

Does General Parenting Context Modify Adolescents' Appraisals and Coping with a Situation of Parental Regulation? The Case of Autonomy-Supportive Parenting

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Abstract Theory and research suggest that adolescents differ in their appraisals and coping reactions in response to parental regulation. Less is known, however, about factors that determine these differences in adolescents' responses. In this study, we examined whether adolescents' appraisals and coping reactions depend upon parents' situation-specific autonomy-supportive or controlling communication style (i.e., the *situation*) in interaction with adolescents' past experiences with general autonomy-supportive parenting (i.e., the parenting *context*). Whereas in Study 1 ($N = 176$) adolescents' perceived general autonomy-supportive parenting context was assessed at one point in time, in Study 2 ($N = 126$) it was assessed multiple times across a 6-year period, allowing for an estimation of trajectories of perceived autonomy-supportive parenting context. In each study, adolescents read a vignette-based scenario depicting a situation of maternal regulation (i.e., a request to study more), which was communicated in either an autonomy-supportive or a controlling way. Following this scenario, they reported upon their appraisals and their anticipated coping reactions. Results of each study indicated that both the autonomy-supportive (relative to the controlling) situation and the perceived autonomy-supportive parenting

context generally related to more positive appraisals (i.e., more autonomy need satisfaction, less autonomy need frustration), as well as to more constructive coping responses (i.e., less oppositional defiance and submission, more negotiation and accommodation). In addition, situation \times context interactions were found, whereby adolescents growing up in a more autonomy-supportive context seemed to derive greater benefits from the exposure to an autonomy-supportive situation and reacted more constructively to a controlling situation.

Keywords Adolescence · Parenting · Coping · Appraisal · Autonomy · Control · Regulation

Introduction

An important part of the socialization process includes parents' regulation of their offspring's behavior. During adolescence, regulation includes parents' active involvement in setting rules, communicating expectations, and formulating requests for more appropriate behavior when transgressions occur (Barber and Xia 2013). Low or inconsistent parental regulation can create a laissez-faire climate, putting adolescents at risk for externalizing and other problems (e.g., Collins et al. 2000; Galambos et al. 2003). Recent research, however, suggests that adolescents differ strongly in their appraisals (i.e., interpretations) and reactions to specific situations of parental regulation (e.g., Kakiyama and Tilton-Weaver 2009). This type of research is important because it contributes to a better understanding of children's and adolescents' active roles in shaping their own socialization (cf. Kuczynski 2003; Soenens et al. 2015).

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Thus, it can be expected that adolescents' appraisals and reactions to a situation of parental regulation may depend upon (a) parents' (autonomy-supportive vs. controlling) communication style (or, more briefly, the *situation*), (b) the perceived general autonomy-supportive parenting context (or, more briefly, the *context*), as well as (c) the interaction between situation and context.

According to self-determination theory (SDT; Ryan and Deci 2000), one important determinant of adolescents' interpretations and reactions to a specific parenting situation is the quality of parents' communication style, which refers to the way in which rules and regulations are expressed and discussed (e.g., Vansteenkiste et al. 2005). Thereby, SDT especially underscores the importance of distinguishing between an autonomy-supportive and a controlling communication style. An autonomy-supportive communication style involves encouraging adolescents to reflect upon and act in ways consistent with their personally endorsed goals and values (Grolnick et al. 1997; Soenens et al. 2007). In the context of parental regulation and rule-setting, autonomy-supportive strategies involve being empathic towards the child, offering choice about how expectations can be met, being curious why children would refrain from sticking to rules, and providing a meaningful rationale for rules and requests. In contrast, a controlling communication style involves the use of coercion and intrusion, where parents pressure children to behave, feel, or think in ways prescribed by the parents (Grolnick 2003; Soenens and Vansteenkiste 2010; Zimmer-Gembeck et al. 2011). Controlling strategies for parental regulation include guilt induction, power assertion, conditional parental regard, and threatening with punishment (e.g., Assor et al. 2004; Rowe et al. 2015; Vansteenkiste et al. 2005). Although debate exists about whether an autonomy-supportive and a controlling style are orthogonal dimensions or rather opposite ends of one dimension, research suggests that a controlling style largely is incompatible with an autonomy-supportive style, when autonomy support is defined as the encouragement of children's self-endorsed functioning (Soenens and Vansteenkiste 2010; Soenens et al. 2009).

Parents' situation-specific communication style is likely to play a role in how adolescents appraise and cope with parents' attempts at regulating their behavior. According to SDT (Ryan and Deci 2000; Vansteenkiste and Ryan 2013), an autonomy-supportive style contributes to the satisfaction of adolescents' basic psychological need for autonomy; that is, when parents use an autonomy-supportive communication style, adolescents would be more likely to experience a sense of volition and psychological freedom in their actions. In the context of parental regulation, adolescents then would be more likely to feel that following their parents' rules is a personal choice and that the parental request is consistent with their personally endorsed values and interests. In

contrast, a controlling style would frustrate the need for autonomy (Soenens and Vansteenkiste 2010). That is, adolescents then would feel pressured to behave, feel or think in a non-desired way. Previous research in the parenting context as well as in different domains (e.g., focusing on teacher communication styles) supports this notion (e.g., Chen et al. 2016; Reeve and Jang 2006; Van Petegem et al. 2015; Vansteenkiste et al. 2004).

