of deviant behavior (e.g.,
492 being involved in fights) during the past 6 months, on a
493 scale from 0 (“Never”) to 3 (“Frequently”). The scale had
494 an acceptable reliability ($\alpha = .71$; $M = .50$, $SD = .36$).
495 Additionally, alcohol abuse was assessed through a short-
496 ened version of the Alcohol Use Disorders Identifica-
497 tion Test (AUDIT, Saunders et al. 1993). The scale
498 consisted of 5 items (e.g., “I sometimes gulp drinks to speed
499 the effect”) and had a good reliability ($\alpha = .81$; $M = 1.73$,
500 $SD = .73$).

501 *Plan of Analysis*

502 To examine the underlying structure of the autonomy mea-
503 sures (Aim 1), we began with determining and extracting
504 the optimal number of dimensions through principal

component analysis (PCA). Then, we made use of orthogo-
nal Procrustes rotation to rotate these dimensions towards an
interpretable solution as this is considered a powerful tech-
nique for conducting hypothesis-guided rotation (McCrae
et al. 1996). Through this technique, dimensions are rotated
to minimize the sum of squares of deviations from a
hypothesized target matrix (Schönemann 1966). The rota-
tion thus involves a realignment of the position of the axes,
without changing their relative position. Such an approach is
preferable (1) to the traditional exploratory rotational pro-
cedures as the obtained solution not necessarily involves a
simple structure (where each variable loads high on one
dimension and approximately zero on the other dimensions),
and (2) to confirmatory factor analysis, as we were searching
for a factor structure of bipolar dimensions (for a further
elaboration on these issues, see Hopwood and Donnellan
2010; McCrae et al. 1996). Tucker’s Phi values were used
to evaluate congruence between the hypothesized and rotated
solution, with .85 and higher indicating fair similarity and .95
and higher suggesting strong similarity (Lorenzo-Seva and
ten Berge 2006).

In a next step, we tested whether the solution would be
valid for both middle and late adolescents. Therefore, we
divided our sample in two subsamples, that is, a sample of
middle (14–16 years) and late adolescents (17–20 years).
Next, the same factor-analytical procedure was repeated in
the separate samples, that is, a PCA followed by a Pro-
crustes rotation. To test for the congruence between both
obtained solutions, we inspected the similarity in the pat-
tern and the magnitude of the factor loadings through the
root mean square (RMS) coefficient and the coefficient of
congruence (CC; Rummel 1970, pp. 461–462). The RMS
coefficient is proportional to the Euclidean distance
between the factor loadings and should be close to zero.
The CC represents the cosine of the angle between the
factors and the factor loadings, varying between -1.00
(indicating perfect dissimilarity) and 1.00 (indicating per-
fect similarity).

To examine the relationship with psychosocial func-
tioning (Aim 2), we first explored the effects of the
background characteristics (i.e., gender, family structure,
education and age) through MANCOVA. Significant
effects were controlled for in subsequent series of hierar-
chical regression analyses, as the control variables were
added in the first step and the main predictors, reflecting
the two retained dimensions, were added in a second step.
Then, in a third step, we added the interaction between the
two dimensions to determine whether the association
between one dimension and the outcome variables is
dependent upon the other dimension. In a final step, we
tested for the possibility of moderation by age, by adding
two second-order interaction terms (i.e., the interaction
between age and each of the two dimensions separately)

Table 1 Means, standard deviations and correlations among the autonomy measures for Study 1 (N = 707)

	Mean	SD	1.	2.	3.	4.	5.	6.	7.
1. Volition	3.77	.62							
2. Emotional reliance	3.08	.80	.12**						
3. Emotional connectedness	2.73	.59	-.12**	.49***					
4. Pressure	2.06	.66	-.27***	-.06	.13***				
5. Engulfment anxiety	2.49	.81	-.27***	-.30***	-.10**	.26***			
6. Oppositional defiance	2.34	.67	-.03	-.39***	-.35***	.17***	.52***		
7. Emotional independence	3.67	.71	.02	-.58***	-.56***	-.08*	.26***	.33***	
8. Independent decision making	3.94	.59	.28***	-.15***	-.23***	-.08*	-.10**	.15***	.08*

* $p < .05$; ** $p < .01$; *** $p < .001$

558 and one third-order interaction term (i.e., the first dimen-
559 sion by the second dimension by age).

560 **Results for Study 1**

561 Aim 1: Identifying the Structure Underlying
562 the Autonomy Measures

563 Descriptive statistics and correlations among the autonomy
564 measures are presented in Table 1. PCA was performed on
565 the eight autonomy measures. Inspection of the scree plot
566 clearly yielded evidence for a two-dimensional solution
567 (Cattell 1966), accounting for 55 % of the variance. Con-
568 sequently, we performed an orthogonal Procrustes rotation
569 to test whether the solution corresponded to the theoret-
570 ical expectations. Table 2 presents the loadings of the
571 (a) unrotated, (b) hypothesized and (c) rotated solution.
572 Tucker’s phi indices suggested fair congruence for both
573 dimensions (.85 and .95, respectively). To gain further
574 confidence in the obtained factor structure, we repeated the
575 factor analyses making use of the standard orthogonal
576 (VARIMAX) and oblique (PROMAX) rotations. These
577 solutions were found to be highly similar to the solution
578 after Procrustes rotation, with correlations of at least .98
579 with the corresponding dimensions. Moreover, in the obli-
580 que rotation, the two dimensions did not correlate signifi-
581 cantly, underscoring their orthogonality.

582 The solution after Procrustes rotation is depicted in
583 Fig. 1a. Based on Zwick and Velicer (1982), we considered
584 factor loadings higher than .30 as salient. As predicted, both
585 the volition and the pressure subscales of the SDS loaded
586 strongly on one dimension (yet in opposite directions) and
587 nearly zero on the other dimension. The first dimension thus
588 captured the degree to which one experiences a sense or
589 feeling of volition, as opposed to feelings of pressure and
590 coercion, and was labeled as “volition versus pressure”.
591 Also as predicted, emotional independence loaded highly

592 positive on the second dimension and approximately zero
593 on the first. However, independent decision making yielded
594 an equally positive loading on both dimensions,¹ which
595 complicated the interpretation of the second dimension.
596 Because of these interpretational ambiguities, we tempo-
597 rarily refrained from labeling this dimension; yet, we return
598 upon this issue when discussing the present findings. The
599 other measures yielded loadings on the dimensions that
600 were generally in the expected ways. Specifically, both
601 emotional reliance and emotional connectedness especially
602 loaded negative on the second dimension; engulfment
603 anxiety as well as oppositional defiance both loaded nega-
604 tively on the volition versus pressure dimension and posi-
605 tively on the second dimension.