Moreover, parents' situation-specific communication style not only may affect adolescents' appraisals of the situation, but also how they would respond to (or cope with) the situation. As parental regulation involves a potential threat to adolescents' autonomy, four types of coping reactions are relevant (Skinner et al. 2003; Skinner and Zimmer-Gembeck 2007). First, one may react through *oppositional defiance*, which is a maladaptive response that involves a blunt rejection of the parental rule and a tendency to simply disregard the request (Deci and Ryan 1985; Vansteenkiste et al. 2014). *Submission* is a second maladaptive way of responding, and involves ruminating about the situation and rigidly obeying the demand, thereby suppressing one's own personal preferences (Skinner and Edge 2002; Zimmer-Gembeck and Skinner 2011; see also Nolen-Hoeksma 1998). Apart from these two maladaptive coping responses, two adaptive reactions are discerned as well. *Accommodation* refers to the flexible adjustment of one's own goals and priorities, for instance by cognitively restructuring the demand, by accepting the constraining situation or by focusing on more important goals (Brandtstädter and Rothermund 2002; Compas et al. 2001; Morling and Evered 2006). Finally, *negotiation* involves the constructive articulation of disagreement by engaging in a dialogue with the parent, as to create a situation where a consensus can be reached between the external request and one's personally endorsed goals (Skinner and Edge 2002; Parkin and Kuczynski 2012).

As previous research suggests, parents' controlling communication style would relate to both more oppositional defiance (e.g., Chen et al. 2016; Van Petegem et al. 2017) and more submission (e.g., Assor and Tal 2012; Baudat et al. 2016) with regard to the parental request. By contrast, when parents communicate a request in an autonomy-supportive way, adolescents would be more likely to willfully adopt and accommodate to the parental request (Grolnick 2003; Vansteenkiste et al. 2014). However, adolescents' appraisals and coping reactions not only would be function of the characteristics of the specific situation, but they also would depend upon the more general parenting *context* in which they have been raised (Skinner and Edge 2002; Zimmer-Gembeck and Skinner 2016). In this regard, Darling and Steinberg (1993) asserted that the general parenting style (i.e., the emotional climate in which the parent's behaviors are expressed) functions as a

contextual factor that influences (i.e., moderates) the relationship between more specific parenting practices and specific outcomes. Similarly, Kuczynski (2003) argued that parent–child interactions need to be considered in the context of the parent–child relationship history. In other words, the accumulated history of interactions between parent and child has implications for how one interprets a new specific situation that occurs between a parent and his/her offspring, and how each understands a singular event and responds to it. This reasoning is consistent with a central tenet of symbolic interactionism (Blumer 1969; Mead 1934; see also Kuczynski 2003), according to which specific situations are given meaning against the background of the larger social context in which the situation is embedded.

Specifically with regard to situations of parental regulation, one may argue that when adolescents' parenting context has been generally autonomy-supportive, adolescents will be more sensitive to a new specific autonomy-supportive interaction and would derive a relatively greater degree of autonomy need satisfaction from this situation. By contrast, when the parenting context has been generally controlling for adolescents, they may be more sensitive for cues of control, thereby interpreting a controlling situation as more pressuring and experiencing more autonomy need frustration (Moller et al. 2010). Technically, this reasoning implies moderation, where the positive effects of an autonomy-supportive situation are more pronounced among adolescents who grew up in an autonomy-supportive parenting context (i.e., a situation \times context interaction). A number of recent social-psychological studies on relatedness frustration provided indirect evidence for the hypothesis of a situation \times context interaction. Vanhalst et al. (2015), for instance, found that a history of relatedness frustration impacted responses to new interpersonal experiences. Specifically, they found that chronically lonely adolescents (who experienced repeated relatedness frustration in the past) were hypersensitive to new situations of social exclusion (i.e., they experienced more negative emotions) and hyposensitive to situations of social inclusion (i.e., they experienced less positive emotions). Moller et al. (2010) found that the more university students experienced relatedness satisfaction in their lives, the more they benefitted from new social encounters (i.e., they derived more need satisfaction from these encounters). Both studies demonstrate that individuals' history with need-based experiences affects their sensitivity to new needs-relevant situations, such that a history of need satisfaction increases individuals' sensitivity to the positive effects of a new need-satisfying event.

Alternatively, one might also argue that adolescents growing up in a more controlling environment would be more sensitive to the positive effects of an autonomy-supportive situation. An autonomy-supportive interaction

would be more novel to them as it would stand in contrast with their previous experiences and they therefore would be disconfirmed in their expectancies about the situation, which would come as a "pleasant surprise" (see Gurland et al. 2012; Oliver 1993). Also, adolescents growing up in a more controlling environment would be in greater desire of autonomy need satisfaction and may, as such, benefit more from an autonomy-supportive situation. Indirectly supporting such reasoning, Radel et al. (2011) found that the deprivation of autonomy increased individuals' sensitivity for cues related to autonomy satisfaction (i.e., it instigated a tendency to approach cues related to autonomy satisfaction and to avoid cues related to autonomy frustration). Extending this reasoning, one might expect that when adolescents grow up in a generally controlling familial context (and experienced long-term deprivation of their need for autonomy), they might be more sensitive for the positive effects of a new autonomy-supportive situation and therefore may appraise it in a more positive fashion.

Finally, the general parenting context may play a role in how adolescents cope with a specific situation of parental regulation. This is because parents play an important role in the socialization of children's coping, for instance through coaching and modeling mechanisms (e.g., Kliewer et al. 1994; Power 2004; Skinner and Wellborn 1994). Indeed, research has shown that adolescents growing up in generally supportive families use more constructive coping strategies (e.g., Seiffge-Krenke and Pakalniskiene 2011; Zimmer-Gembeck and Locke 2007). Hence, adolescents growing up in an autonomy-supportive family context likely respond more often with negotiation or accommodation, and less often with oppositional defiance or submission. Indeed, even in a situation where the parent would use a controlling communication style, adolescents growing up in a generally more autonomy-supportive context would have developed the necessary social skills and would have experienced sufficient safety in the past to negotiate under these circumstances (see Miklikowska et al. 2011); or, alternatively, these adolescents would accommodate, as they would be better able to see the underlying reasons or well-meant intentions of the parents' regulation, regardless of the way how it is communicated (Skinner and Edge 2002). Adolescents who grew up in a controlling parenting context, by contrast, may see any request for regulation as highly demanding and may lack the resources to deal adequately with such a situation; hence, these adolescents would rather engage in oppositional defiance and/or submission—especially when the request is communicated in a controlling way (Skinner and Edge 2002).

In two studies, we aimed at examining differences in adolescents' appraisals and coping with a situation of parental regulation, that is, a situation involving a parental

demand to study more for school. We tested whether their appraisals and coping responses depend upon the situation (i.e., an autonomy-supportive vs. controlling situation), the general perceived autonomy-supportive parenting context, and the interaction between situation and context. First, we expected that adolescents' appraisals and coping responses would depend on the situation-specific communication style. Specifically, in response to the controlling (as opposed to the autonomy-supportive) situation, adolescents would report more perceived parental control and autonomy need frustration and less perceived parental autonomy support and autonomy need satisfaction. In addition, in the controlling situation, we expected adolescents to react more often through maladaptive coping (i.e., oppositional defiance, submission) and less often through adaptive coping (i.e., negotiation, accommodation). Second, we expected that adolescents' general perceptions of an autonomy-supportive parenting context would have a main effect on their appraisals and their coping responses, such that adolescents growing up in a generally more autonomy-supportive family would report more benign appraisals and more constructive coping. Finally, we also tested whether the perceived general parenting context moderated the relation between the situation-specific communication style and adolescents' appraisals and coping reactions.

Study 1

Method

Participants

The participants were 176 Belgian adolescents, ranging in age between 14 and 17 years (mean = 15.7 years, 55% girls). Most adolescents came from intact two-parent families (83%) or divorced families (15%), with the remaining adolescents reporting that one of the parents had deceased (2%). Further, 67% of the participants followed an academic track, 25% followed a technical track, 5% followed a vocational track, and 2% followed arts education. As for maternal highest educational degree, 1% of the mothers had completed elementary school, 41% completed secondary school, 40% attained a bachelor's degree, and 16% had a master's degree. Information about educational level was missing for 2% of the mothers.

Procedure

Data were gathered by undergraduate students in the context of a course on developmental psychology in return for course credits. In a 1.5-hour session, the undergraduate students were explained about the goal of the study and

about the recruitment procedures in order to ensure standardization of the procedure. Specifically, they were asked to search for two families (no relatives or close friends) who were willing to take part in the study, and to visit the families at home. Students explained the purpose of the study, emphasized the voluntary nature of participation, and guaranteed confidential treatment of the data. Parents and the participating adolescents signed an informed consent. The adolescents filled out a number of general questionnaires, including a measure of perceived autonomy-supportive parenting context. While participants were filling out the questionnaires, the undergraduate students remained present to provide assistance if needed. A few days later, students visited the families again. During this meeting, the participants first read a vignette depicting a hypothetical situation. Previous research has shown the utility and the relevance of using a vignette-based approach for studying adolescents' interpretations of parent–adolescent interactions (e.g., Kakihara and Tilton-Weaver 2009; Pomerantz and Eaton 2000). Specifically, such an approach allows for the presentation of a situation in a detailed, context-specific and standardized way, and therefore is deemed as a valid methodology for studying participants' interpretations of a situation (e.g., Alexander and Becker 1978; Torres 2009). As in previous research (e.g., Kakihara and Tilton-Weaver 2009), the vignette depicted a hypothetical interaction between a mother and an adolescent, and participants were instructed to imagine that they were in the situation. Specifically, participants first read a description of a situation where an adolescent comes home from school with poor grades. This situation was followed by a maternal reaction involving a request to study more, which was formulated either in an autonomy-supportive way (e.g., showing empathy, providing a rationale for the request) or in a controlling way (e.g., shaming, coercive language; Grolnick 2003; Soenens and Vansteenkiste 2010). Extensive information about the development and the validity of the vignettes, as well as the materials as such, are provided by Van Petegem et al. (2015). Adolescents were randomly assigned to either the autonomy-supportive ($N = 87$) or the controlling ($N = 89$) condition. After reading the situation, participants filled out the questionnaires on their appraisals and anticipated coping reactions in the situation.

Measures

All items had five response options, ranging from 1 (“Completely not true”) to 5 (“Completely true”).