606 Next, we tested whether there was congruence between
607 the solutions in our subsamples of middle ($N = 309$) and
608 late adolescents ($N = 398$). Although eyeball inspection
609 already indicated strong similarity between the solutions
610 obtained in both subsamples, we also tested the congruence
611 between the two factor solutions more formally. The RMS
612 coefficients for the two dimensions were both low (i.e.,
613 .076 and .062, respectively), whereas the CC was twice
614 almost 1.00 (i.e., .988 and .995). These findings under-
615 scored the strong congruence between the factor structures
616 in the two subsamples, indicating that the measures yielded
617 similar loadings on the two retained dimensions in the
618 middle adolescent and late adolescent sample.

1FL01 ¹ The FDMS comprised issues coming from five different domains
1FL02 (i.e., personal, friendship, prudential, conventional and moral).
1FL03 However, exploratory factor analysis only differentiated between
1FL04 two highly correlated latent factors, one pertaining to personal,
1FL05 friendship and prudential issues and one relating to conventional and
1FL06 moral issues. Subsequent analyses, where we split the FDMS score up
1FL07 into two separate scores, yielded almost identical results, both in
1FL08 terms of the loadings on the two underlying dimensions (cf. Aim 1) as
1FL09 well as the associations with age and psychosocial functioning (cf.
1FL10 Aim 2). Therefore, we chose not to differentiate between these
1FL11 domains.

Author Proof

Table 2 Loadings of the unrotated, hypothesized and rotated PCA solution, for Study 1

	Unrotated solution		Hypothesized solution		Rotated solution	
	D1	D2	D1	D2	D1	D2
Volition	-.08	-.71	1	0	.71	.14
Emotional reliance	-.80	.02	1	-1	.21	-.77
Emotional connectedness	-.71	.39	-1	-1	-.17	-.80
Pressure	.10	.64	-1	0	-.64	-.09
Engulfment anxiety	.56	.56	-1	1	-.70	.37
Oppositional defiance	.71	.19	-1	1	-.39	.63
Emotional independence	.77	-.19	0	1	-.05	.79
Independent decision making	.23	-.53	0	1	.44	.37

D1 = dimension reflecting volition versus pressure, D2 = dimension reflecting distance versus proximity

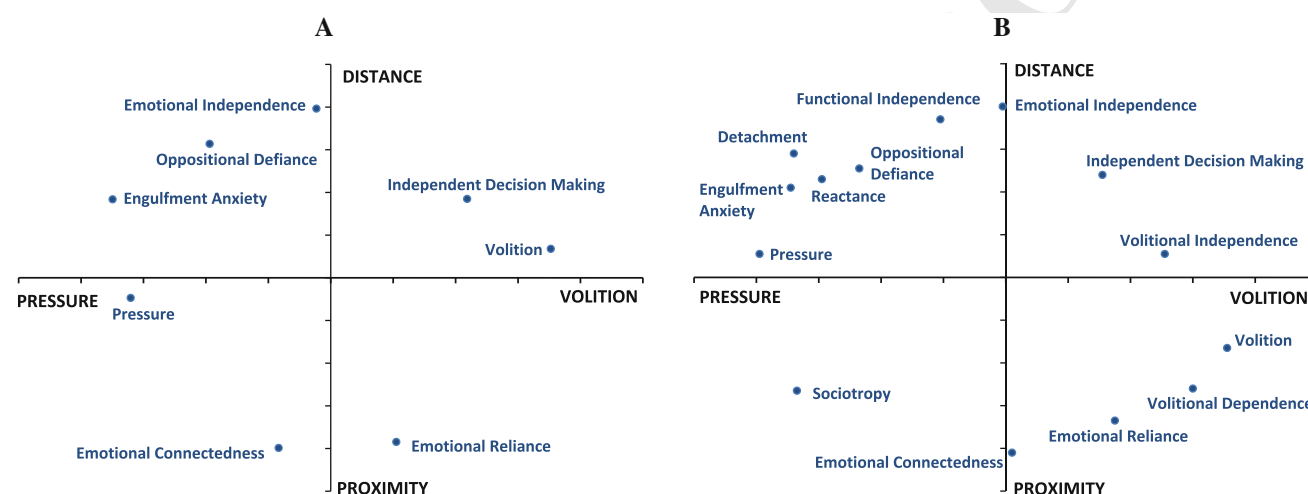


Fig. 1 PCA solution after Procrustes rotation for Study 1 (a) and Study 2 (b)

619 Aim 2: Associations with Background Characteristics
620 and Adjustment

621 We first tested the associations with the background char-
622 acteristics (i.e., gender, family structure, education and age).
623 Multivariate analyses based on Wilk’s Lambda indicated a
624 significant main effect of gender [$F(2,693) = 13.96$,
625 $p < .001$, $\eta^2 = .04$] and age [$F(2,693) = 19.47$, $p < .001$,
626 $\eta^2 = .05$]. There were no significant effects of family
627 structure [$F(6,1386) = 1.45$, ns] or education [$F(4,1386) =$
628 1.71 , ns]. Subsequent univariate analyses indicated that
629 boys scored higher on the second dimension [$F(1,694) =$
630 25.43 , $p < .001$, $\eta^2 = .04$]. Further, age was found to
631 relate positively to volition [$F(1,694) = 38.95$, $p < .001$,
632 $b = .20$], whereas it was unrelated to the second dimension
633 [$F(1,694) = .02$, ns]. Hence, we controlled for age and
634 gender in subsequent analyses.

635 Next, we investigated the association with adjustment
636 through a series of hierarchical regression analyses. The

specific correlations with each of the autonomy measures 637
are presented in “Appendix 1”. The results of the first two 638
steps of the regression analyses can be found in Table 3. 639
Generally, volition predicted higher scores on the indica- 640
tors of well-being as well as lower scores on problem 641
behavior. The second dimension predicted slightly less 642
vitality as well as more deviant behavior and alcohol abuse. 643
As for the third step, the interaction between the two 644
dimensions never reached significance, $\Delta F(1,700)$ ranging 645
between .03 and 1.90 ($p > .05$). Likewise, adding age as a 646
moderator in a fourth step never added significantly to the 647
prediction of any of the outcome variables, with $\Delta F(3,697)$ 648
ranging between .07 and 2.59 ($p > .05$). 649

Brief Discussion of Study 1 650

The first study revealed a number of interesting find- 651
ings. As for the first aim, initial evidence was obtained for a 652

Table 3 Summary of regression analyses predicting adolescents' adjustment in Study 1

	Subjective well-being						Problem behavior			
	Self esteem		Depressive symptoms		Vitality		Deviant behavior		Alcohol abuse	
	<i>b</i>	ΔR^2	<i>b</i>	ΔR^2	<i>b</i>	ΔR^2	<i>b</i>	ΔR^2	<i>b</i>	ΔR^2
Step 1		.03***		.03***		.00		.05***		.08***
Gender ^a	.13**		-.15***		.02		.21***		.22***	
Age	.09*		-.04		-.06		.07		.14***	
Step 2		.24***		.18***		.10***		.14***		.08***
Gender ^a	.11**		-.14***		.02		.15***		.18***	
Age	-.03		.07		-.13***		.10**		.17***	
Volition	.51***		-.44***		.32***		-.12**		-.15***	
Distance	-.02		.04		-.08*		.36***		.24***	

^a 0 = female, 1 = male. * $p < .05$; ** $p < .01$; *** $p < .001$. Standardized regression coefficients are presented

two-dimensional structure underlying the multitude of autonomy measures. This two-dimensional solution was highly similar when comparing between middle and late adolescents. The extraction of these two dimensions helped to gain more precise insight in the meaning of each assessed concept. The pattern of loadings of the different measures clearly suggested that the first dimension could be interpreted as indicative of “volition versus pressure”. The interpretation of the second dimension was less clear. This is because the independent decision making scale, which can be considered a straightforward and face valid indicator of independent functioning (Smetana et al. 2004; Van Petegem et al. 2012), failed to load exclusively high on this dimension, instead loading moderately high on both dimensions. Hence, “independence versus dependence” may not be the best label for this second dimension. The observation that oppositional defiance and emotional independence yielded a positive loading on this dimension, whereas emotional reliance and emotional connectedness yielded a negative loading, suggests that this dimension may reflect the felt distance versus proximity in the parent-child relationship (Kagitçibasi 2005). Study 2 was set up to further explore this issue, that is, whether the second dimension could be interpreted in terms of distance versus proximity.

As for the associations with age and adjustment (Aim 2), the dimension reflecting volition versus pressure yielded positive links with well-being and age and slightly negative associations with problem behavior. In contrast, the second dimension was associated with more problem behavior and was generally unrelated to well-being. Contrary to expectations, we found no correlation with age. If this second dimension would capture independence versus dependence, a positive correlation should have emerged, as adolescents' independent functioning is supposed to increase with age (Steinberg 2002). This non-significant association with age

equally suggested that a more in-depth investigation of the second dimension is warranted.

Study 2

The primary aim of Study 2 was to gain further insight in the exact meaning of the second dimension. We attempted to do so in two ways. First, we included a number of additional measures that were assumed to tap into healthy as well as dysfunctional manifestations of autonomy, especially focusing on quadrants that were relatively under-represented in Study 1. By doing so, we hoped to clarify whether the second dimension reflects the degree of distance vs. proximity in the parent-adolescent relationship or whether another label better describes this dimension. Specifically, we measured sociotropy (Beck 1983), which represents an excessive concern about the opinion of others and a strong reliance on others for maintaining a positive self view. Therefore, sociotropy was hypothesized to reflect a pressured type of proximity in the parent-adolescent relationship (Brenning et al. 2011a). In addition, we administered two newly created measures, which involve a combination of volitional independence and volitional dependence, respectively. Further, in order to cover the different facets of independence better, we also added a measure of functional independence (Beyers and Goossens 2003; Hoffman 1984), which reflects the extent to which one is able to manage personal affairs without help of the parents. Finally, we added two more measures that tap into pathological manifestations of autonomy, that is, detachment and reactance, which were expected to reflect distance from the parents out of pressured reasons. This is because detachment is rooted in mistrust and alienation (Beyers et al. 2003; Lamborn and Groh 2009) and reactant behavior is determined by the rules

722 against which one reacts (Brehm 1966; Fitzsimons and
723 Lehmann 2004). In total, then, 14 constructs were
724 included to cover the two dimensions and four quadrants
725 obtained in Study 1.

726 To further determine the specific meaning of the second
727 dimension, we related the two dimensions to adolescents'
728 attachment representations. We reasoned that attachment
729 theory (Bowlby 1969, 1973) represents a valuable frame-
730 work for this purpose because autonomous functioning, as
731 indexed by explorative behavior, is said to be rooted in a
732 secure attachment style. Specifically, a critical (yet less
733 studied) function of attachment figures is to provide a
734 *secure base*, which refers to the provision of guidance to
735 safely explore the environment in a self-confident and
736 autonomous manner (Bowlby 1988; Mikulincer and Shaver
737 2007a). This function is distinguished from the more well-
738 known role of attachment figures to serve as a *safe haven*,
739 which pertains to the provision of safety and support in
740 times of distress. The secure base function seems especially
741 important in adolescence, given the developmental changes
742 characteristic for this period (Allen and Land 1999;
743 Becker-Stoll et al. 2008).

744 If parents fail to take up these functions, children are
745 said to develop an insecure attachment. Typically, two
746 types of insecure attachment representations are distin-
747 guished, that is, avoidant and anxious attachment (e.g.,
748 Brennan et al. 1998; Brenning et al. 2011b). Avoidantly
749 attached adolescents tend to downplay the importance of
750 relationships and strive for distance from others. Anxiously
751 attached adolescents, by contrast, are characterized by
752 worries about the availability of others and display a strong
753 ambivalence towards closeness and distance (Brenning
754 et al. 2011b; Mikulincer et al. 2010). Low scores on the
755 two dimensions are considered as indicative of a secure
756 attachment.

757 If the second dimension would entail independent func-
758 tioning, we reasoned that it should be unrelated or even
759 positively related to attachment security as secure rela-
760 tionships have been shown to support independent func-
761 tioning in romantic couples (Feeney 2007) as well as in the
762 mother-adolescent relationship (Allen et al. 2003). Tech-
763 nically, then, the second dimension should relate negatively
764 to both avoidant and anxious attachment. However, if the
765 second dimension would involve distance versus proximity,
766 this dimension should relate primarily to an avoidant
767 attachment, as an orientation towards interpersonal distance
768 is a key feature of this attachment style (Mikulincer and
769 Shaver 2007b). Further, we expected high scores on the
770 volition dimension to relate to low scores on both avoidance
771 and anxiety, as a sensitive and secure attachment has been
772 shown to support self-endorsed functioning in romantic
773 (La Guardia et al. 2000) as well as in the parent-adolescent
774 relationship (Laghi et al. 2009).

Method for Study 2

Sample and Procedure

Data were collected in two high schools in Belgium. 783
784 adolescents participated in the study, ranging in age
785 between 14 and 21 years ($M = 16.3$, $SD = 1.3$). There
786 were slightly more girls (59 %), and most youngsters came
787 from intact families (79 %). The majority of the partici-
788 pants (67 %) followed an academic track, 23 % followed a
789 technical track, and 10 % a vocational track. In the pres-
790 ent dataset, 16 % of the data was incomplete. These
791 missing data were found to be missing at random (normed
792 $\chi^2 = 1.31$) and were estimated through the procedure of
793 multiple estimation using the EM algorithm.

Measures

As in Study 1, participants completed the questionnaire in
789 Dutch and most questionnaires were answered on a 5-point
790 Likert type scale, ranging from 1 (“Completely untrue”) to
791 5 (“Completely true”), unless otherwise mentioned. Dif-
792 ferent from Study 1, we reformulated the items of some
793 questionnaires towards the parent–child context, such that
794 they all have the same level of focus (Vallerand 1997,
795 2000).