Perceived autonomy-supportive parenting context

Adolescents filled out a questionnaire tapping into their general perceptions of maternal autonomy-supportive (vs.

psychologically controlling) parenting. Specifically, participants were administered two often-used questionnaires, that is, the 7-item Autonomy Support subscale of the Perceptions of Parents Scale (POPS; Grolnick et al. 1991; e.g., “Whenever possible, my mother allows me to choose what to do”) and the 8-item Psychological Control Scale of Barber (1996; e.g., “My mother is less friendly to me if I don’t see things like she does”). There was a strong negative correlation between both scales ($r = -.62$, $p < .001$). Therefore, as in previous research (e.g., Soenens et al. 2009), the latter items were reverse-coded as to create a reliable index of perceived autonomy-supportive vs. controlling parenting ($\alpha = .83$).

Perceived parental autonomy support and parental control

After reading the situation, adolescents reported upon the degree to which they would perceive their mother as being autonomy-supportive or controlling in the described situation. Perceived parental autonomy support was assessed through four adjusted items of the Autonomy Support subscale of the POPS (Grolnick et al. 1991), adapted to the context of the hypothetical situation (e.g., “If my mother would react like this, I would feel like she allows me to decide things for myself”, $\alpha = .85$). Perceived parental control was assessed through four items from the PCS (Barber 1996), which were also adapted to the described situation (e.g., “If my mother would react like this, I would feel like she is disappointed in me”, $\alpha = .86$).

Autonomy need satisfaction and frustration

Participants reported upon the degree to which they would experience satisfaction or frustration of their basic psychological needs in the situation. This was done through an adapted version of the 24-item basic psychological need satisfaction and frustration scale (BPNSFS; Chen et al. 2015), which taps into satisfaction and frustration of the need for autonomy, relatedness, and competence (Chen et al. 2015). As our study focused specifically on the issue of adolescent autonomy, we only used the subscales assessing autonomy satisfaction and autonomy frustration. Four items tapped into adolescents’ experienced autonomy need satisfaction (e.g., “If my mother would react like this, I would experience a sense of choice and freedom”), and four items tapped into adolescents’ autonomy need frustration (e.g., “If my mother would react like this, I would feel forced to do things I wouldn’t choose to do”). Both subscales were found to be reliable ($\alpha = .88$ and $.86$, for autonomy need satisfaction and autonomy need frustration, respectively).

Anticipated coping

Adolescents reported on how they would cope with the described situation. Oppositional defiance was assessed through a recently developed 4-item scale (Vansteenkiste et al. 2014; e.g., “I would rebel against the request of my mother”; “I would simply disregard the request”). The scale was found to be reliable ($\alpha = .85$). Adolescents’ inclination towards negotiation was assessed through an adapted version of the negotiation subscale of the child coping questionnaire (CCQ; Finnegan et al. 1998; Ojanen and Perry 2007). The scale included five items (e.g., “I would explain my mother how I think about it”; “I would try to come to a good agreement with my mother”) and was found to be reliable as well ($\alpha = .84$).

Data Analysis

Before examining the main research questions, we tested the role of gender and age by performing a MANCOVA with gender as a fixed factor, age as a covariate, and the variables of interest as dependent variables. Our main analyses involved a series of regression analyses. Specifically, we examined the main effect of the situation (coded as 0 = controlling situation and 1 = autonomy-supportive situation), the main effect of perceived autonomy-supportive parenting context, and the interaction between both, in the prediction of each of the adolescents’ appraisals and coping responses. We standardized all predictors and created interaction terms by multiplying the standardized terms. When interactions were significant, a simple slope test was used to examine the significance of the slopes under conditions of high levels (+1SD) and low levels (−1SD) of the moderator (Cohen et al. 2003; Dawson 2014).

Results

Table 1 presents descriptive statistics and correlations between the variables of interest. The multivariate effects of gender and age were not significant [$F(6166) = 1.09$, *ns*, for gender; $F(6166) = .83$, *ns*, for age]. Results of the hierarchical regression analyses are presented in Table 2. As for the prediction of adolescents’ appraisals, adolescents in the autonomy-supportive situation, relative to those in the controlling situation, perceived the mothers’ request as more autonomy-supportive and less controlling, and anticipated experiencing more autonomy need satisfaction and less autonomy need frustration. Moreover, there also was a significant main effect of perceived general autonomy-supportive parenting context on adolescents’ appraisals in the described situation. Specifically, adolescents who reported growing up in a more autonomy-supportive

Table 1 Means, standard deviations and correlations among the variables of study 1

| | Mean | SD | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--|------|------|---------|---------|---------|---------|---------|--------|-------|
| 1. Situation ^a | 0.49 | 0.50 | | | | | | | |
| 2. Context ^b | 3.74 | 0.53 | .03 | | | | | | |
| 3. Perceived parental autonomy support | 2.98 | 1.00 | .66*** | .17* | | | | | |
| 4. Perceived parental control | 2.74 | 1.02 | -.64*** | -.29*** | -.74*** | | | | |
| 5. Autonomy need satisfaction | 2.82 | 0.97 | .67*** | .20** | .78*** | -.76*** | | | |
| 6. Autonomy need frustration | 3.02 | 0.92 | -.61*** | -.25** | -.68*** | .76*** | -.75*** | | |
| 7. Oppositional defiance | 2.07 | 0.85 | -.20** | -.24** | -.36*** | .43*** | -.36*** | .34*** | |
| 8. Negotiation | 3.82 | 0.72 | -.13 | .25** | -.02 | .11 | -.09 | .10 | -.17* |