Independent Decision Making

As in Study 1, the FDMS (Dornbusch et al. 1985) was used
798 to assess independent decision making. Cronbach’s alpha
799 was .88.
800

Emotional and Functional Independence

The same 10-item version of the Emotional Independence
802 subscale of the PSI (Hoffman 1984) was administered. In
803 addition, the Functional Independence subscale was used to
804 assess youngsters’ ability to manage personal and practical
805 affairs without depending on the parents for help (e.g.,
806 “When I am in difficulty I usually call upon my parents to
807 help me out of trouble”, reverse coded). We also used a
808 shortened 10-item version (Luyckx et al. 2006) of the
809 functional independence subscale. Both the emotional and
810 the functional independence subscales were internally
811 consistent ($\alpha = .87$ and $.82$, respectively).
812

Volition and Pressure

The two subscales of the SDS (Sheldon et al. 1996) were
814 adapted to assess feelings of volition and pressure in the
815 parent–child relationship. Items of the SDS were reformu-
816 lated by the first author and, then, were assessed
817

818 independently by the two other authors. Through discus-
819 sion, a consensus was reached about the final version. Both
820 the volition (e.g., “When I’m with my parents, I generally
821 make decisions that are based upon my true values and
822 interests.”) and pressure subscale (e.g., “When I’m with
823 my parents, I rarely have the feeling I can be myself”)
824 consisted of five items.² Cronbach’s alpha was .84 for
825 volition and .78 for pressure.

826 *Volitional Dependence and Volitional Independence*

827 We created two scales to specifically assess volitional
828 dependence and volitional independence. The Volitional
829 Dependence Scale assesses feelings of volition and per-
830 sonal choice when depending upon the parents (e.g.,
831 “When I follow the advice of my parents, it feels like a
832 personal choice”, “I feel free to ask my parents for help,
833 whenever necessary”; 7 items). The Volitional Independ-
834 ence Scale measures the extent to which the adolescent
835 personally endorses acting and deciding independently
836 (e.g., “I think it’s important to first try and solve a problem
837 myself, before relying on my parents for help”, “If I don’t
838 follow the advice of my parents, it feels like a personal
839 choice”; 8 items). When performing a PCA on these 15
840 items, the scree plot clearly indicated a two component
841 solution, explaining 49 % of the variance. After perform-
842 ing a Promax rotation, all items clearly loaded onto the
843 expected component (with loadings of at least .47), and
844 approximately zero on the other component.² Cronbach’s
845 alpha was .82 for volitional dependence and .76 for voli-
846 tional independence.

847 *Emotional Reliance*

848 We assessed emotional reliance on the parents through the
849 same questionnaire as in Study 1, that is, the scale devel-
850 oped by Ryan and colleagues (2006). The scale was
851 internally consistent ($\alpha = .85$).

852 *Emotional Connectedness*

853 As in Study 1, we administered the Emotional Connect-
854 edness subscale of the MIS (Gavazzi et al. 1999). The scale
855 had an acceptable reliability ($\alpha = .81$).

856 *Sociotropy*

857 The participants completed a shortened version of the
858 Sociotropy subscale of the Revised Personal Style Inven-
859 tory (PSI-II, Robins et al. 1994). The scale originally con-
860 sisted of 24 items and was designed to assess a sociotropic

861 personality style (Beck 1983), which is characterized by a
862 strong dependency on the opinion of others and a striving to
863 please others in order to feel accepted and maintain self-
864 worth. We used an adolescent version of the PSI-II (Bren-
865 ning et al. 2011a), which was reduced to 10 items on the
866 basis of an unpublished dataset and which was adjusted to
867 the parent–child context (e.g., “I am very sensitive to crit-
868 icism by my parents”). The brief version correlated strongly
869 with the original version ($r = .87$). In the present study, the
870 reliability coefficient was acceptable ($\alpha = .76$).

Detachment

871
872 As in the study of Beyers et al. (2003), the 10-item cool-
873 ness/rejection subscale of the Relationship with Father/
874 Mother Questionnaire (RFMQ, Mayseless et al. 1998) was
875 used as an indicator of detachment, as it taps into feelings
876 of alienation and disengagement towards the parents (e.g.,
877 “I feel that my parents don’t understand me”). The ques-
878 tionnaire was internally consistent ($\alpha = .91$).

Oppositional Defiance

879
880 As in Study 1, we tapped into oppositional defiance
881 through the same recently developed questionnaire
882 (Vansteenkiste et al. 2012). The scale had a good reliability
883 ($\alpha = .87$).

Reactance

884
885 We measured reactance through the Hong Psychological
886 Reactance Scale (HPRS, Hong and Faedda 1996). This
887 scale is based directly upon the theory of psychological
888 reactance (Brehm 1966), measuring a person’s trait pro-
889 pensity to experience reactance. This 14-item scale has
890 been shown to be a valid and reliable measure of trait
891 reactance (Shen and Dillard 2005). Items were reworded
892 towards the parent-adolescent context (e.g. “The thought
893 of being dependent on my parents aggravates me”).
894 Cronbach’s alpha was .89.

Engulfment Anxiety

895
896 We assessed engulfment anxiety through the same ques-
897 tionnaire as in Study 1, that is, the Engulfment Anxiety
898 subscale of the SITA (Levine et al. 1986). The scale was
899 internally consistent ($\alpha = .86$).

Attachment

900
901 The Experiences in Close Relationships Scale-Revised
902 (ECR-R, Fraley et al. 2000) is a frequently used measure that
903 was originally designed to assess insecure attachment

2FL01 ² All items from the new scales can be obtained from the authors.

904 representations in the romantic relationship. In the present
 905 study, we used a recently developed version that was adapted
 906 to assess attachment to the parents in children and adoles-
 907 cents (ECR-RC; Brenning et al. 2011b). The questionnaire
 908 was filled out separately about the mother and father. The
 909 ECR-RC consists of two subscales, that is, *Avoidance* and
 910 *Anxiety*. The Avoidance subscale measures feelings of dis-
 911 comfort with closeness and intimacy (e.g., “I am comfort-
 912 able being close to my mother/father”, reverse coded), the
 913 Anxiety subscale taps into a preoccupation about rejection
 914 and abandonment (e.g., “I often worry that my mother/father
 915 doesn’t really love me”). In an unpublished sample of 670
 916 youngsters, both subscales were reduced each to 6 items, by
 917 selecting the highest loading items (i.e., > .70). Both short-
 918 ened subscales correlated strongly with the original sub-
 919 scales (i.e., .92 and .90 for avoidance and anxiety,
 920 respectively) and yielded good reliability coefficients (.88
 921 and .87, respectively). In the present sample, reliabilities
 922 were good for both avoidance ($\alpha = .91$ for mother;
 923 $M = 3.77$, $SD = 1.35$; $\alpha = .92$ for father; $M = 4.38$,
 924 $SD = 1.26$) and anxiety ($\alpha = .85$ for mother; $M = 1.65$,
 925 $SD = .76$; $\alpha = .87$ for father; $M = 1.74$, $SD = .83$).

926 *Subjective Well-Being*

927 As in Study 1, we used the global self-worth scale of the
 928 SPPA to measure self-esteem ($\alpha = .82$; $M = 3.56$,
 929 $SD = .80$) and the CES-D to assess depressive symptoms
 930 ($\alpha = .81$; $M = .61$, $SD = .57$). A third indicator of sub-
 931 jective well-being was life satisfaction, measured through
 932 the 5-item Satisfaction With Life Scale (SWLS, Diener
 933 et al. 1985). This scale measures the extent to which
 934 individuals judge their life as satisfying (e.g., “In most
 935 ways, my life is close to my ideals”). The scale was
 936 internally consistent ($\alpha = .88$; $M = 3.49$, $SD = .88$).

937 *Problem Behavior*

938 As indicators of problem behavior, the DBS was used
 939 again to measure deviant behavior ($\alpha = .73$; $M = .45$,
 940 $SD = .37$). Further, we administered the 5-item behavioral
 941 conduct subscale of the SPPA (Harter 1988) to tap into
 942 adolescents’ evaluation of their own behavior ($\alpha = .79$;
 943 $M = 3.51$, $SD = .61$).

944 **Results for Study 2**

945 Aim 1: Identifying the Structure Underlying
 946 the Autonomy Measures

947 Table 4 shows the descriptive statistics and correlations
 948 among the autonomy measures of Study 2. A PCA on the

Table 4 Means, standard deviations and correlations among the autonomy measures, for Study 2 (N = 783)

	Mean	SD	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1. Volition	3.49	.81													
2. Volitional dependence	3.51	.67	.61***												
3. Emotional reliance	3.15	.85	.45***	.56***											
4. Emotional connectedness	2.62	.54	.24***	.48***	.49***										
5. Sociotropy	2.37	.49	-.18***	-.10**	.10***	.31***									
6. Pressure	2.60	.76	-.59***	-.43***	-.30***	-.07	.42***								
7. Detachment	2.20	.67	-.67***	-.71***	-.70***	-.43***	.16***	.60***							
8. Engulfment anxiety	2.64	.79	-.58***	-.49***	-.43***	-.32***	.17***	.60***	.64***						
9. Reactance	2.66	.79	-.43***	-.45***	-.38***	-.40***	.22***	.46***	.57***	.70***					
10. Oppositional defiance	2.44	.74	-.35***	-.40***	-.36***	-.43***	.06	.36***	.53***	.64***	.71***				
11. Functional independence	2.91	.66	-.37***	-.50***	-.60***	-.57***	-.16***	.22***	.56***	.35***	.39***	.38***			
12. Emotional independence	3.67	.73	-.32***	-.41***	-.47***	-.58***	-.51***	.20***	.46***	.40***	.32***	.29***	.50***		
13. Independent DM	3.87	.63	.07*	-.04	-.15***	-.31***	-.29***	-.14***	.08*	-.09*	.11**	.19***	.29***	.17***	
14. Volitional independence	3.88	.58	.33***	.44***	.18***	-.04	-.34***	-.20***	-.22***	-.12**	-.06	-.11**	-.13***	.10**	.09**

DM decision making

* $p < .05$; ** $p < .01$; *** $p < .001$

14 scales yielded evidence for a two-dimensional solution, explaining 58 % of the variance in the measures. As in Study 1, the PCA solution was rotated towards a hypothesized solution through an orthogonal Procrustes rotation. The factor loadings of the unrotated, hypothesized and rotated solution are presented in Table 5. Tucker's Phi indices showed good congruence for both dimensions, that is, .91 for Dimension 1 and .94 for Dimension 2. The rotated solution is displayed graphically in Fig. 1b.

Most of the results were in line with the expectations, with the measures used in Study 1 loading very similarly on the two dimensions. As expected, the first dimension reflected "volition versus pressure", being marked primarily by the scales that assess volitional and coercive functioning in the relationship with the parents. As for the interpretation of the second dimension, results were highly similar to the findings of Study 1. Both the emotional independence subscale and the newly added functional independence subscale of the PSI loaded highly positively on this dimension. Also in line with Study 1, independent decision making loaded positively on this dimension, though on the volition dimension as well. These findings further confirm that the label "independence versus dependence" was not well suited for the second dimension. Instead, the label "distance versus proximity" seemed a better choice which was further confirmed by the loadings of the other newly added measures and the replication of factor loadings of measures used in Study 1. For instance, emotional connectedness again loaded negatively on this dimension. In addition, the newly added scale of sociotropy seemed to tap into a more pressured form of proximity, as it loaded negatively on both dimensions. In contrast, both emotional reliance and the

newly created measure of volitional dependence fell in the quadrant tapping into volitional proximity.

Further, the newly added subscale volitional independence especially loaded positively on the volition dimension and only slightly on the distance dimension. Finally, the factor loadings for the other measures were clearly in line with our expectations and also attest the validity of the retained dimensions. As in Study 1, both oppositional defiance and engulfment anxiety entailed a pressured striving for distance. The newly added measures of detachment and reactance loaded negatively on the volition dimension and positively on the distance dimension as well. This underscores that detachment and reactance reflect an orientation towards interpersonal distance from the parents characterized by feelings of pressure and a lack of self-endorsement.

Again, we tested whether the retained solution was valid for both middle and late adolescents. We split the sample into a subsample of middle (14–16 years, $N = 446$) and late adolescents (17–21 years, $N = 337$) and re-ran the factor analysis in each subsample. Again, the comparative statistics yielded strong evidence for similarity between the two factorial solutions, that is, $RMS = .071$ and $CC = .991$ for the volition dimension and $RMS = .072$ and $CC = .991$ for the distance dimension. These findings further bolstered the robustness of the solution.

Aim 2: Associations with Background Characteristics, Attachment and Adjustment

Next, we tested for the associations with the background variables. Significant effects were found for gender [$F(2,767) = 10.59, p < .001, \eta^2 = .03$], education

Table 5 Loadings of the unrotated, hypothesized and rotated PCA solution, for Study 2

	Unrotated solution		Hypothesized solution		Rotated solution	
	D1	D2	D1	D2	D1	D2
Volition	-.72	-.30	1	0	.71	-.33
Volitional dependence	-.79	-.09	1	-1	.60	-.52
Emotional reliance	-.73	.20	1	-1	.35	-.67
Emotional connectedness	-.61	.54	-1	-1	.02	-.82
Sociotropy	.07	.85	-1	-1	-.67	-.53
Pressure	.62	.50	-1	0	-.79	.11
Detachment	.88	.10	-1	1	-.68	.58
Engulfment anxiety	.78	.22	-1	1	-.69	.42
Reactance	.74	.12	-1	1	-.59	.46
Oppositional defiance	.69	-.01	-1	1	-.47	.51
Functional independence	.68	-.35	0	1	-.21	.74
Emotional independence	.60	-.54	0	1	-.01	.80
Independent decision making	.14	-.55	0	1	.31	.48
Volitional independence	-.26	-.45	1	1	.51	.11

D1 = dimension reflecting volition versus pressure, D2 = dimension reflecting distance versus proximity

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1011 [$F(4,1534) = 4.47, p < .01, \eta^2 = .01$] and age
 1012 [$F(2,767) = 10.94, p < .001, \eta^2 = .03$]; family structure
 1013 was unrelated [$F(6,1534) = 1.77, ns$]. Univariate analyses
 1014 showed that boys scored significantly lower on volition
 1015 [$F(1,768) = 13.95, p < .001, \eta^2 = .02$] and higher on
 1016 distance [$F(1,768) = 7.11, p < .01, \eta^2 = .01$]. Adoles-
 1017 cents following a technical track scored significantly lower
 1018 on volition [$F(2,768) = 7.43, p < .01, \eta^2 = .02$] as com-
 1019 pared to those following an academic or vocational track.
 1020 Further, similar to the Study 1 findings, age related posi-
 1021 tively to volition [$F(1,768) = 19.74, p < .001, b = .13$],
 1022 whereas it was unrelated to distance [$F(1,768) = 2.27, ns$].