^a 0 = controlling situation, 1 = autonomy-supportive situation

^b Context = Perceived autonomy-supportive parenting context

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

Table 2 Situation and perceived parenting context as predictors of adolescents' appraisals and coping (study 1)

| | Appraisal | | | | Coping | |
|----------------------------|-------------------------------------|----------------------------|----------------------------|---------------------------|-----------------------|-------------|
| | Perceived parental autonomy support | Perceived parental control | Autonomy need satisfaction | Autonomy need frustration | Oppositional defiance | Negotiation |
| $F(3, 173)$ | 51.54*** | 54.99*** | 55.65*** | 41.61*** | 6.59*** | 6.63*** |
| Situation ^a | .66*** | -.64*** | .67*** | -.60*** | -.20** | -.15* |
| Context ^b | .15** | -.27*** | .18** | -.23*** | -.23** | .25** |
| Situation \times Context | .14* | -.05 | .10 | .00 | .09 | -.15* |
| Adjusted R^2 | .47 | .48 | .49 | .41 | .09 | .09 |

^a 0 = controlling situation, 1 = autonomy-supportive situation

^b Context = Perceived autonomy-supportive parenting context

* $p < .05$. ** $p < .01$. *** $p < .001$. Standardized regression coefficients are presented

parenting context reported more perceived situational autonomy support and less perceived parental control, and they anticipated experiencing more autonomy need satisfaction and less autonomy need frustration in the hypothetical situation. Finally, the interaction between situation and context was significant in the prediction of perceived parental autonomy support. Follow-up analyses indicated that the association between situation-specific communication style and perceived situational autonomy support was stronger among adolescents reporting higher levels of perceived general autonomy support ($b = .80$, $t(172) = 10.28$, $p < .001$), as compared to those reporting lower levels of perceived general autonomy support ($b = .52$, $t(172) = 6.71$, $p < .001$; see also Fig. 1a). In other words, adolescents perceived most parental autonomy support when they were in the autonomy-supportive situation and grew up in a highly autonomy-supportive family context.

As for the coping response of oppositional defiance (see Table 2), it was found that adolescents in the autonomy-supportive, relative to the controlling, situation reported less oppositional defiance. Also as expected, adolescents who

reported growing up in a context that was more autonomy-supportive reported less oppositional defiance in the situation. Context and situation did not interact in the prediction of oppositional defiance. The pattern was somewhat different for negotiation. Whereas adolescents in the autonomy-supportive (relative to the controlling) situation reported less negotiation, they reported more negotiation when perceiving their general parenting context as being more autonomy-supportive. More importantly, the interaction between situation and context was significant. As can be seen in Fig. 1b, there only was a difference in negotiation between the two situations when adolescents perceived their parenting context as highly autonomy-supportive ($b = -.22$, $t(172) = -2.80$, $p < .01$). The relation between communication style condition and negotiation was non-significant among adolescents reporting low levels of perceived general autonomy support ($b = .00$, $t(172) = .01$, ns). In other words, adolescents reported only reported higher levels of negotiation when they were in the controlling situation and grew up in a highly autonomy-supportive family.

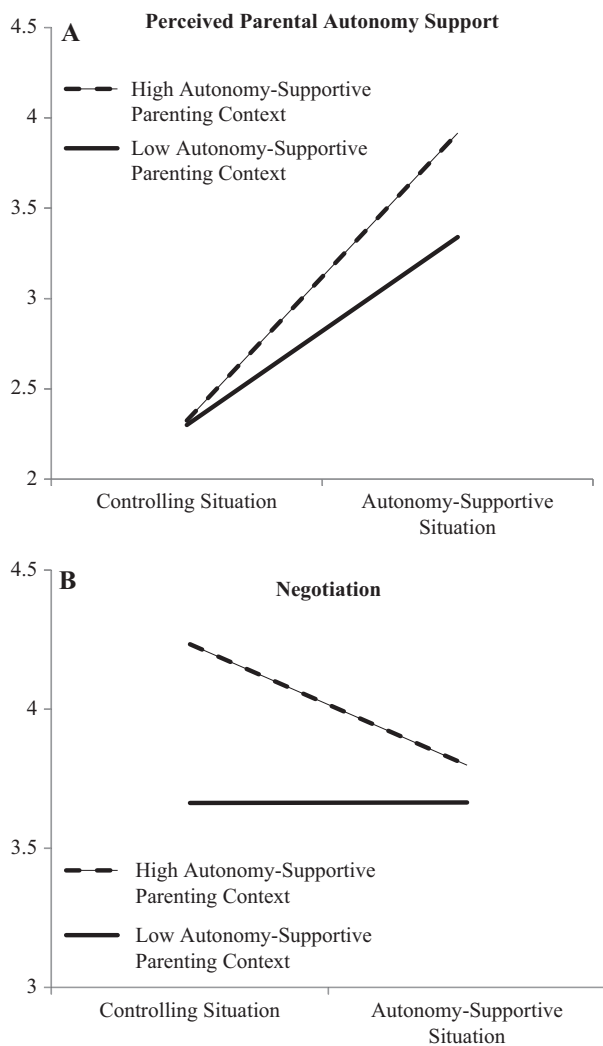


Fig. 1 Interaction between situation and perceived parenting context in the prediction of perceived parental autonomy support (a) and negotiation (b) for Study 1

Discussion

Study 1 provides insight into the question why adolescents differ in their appraisals and anticipated coping in response to a parental request to study more, thereby pointing to the role of situational characteristics (i.e., parents' situation-specific communication style) as well as the perceived general parenting context (i.e., whether they generally experience their mother as autonomy-supportive). In line with previous work on the effects of an autonomy-supportive as opposed to a controlling communication style (e.g., Vansteenkiste et al. 2005), adolescents in the autonomy-supportive situation clearly reported more positive appraisals, relative to those in the controlling situation: they perceived more parental autonomy support and less parental control and anticipated experiencing more

autonomy need satisfaction and less autonomy need frustration. Moreover, adolescents in the controlling situation reported more oppositional defiance and negotiation, supporting the assumption that these coping reactions are especially salient when adolescents' feelings of autonomy are threatened (cf. Skinner and Edge 2002; Skinner et al. 2003). Such findings are congruent with recent research showing that autonomy deprivation may motivate people to engage in behaviors to restore their thwarted autonomy (e.g., Radel et al. 2011; Sheldon and Gunz 2009; van Prooijen 2009). Interestingly, whether these restorative behaviors were adaptive (i.e., negotiation) or maladaptive (i.e., oppositional defiance) was largely function of the perceived parenting context in which the adolescent is raised. Indeed, as the situation \times context interaction suggests, it is only when adolescents perceive their mother as generally autonomy-supportive that they are inclined to engage in negotiation when facing a controlling communication style in a specific situation. By contrast, adolescents growing up in an autonomy-suppressing context generally were inclined to react through oppositional defiance in reaction to both an autonomy-supportive and controlling communication of a specific request. These findings confirm that an autonomy-supportive family context might foster the development of adolescents' constructive coping skills (Kliewer et al. 1994; Power 2004; Zimmer-Gembeck and Skinner 2016).

Finally, adolescents' general perceptions of the parenting context also played an important role in the prediction of adolescents' appraisals of the specific situation. That is, adolescents perceiving their parenting context as generally autonomy-supportive also tended to appraise the situation in a more benign fashion. Interestingly, we also obtained evidence for one situation \times context interaction, indicating that adolescents from a perceived general autonomy-supportive parenting context especially appraised the autonomy-supportive situation as more autonomy-supportive, indicating that they are more sensitive to novel need-supportive interactions (Moller et al. 2010). Stated differently, it seems that adolescents growing up in an autonomy-suppressing (i.e., controlling) family context have become relatively less sensitive to the potential benefits of new need-satisfying events (e.g., Radel et al. 2011; Sheldon 2011). However, a longitudinal design is needed to truly examine whether adolescents' history of socialization colors new interactions.

Study 2

Although informative, the first study has two major limitations, which we aimed to overcome in Study 2. First, Study 1 relied on a cross-sectional assessment to evaluate

adolescents' perceived general autonomy-supportive parenting context. However, it is said that the *enduring* character of the parent-adolescent relationship is essential to understand more fully the dynamics of parent-child interactions (Kuczynski 2003). Similarly, in past research examining the effects of the short-term (or acute) vs. long-term (or enduring) frustration of one's basic psychological needs, the enduring experience to need frustration especially was found to be detrimental for one's functioning and instigated the process of desensitization (e.g., Radel et al. 2011; Vanhalst et al. 2015). Hence, Study 2 relied upon 4-wave longitudinal data—spanning 6 years—to chart adolescents' long-term history of perceived autonomy-supportive parenting. Thereby, we used a person-centered approach (i.e., latent class growth analysis, LCGA; Nagin 2005) in order to distinguish different trajectories of perceived general autonomy-supportive parenting context. This approach, where general perceptions of parenting context are assessed multiple times in vivo, helps to overcome problems (e.g., recall bias) associated with one-shot retrospective measures. In addition, doing so allowed us to differentiate adolescents' potentially periodic experiences of autonomy-supportive (vs. psychologically controlling) parenting from their *accumulated history* of experiences of autonomy-supportive parenting. Second, Study 1 assessed only two possible coping reactions, that is, oppositional defiance and negotiation. However, according to Skinner and colleagues (Skinner et al. 2003; Skinner and Edge 2002), people also may respond through submission or through accommodation when confronted with a threat to their autonomy. Therefore, all four coping reactions were assessed at Wave 4 of Study 2. Also, Study 2 made use of a within-person design rather than a between-person design, such that adolescents read both the controlling and the autonomy-supportive situation. The advantage of a within-person approach is the increased power of the design as well as a reduction of possible error caused by naturally occurring variance between groups. Moreover, by counterbalancing the order of presentation, possible order effects can be tested and taken into account (see e.g., Charness et al. 2012).

Method

Participants

The sample consisted of 127 adolescents (59.8% girls) who had participated in a four-wave longitudinal study. Participants were retained for this study if they had participated at Time 4 (T4), because the hypothetical vignettes were only administered at T4. In total, 56 adolescents (44.1%) participated at all four waves, 48 adolescents (37.8%) at three of the four waves, 19 adolescents (15%) at two of the four

waves, and 4 adolescents (3.1%) at one wave. Little's (1988) MCAR-test indicated that data were likely missing at random ($\chi^2(404) = 403.99, ns$), and therefore were treated through the full information maximum likelihood (FIML) procedure. At Time 1 (T1), the mean age of the participants was 12 years ($SD = 1.7$). The following three waves took place 1 year (T2; mean age = 13.1 years), 4 years (T3; mean age = 16 years), and 5.5 years (T4; mean age = 17.4 years) after Wave 1. Most adolescents came from intact two-parent families (87%). The remaining adolescents reported coming from divorced families (9%), having one of the parents deceased (2%), or had another family constellation (2%). Almost all participants were students, either at high school (60%), university or college (37%), or another type of education (2%).