1023 To further validate the two dimensions, we inspected
 1024 partial correlations with parental attachment (controlling
 1025 for age and gender). In line with our hypotheses, volition
 1026 related to less avoidant attachment ($r = -.44, p < .001$,
 1027 and $r = -.24, p < .001$, for mother and father, respec-
 1028 tively) and less anxious attachment ($r = -.46, p < .001$,
 1029 and $r = -.34, p < .001$, respectively). The second dimen-
 1030 sion related strongly to more avoidant ($r = .59, p < .001$,
 1031 and $r = .49, p < .001$, respectively) and only slightly to
 1032 more anxious attachment ($r = .13, p < .001$, and $r = .09$,
 1033 $p < .05$, respectively). These correlates further justified
 1034 the label of “distance versus proximity” for the second
 1035 dimension.

1036 Finally, through a set of hierarchical regression analy-
 1037 ses, we tested for the associations with adjustment. The
 1038 specific correlations with each of the autonomy measures
 1039 are presented in “Appendix 2”. Table 6 presents the results
 1040 of the first two steps of the regression analyses (i.e., the
 1041 effects of the control variables and the main effects of
 1042 volition and distance). Again, volition strongly related to a
 1043 higher well-being and to less problem behavior. Distance,
 1044 on the other hand, predicted less life satisfaction, more
 1045 deviant behavior and a negative behavioral conduct. Anal-
 1046 ogous to Study 1, we tested for the interaction between
 1047 distance and volition in a third step and for moderation by
 1048 age in a fourth step. However, the interaction between the
 1049 two dimensions never reached significance in the predic-
 1050 tion of any of the five outcome variables, $\Delta F(1,775)$ rang-
 1051 ing between .04 and 2.73 ($p > .05$). The fourth step was
 1052 never significant either, as $\Delta F(1,772)$ ranged between .61
 1053 and 2.45 ($p > .05$).

1054 Brief Discussion of Study 2

1055 The present findings replicated and extended the results of
 1056 Study 1. Using more autonomy-related measures, which
 1057 were all formulated with respect to the parent-adolescent
 1058 relationship, two underlying dimensions emerged again in
 1059 our sample of middle and late adolescents. Study 2 also
 1060 provided further evidence for the proposed labeling of the

second dimension, reflecting distance versus proximity. 1061
 This label was justified based on (1) the pattern of loadings 1062
 of the measures, (2) the strong positive correlations with an 1063
 avoidant attachment style, and (3) the non-significant cor- 1064
 relation with age. 1065

1066 The second aim was to investigate the link with psy-
 1067 chosocial functioning. These results were consistent with
 1068 our hypotheses and the Study 1 findings. Volition clearly
 1069 related to higher well-being, less problem behavior and a
 1070 secure attachment, whereas distance related to a somewhat
 1071 lower well-being, more problem behavior, and an insecure
 1072 (and especially avoidant) attachment relationship with the
 1073 parents. Moreover, the variables did not interact in the
 1074 prediction of the outcomes nor did age play a significant
 1075 moderating role in these associations.

1076 General Discussion

1077 As has been alluded to by other scholars (e.g., Silverberg
 1078 and Gondoli 1996; Zimmer-Gembeck and Collins 2003),
 1079 the literature on adolescent autonomy seems to suffer from
 1080 the jingle-jangle fallacy. Frequently, the term autonomy is
 1081 used as an umbrella term referring to different constructs,
 1082 each with its own definition, operationalization and assump-
 1083 tions about the role of autonomy in predicting adjustment
 1084 (cf. the jingle fallacy; Thorndike 1904). Simultaneously,
 1085 different labels are used sometimes, while in practice the
 1086 measures tap into the same underlying concept (cf. the
 1087 jangle fallacy; Kelley 1927). The present investigation
 1088 aimed at deepening our understanding of the concept and
 1089 measurement of autonomy. Therefore, we administered a
 1090 wide array of measures tapping into both healthy and dys-
 1091 functional manifestations of autonomy that were selected
 1092 from a diversity of theories and bodies of literature,
 1093 including Self-Determination Theory (Ryan and Deci
 1094 2000), Separation-Individuation Theory (Blos 1979), Psy-
 1095 chological Reactance Theory (Brehm 1966) and the theory
 1096 on depressogenic personality (Beck 1983). Our goal was to
 1097 search for the structure underlying these diverse measures
 1098 and to relate the retained dimension with age, well-being,
 1099 problem behavior, and attachment style. We found con-
 1100 sistent evidence for a two-dimensional structure, involving
 1101 the dimensions of volition versus pressure and distance
 1102 versus proximity in the parent-child relationship, which
 1103 yielded divergent associations with well-being, problem
 1104 behavior and attachment.

1105 What Is Autonomy All About?

1106 The first retained dimension could be interpreted as
 1107 “volition versus pressure”, which has been studied inten-
 1108 sively within Self-Determination Theory (Ryan and Deci

Table 6 Summary of regression analyses predicting adolescents' adjustment in Study 2

	Subjective well-being						Problem behavior			
	Self esteem		Depressive symptoms		Life satisfaction		Deviant behavior		Behavioral conduct	
	<i>b</i>	ΔR^2	<i>b</i>	ΔR^2	<i>b</i>	ΔR^2	<i>b</i>	ΔR^2	<i>b</i>	ΔR^2
Step 1		.01*		.02***		.00		.03***		.02**
Gender ^a	.10**		-.14***		.03		.16***		-.13***	
Age	.02		.07*		-.05		.10**		.02	
Step 2		.19***		.14***		.22***		.08***		.33***
Gender ^a	.16***		-.19***		.11**		.11**		-.04	
Age	-.04		.12***		-.10**		.11**		-.02	
Volition	.44***		-.38***		.41***		-.17***		.41***	
Distance	-.06		.06		-.24***		.23***		-.42***	

^a 0 = female, 1 = male. * $p < .05$; ** $p < .01$; *** $p < .001$. Standardized regression coefficients are presented

2000). This dimension involves acting upon personally endorsed values and interests, which typically is accompanied by experiences of choice, volition and psychological freedom. Pressure, by contrast, involves coercive functioning, which often is accompanied with an internal conflict and feelings of alienation from one's sense of self. In line with our expectations, volition clearly yielded beneficial correlates with adolescents' functioning as it related strongly to higher well-being, less problem behavior and a secure attachment to the parents. Further, volition also related positively with age, which indicates that, on average, older adolescents increasingly tend to experience a greater sense of psychological freedom and personal choice in their relationship with their parents.

As for the second dimension, we hypothesized that this dimension would capture adolescents' independent versus dependent functioning as this viewpoint on autonomy dominates in developmental as well as cross-cultural frameworks on autonomy (e.g., Blos 1979; Markus and Kitayama 1991; Smetana et al. 2004). Yet, the current results suggested that the second dimension could be labeled as "distance versus proximity", which involves the degree of interpersonal distance in the parent-child relationship. Several findings favored this labeling. First, the pattern of loadings of the indicators of independence was rather equivocal. For instance, even though independent decision making is considered a straightforward measure of independence (Smetana et al. 2004), it loaded equally high on both dimensions. Second, distance versus proximity related strongly to an avoidant attachment style, which is characterized by a strong desire for interpersonal distance and an avoidance of closeness and intimacy. Third, as adolescents grow older, they are supposed to function increasingly independently (Steinberg 2002). Yet, no positive association with age was obtained. Further, although independence is supposed to yield beneficial correlates when adolescents are older (cf. Smetana et al.

2004), the retained dimension did not interact with age in the prediction of our outcome variables.

As for the associations with the outcomes, distance related positively to problem behavior and an insecure attachment, while being unrelated or related negatively to well-being. Taken together, then, when predicting subjective well-being, the most pertinent question is not so much whether one maintains proximity or seeks distance in the parent-child relationship. Much more critical is the question whether one experiences a sense of volition and choice as opposed to pressure and coercion, regardless of the degree of distance versus proximity as such.

Broader Operational, Theoretical and Clinical Implications

First, the present findings raise questions about the names of certain autonomy scales, as these names might not be well capturing their intended content. For instance, the Emotional and Functional Independence subscales of the PSI (Hoffman 1984) do not seem to tap into adolescents' independent functioning as their labels suggest given their null-relationship with age and their low association with independent decision making. Instead, the current findings suggest that these measures rather assess a distant and avoidant stance towards the parents. In a similar fashion, the label of the Emotional Connectedness subscale of the MIS (Gavazzi et al. 1999) suggests that the scale measures a positive bond and a willing reliance on the parents. Although the current findings suggest that this scale assesses general feelings of loyalty and proximity to the parents as such, it remains unclear whether this proximity is willingly sought or maintained (e.g., valuing the opinion of your parents) or rather coercive in nature (e.g., driven by fear for rejection). In short, the names of some scales do not seem to match with their exact operationalization, which may create confusion in the field and hamper systematic progress.

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Hence, it seems of crucial importance to think critically about the measurement when conducting future studies on autonomy; researchers need to be cautious as there might be a gap between the label and the type of autonomy the measure actually taps in. Thus, researchers would do well to reflect critically on which aspects of autonomy they aim to tap into and select a valid measure accordingly.

Second, the present findings also shed light on what independence is all about. Independent functioning (e.g., as indicated by youth alone decision making) implies taking some distance from the parents as one is not relying upon the advice of the parents, a tendency that—on average—seems accompanied by feelings of volition and self-endorsement. This interpretation seems justified by the moderate positive loading of independent decision making on both dimensions. Thus, the present findings suggest that independence and volition are clearly distinct, yet not fully orthogonal. This finding is consistent with past work showing that an independent living situation in emerging adults is on average reflective of a volitional choice (Kins et al. 2009).

Third, the current results provide insight into the reasons why certain autonomy-related constructs relate positively or negatively to adjustment. For instance, although past research (e.g., Brenning et al. 2011a) found sociotropy (Beck 1983) to relate to maladjustment, the present results may suggest why. That is, the relationship exists not so much because sociotropy yields a focus on keeping proximity with others per se, but rather because the proximity-maintenance comes with feelings of pressure and obligation. Similarly, the likely reason why reactance (Brehm 1966) yields maladjustment is because it is characterized by a pressured and alienating form of distance seeking. So, even though reactant and oppositional behavior is oriented towards reestablishing “freedom” by means of creating distance (Brehm 1966), the present findings suggest that the very act of seeking distance is not accompanied by feelings of psychological freedom, on the contrary.

Fourth, the present findings also help to answer the question of whether autonomy and relatedness form compatible or antagonistic forces (Cooper and Grotevant 2011). Whereas distance potentially yields tension with relatedness, volition is fully compatible with relatedness. This is because when adolescents experience a strong sense of psychological freedom in the interaction with their parents, they will feel connected to them as well. Hence, the challenge for adolescents is not so much to balance their striving for independence with their striving for closeness, but rather to find ways to volitionally seek distance or to volitionally remain proximal to their parents. Similarly, the present results also emasculate the statement of certain separation-individuation theorists (e.g., Freud 1958) about interpersonal distance and even detachment being normative and necessary for adolescents. These findings rather

suggest that successful separation-individuation from the parents does not entail a physical or interpersonal movement away from the parents (Boles 1999). Much more critical is the maintenance of a sense of volition during this transformation process of the parent–child relationship.

Finally, the current studies are also clinically important, because issues regarding proximity and distance frequently form the direct or indirect basis for parent-adolescent conflicts. The present findings suggest that counselors may attend to the *qualitative* reasons why youngsters are seeking to expand their boundaries or why they remain proximal to their parents. Similarly, when rearing an adolescent, parents may want to foster volitional functioning, regardless of whether the adolescent is oriented towards increasing independence or rather wants to stay within close boundaries. Such volitional functioning can be supported through empathy, giving meaningful choice when possible and providing a rationale when choice is limited (Soenens et al. 2007).

Limitations and Suggestions for Future Research

Several limitations need to be acknowledged. First, the included autonomy measures do not encompass the full range of existing scales. It may be interesting to administer other autonomy measures along with certain measures included herein. We believe the present study provides a framework for deriving hypotheses about what aspects of autonomy a measure may tap into and about the functional role of the assessed construct. For instance, in addition to sociotropy, Beck (1983) proposed “autonomy” as a second depressogenic vulnerability factor. Within this perspective, autonomy is defined as a strong need for control and a compulsive focus on self-reliance. On the basis of the present findings, we would hypothesize this measure of autonomy to fall in the quadrant of pressured distance. Typically, developmental theorists also point to the existence of a cognitive type of independence (Zimmer-Gembeck and Collins 2003), which is defined as the capacity for independent thought (Beckert 2007). Even though the study of cognitive independence is more limited, the notion is gaining increasing attention in the developmental literature (see e.g., Lee et al. 2010). Therefore, future research should focus explicitly on this component as well as by examining how cognitive independence relates to the present model.