Procedure

As in Study 1, participants were recruited in the context of a course on developmental psychology. At T1, students visited a family with a child between 8 and 14 years. Parents and the child signed an informed consent, and confidential treatment of the data was guaranteed. Then, the child filled out a number of questionnaires, including a measure of perceived autonomy-supportive parenting. For the following waves, the families were invited by phone to participate in the study. Upon their agreement, questionnaires were sent by regular mail and a stamped envelope was provided such that completed questionnaires could be sent back. At T4, adolescents not only filled out the general parenting questionnaire, but they also read the two hypothetical vignettes of Study 1, which were presented in a random order. After reading each of the vignettes, they filled out the situational questionnaires (assessing need satisfaction and frustration and anticipated coping) in response to each specific situation.

Measures

All items had five response options, ranging from 1 ("Completely not true") to 5 ("Completely true").

Perceived autonomy-supportive parenting context

At each point in time, we used the same questionnaires as in Study 1 to assess general perceived maternal autonomy-supportive and psychologically controlling parenting. As in Study 1, both scales correlated highly negatively (r -values ranging between $-.59$ and $-.75$, all $ps < .001$) and therefore were combined. Reliabilities ranged between $.79$ and $.91$.

Situational autonomy need satisfaction and frustration

After reading each scenario, participants reported upon the degree to which they would experience need satisfaction and need frustration in that described situation. As in Study 1, we used the questionnaire developed by Chen et al. (2015). Because of length reasons, we shortened the questionnaire, such that six items assessed need satisfaction (with two items for each need) and six items assessed need frustration (also with two items for each need). To select the items, we first performed a principal component analysis (PCA) on the data of Study 1, and then selected the highest loading items. As in Study 1, we only used the subscales assessing autonomy satisfaction and autonomy frustration. Reliabilities for autonomy need satisfaction were .86 and .94, for the autonomy-supportive situation and for the controlling situation, respectively, and .73 and .83 for autonomy need frustration.

Anticipated coping

After reading each scenario, adolescents also reported on how they would cope with the described situation. We used the same scales as in Study 1 to measure oppositional defiance and negotiation. Further, a recent 7-item scale was used to assess whether adolescents would react through submission (Baudat et al. 2016; cf. Skinner and Zimmer-Gembeck 2007), that is, by giving up the personal preferences, rigidly obeying to the demand, and ruminating about the situation (e.g., “I would find it difficult to think about something else”; “I would comply submissively”). Finally, we assessed whether adolescents would respond through accommodation, which pertains to flexibly adjusting one’s own goals and priorities, for instance, by accepting the current constraining situation or focusing on more important goals (Heckhausen 1997; Skinner and Edge 2002). This scale consisted of six items, which were based upon items from the secondary control subscales of the responses to stress questionnaire (Connor-Smith et al. 2000) and the Acceptance subscale of the cognitive emotion regulation questionnaire (Garnefski and Kraaij 2006; e.g., “I would think by myself it is not such a big deal to do once what she asks”; “I would try to understand that my mother actually has well-meant intentions”). Reliabilities were, for the autonomy-supportive and the controlling situation, respectively, .86 and .88 for oppositional defiance, .86 and .85 for submission, .90 and .91 for negotiation, and .76 and .79 for accommodation.

Data analysis

Before testing the main research questions, we examined whether order of presentation affected participants’

responses, using a repeated measures (RM) MANOVA, with order as a between-subject factor, situation (autonomy support vs. control) and the order \times situation interaction as within-subject factors, and the variables of interest as dependent variables. Then, we tested for gender and age differences through two separate RM MANCOVAs. In the first RM analysis, we added the four measurements of perceived autonomy-supportive parenting context as dependent variables, and gender as a between-subject factor, age as a between-subject covariate, and time point, and the time \times gender interaction and time \times age interaction as within-subject factors. In the second RM analysis, we added the appraisals (i.e., autonomy need satisfaction and frustration) and the coping reactions (i.e., oppositional defiance, submission, negotiation, accommodation) as dependent variables, and gender as a between-subject factor, age as a between-subject covariate, and situation (autonomy-supportive vs. controlling communication style), and the situation \times gender interaction and situation \times age interaction as within-subject factors.

In order to test our main hypotheses, we first performed LCGA using Mplus 7.00 (Muthén and Muthén 2012) as to identify different parenting context trajectories. Intercepts and slopes were modeled using the four measurements of perceived general autonomy-supportive parenting. Factor loadings of the intercepts were set to 1, and factor loadings for the slopes corresponded with the time interval (i.e., 0 at T1, 1 at T2, 4 at T3, and 5.5 at T4). We used several criteria to decide upon the number of classes. The Bayesian information criterion (BIC) for a solution with k classes should be at least ten points lower than for a solution with $k-1$ classes (Kass and Raftery 1995). Classification accuracy was assessed by entropy (E), with values greater than .70 indicating accurate classification (Reinecke 2006). Finally, the bootstrap Lo-Mendell-Rubin Test (Nylund et al. 2007) provides a p -value, which indicates whether there is a statistically significant improvement in fit, when including an additional class.