Moreover, the present investigation was limited to one specific context (i.e., the parent–child relationship) and a specific sample (i.e., middle and late adolescents from a Western country). One may raise the question of whether a similar underlying structure and a similar set of correlates will emerge, when changing the age category, the culture or the domain of focus. We hypothesize that, under certain conditions, correlates of the distance dimension may be different. For instance, high scores on distance may be

1285 even more detrimental in early adolescence (cf. Dishion
 1286 et al. 2004). Similarly, proximity might yield more bene-
 1287 ficial correlates in a collectivistic or relatedness-oriented
 1288 culture (Markus and Kitayama 1991) or in people with an
 1289 interdependent (vs. independent) self-construal; it might
 1290 even vary as a function of the situation (cf. Lalwani and
 1291 Shavitt 2009). However, SDT assumes volition to be a core
 1292 human need (Deci and Ryan 2000) and expects it to yield
 1293 beneficial outcomes across cultures. An explicit test of the
 1294 present model across cultures is needed, however, to truly
 1295 confirm this proposition.

1296 The present investigation also was limited to the parent-
 1297 adolescent context. However, peers also play an important
 1298 role in the development of adolescent autonomy. For
 1299 instance, Daddis (2011) recently showed that perceptions
 1300 of peers as being more independent predicted desires for
 1301 increased independence. Fuligni and Eccles (1993) showed
 1302 that restrictive and controlling parenting (which inhibits
 1303 volitional functioning) predicted an increase in a compul-
 1304 sive orientation towards peers. These findings indicate that
 1305 both worlds (i.e., autonomy in the parent and peer context)
 1306 are connected. Even more broadly, Larson (2000) and
 1307 Allen et al. (1997) discuss the ways in which youth orga-
 1308 nizations and intervention programs may influence ado-
 1309 lescents' autonomous functioning. Hence, future research
 1310 may want to document how youngsters' autonomy devel-
 1311 opment is embedded in a broader social context.

1312 A final major limitation of the present study concerns its
 1313 cross-sectional nature. Therefore, one cannot draw any
 1314 conclusions about the direction of effects regarding, for
 1315 instance, the association between volition and well-being.
 1316 A longitudinal design would allow testing for the direction
 1317 of effects between both dimensions and psychosocial
 1318 functioning. Moreover, such a design would allow inves-
 1319 tigating age-related changes in the retained dimensions as
 1320 well. Hence, longitudinal follow-ups of the present inves-
 1321 tigation seem advisable.

Conclusion

1322 Although the dynamics of adolescent autonomy have received
 1323 a lot of attention in the field of adolescent psychology, both at
 1324 the theoretical and empirical levels, few studies have been
 1325 undertaken to search for the structure underlying these diverse
 1326 measures. In our view, the current investigation represents an
 1327 important step towards the clarification of the exact meaning,
 1328 the measurement and the functional role of autonomy. Spe-
 1329 cifically, a two-dimensional structure was obtained, with the
 1330 first dimension pertaining to the degree to which adolescents
 1331 experience a sense of volition and psychological freedom or
 1332 rather pressure and coercion in the parent-child relationship,
 1333 whereas the second dimension reflected the degree of inter-
 1334 personal distance versus proximity in the parent-child rela-
 1335 tionship. We believe this two-dimensional structure represents
 a more encompassing model for the study of autonomy, which
 allows scholars to draw more accurate conclusions about the
 exact meaning and measurement of adolescent autonomy and
 counselors to gain better insight into which type of autonomy
 adolescents (fail to) display.

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 helped in the collection and interpretation of the data and in drafting
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Conflict of interest The authors declare that they have no conflict
 of interest.

Appendix 1

See Table 7.

Table 7 Correlations between autonomy measures and psychosocial functioning in Study 1

	Age	Self esteem	Depressive symptoms	Vitality	Deviant behavior	Alcohol abuse
Volition	.24***	.33***	-.19***	.21***	.03	.00
Emotional reliance	.07	.12**	-.07	.10*	-.29***	-.21***
Emotional connectedness	.03	-.06	.04	.05	-.24***	-.14***
Pressure	-.04	-.57***	.47***	-.30***	.04	.12**
Engulfment anxiety	-.13**	-.25***	.31***	-.16***	.18***	.14***
Oppositional defiance	-.09*	-.17***	.19***	-.13**	.39***	.29***
Emotional independence	.08*	-.03	.01	-.10**	.27***	.22***
Independent decision making	.25***	.09*	-.09*	.04	.16***	.17***
Volition versus pressure	.24***	.51***	-.43***	.29***	-.08*	-.09*
Distance versus proximity	.03	.00	.02	-.08*	.39***	.28***

* $p < .05$; ** $p < .01$; *** $p < .001$

1356 Appendix 2

1358 See Table 8.

Table 8 Correlations between autonomy measures and psychosocial functioning in Study 2

	Age	Self esteem	Depressive symptoms	Life satisfaction	Deviant behavior	Behavioral conduct
Volition	.09**	.27***	-.22***	.41***	-.12***	.34***
Volitional dependence	.07*	.23***	-.19***	.36***	-.19***	.44***
Emotional reliance	-.05	.25***	-.27***	.39***	-.24***	.42***
Emotional connectedness	.02	.00	.00	.14***	-.15***	.31***
Sociotropy	-.04	-.26***	.18***	-.09*	.05	-.09**
Pressure	-.08*	-.30***	.23***	-.32***	.11**	-.27***
Detachment	.03	-.42***	.36***	-.49***	.18***	-.46***
Engulfment anxiety	-.10**	-.32***	.27***	-.34***	.22***	-.45***
Reactance	-.12**	-.25***	.21***	-.26***	.28***	-.48***
Oppositional defiance	-.14***	-.14***	.13***	-.17***	.38***	-.69***
Functional independence	.07	-.10**	.10**	-.27***	.31***	-.44***
Emotional independence	.04	-.07	-.01	-.20***	.12**	-.21***
Independent decision making	.27***	.11**	-.04	.00	.22***	-.19***
Volitional independence	.08*	.16***	-.14***	.18***	-.15***	.25***
Volition versus Pressure	.14***	.41***	-.33***	.38***	-.17***	.41***
Distance versus proximity	.07	-.06	.06	-.25***	.24***	-.41***

* $p < .05$; ** $p < .01$; *** $p < .001$

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Author Biographies

Stijn Van Petegem is a PhD student at the Department of Developmental, Personality and Social Psychology at Ghent University, Belgium. He received his master in clinical psychology in 2008. His major research interests include autonomy, self-determination theory, psychological reactance, attachment and identity development.

Maarten Vansteenkiste is Professor at the Department of Developmental, Personality and Social Psychology at Ghent University, Belgium. He received his Ph.D. in 2005 from the Catholic University of Leuven. His major research interests include the study of motivation and autonomy in diverse life domains, including adolescence and parenting.

Wim Beyers is Professor at the Department of Developmental, Personality and Social Psychology at Ghent University, Belgium. He received his Ph.D. in 2001 from the Catholic University of Leuven. His major research interests include the development of autonomy, identity and sexuality in adolescence.

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