Then, we tested for the role of situation-specific communication style and of perceived general parenting context in the prediction of adolescents’ appraisals and coping reactions. We performed two RM MANOVAs (for appraisal and for coping separately), with parenting context trajectory as a between-subject factor and with situation (autonomy-supportive vs. controlling communication style) and the situation \times context interaction as within-subject factors.

Results

The RM MANCOVA that tested for possible ordering effects indicated no significant multivariate main effects of ordering [$F(6120) = 1.42, ns$], nor for an interaction with

situation [$F(6120) = .41, ns$]. Then, we tested for gender and age differences in perceived general autonomy-supportive parenting. This RM MANCOVA also yielded no significant multivariate main effects of gender [$F(1124) = .16, ns$], age [$F(1124) = .08, ns$], or time point [$F(3122) = 2.31, ns$], nor were the interactions significant [$F(3122) = .63, ns$, for time \times gender; $F(3122) = 1.93, ns$, for time \times age]. The second RM MANCOVA focused on gender and age differences in adolescents' appraisal and coping, thereby taking the within-subject variable situation into account. The analysis yielded no multivariate main effects of gender [$F(6119) = 1.90, ns$] or age [$F(6119) = 1.78, ns$]. Further, the interaction between situation and age was not significant either [$F(6119) = .35, ns$], but the interaction with gender was [$F(6119) = 2.74, p < .05, \eta^2 = .15$]. Subsequent univariate analyses indicated that the interaction was significant in the prediction of autonomy satisfaction [$F(1124) = 4.41, p < .05, \eta^2 = .04$], autonomy frustration [$F(1124) = 12.30, p < .001, \eta^2 = .11$] and submission [$F(1124) = 12.31, p < .001, \eta^2 = .11$]. Specifically, whereas in the autonomy-supportive situation, boys had similar scores as girls for autonomy satisfaction ($M_{\text{boys}} = 3.79$ vs. $M_{\text{girls}} = 3.77$) and slightly higher scores for autonomy frustration ($M_{\text{boys}} = 2.49$ vs. $M_{\text{girls}} = 2.20$), the opposite pattern was obtained in the controlling situation, with girls scoring lower than boys for autonomy satisfaction ($M_{\text{boys}} = 2.04$ vs. $M_{\text{girls}} = 1.56$) and higher for autonomy frustration ($M_{\text{boys}} = 3.46$ vs. $M_{\text{girls}} = 3.95$). Further, whereas boys and girls scored similarly for submission in the autonomy-supportive situation ($M_{\text{boys}} = 1.90$ vs. $M_{\text{girls}} = 1.86$), girls scored clearly higher on submission in the controlling situation ($M_{\text{boys}} = 2.35$ vs. $M_{\text{girls}} = 2.85$). Given these findings, gender was retained as a control variable in subsequent analyses.

Results of the LGCA estimations with 2–4 classes are presented in Table 3. Each of the selection criteria indicated that a three-class solution was most appropriate. Table 3 also presents intercepts and slopes for the classes. The first class ($N = 65$; 51%) was characterized by high initial levels of perceived general autonomy-supportive parenting context, which further increased across time, and therefore was labeled as a *high-increasing (HI) trajectory*. The second class ($N = 53$; 42%) was labeled as a *moderate-stable (MS) trajectory*, as it displayed moderate levels of perceived autonomy support, remaining stable across time. Finally, a small subgroup ($N = 9$; 7%) had relatively low initial levels for perceived general autonomy-supportive parenting context, which further decreased across time. This class was labeled as the *low-decreasing (LD) trajectory*. The trajectories are graphically displayed in Fig. 2.

As for the first RM MANOVA, predicting adolescents' appraisals, we found multivariate effects for situation [$F(2123) = 95.25, p < .001, \eta^2 = .61$], for context trajectory [$F(4246) = 2.55, p < .05, \eta^2 = .04$], and for the situation \times context interaction [$F(4246) = 4.05, p < .01, \eta^2 = .06$]. F -values and η^2 -values for all subsequent univariate analyses are presented in Table 4 (top half). Replicating the findings of Study 1, a main effect of situation was found, with adolescents reporting significantly more autonomy need satisfaction ($M_{\text{AS}} = 3.61$ vs. $M_{\text{CON}} = 1.75$) and less autonomy need frustration ($M_{\text{AS}} = 2.45$ vs. $M_{\text{CON}} = 3.91$) in response to the autonomy-supportive, as compared to the controlling, situation. Similar to Study 1, the different trajectories of perceived general autonomy supportive context predicted experiences of autonomy need frustration, but not of autonomy satisfaction. Specifically, Tukey's HSD post hoc comparison showed that adolescents in the low-decreasing trajectory scored significantly higher on

Table 3 Results of latent class growth analyses (study 2)

| Solution | BIC | AIC | Entropy | LMR-LRT | Trajectory classes | | | |
|------------|---------------|---------------|------------|----------------|--------------------|----------------|--------------------------|--------------------|
| | | | | | 1 | 2 | 3 | 4 |
| 2-class | 633.37 | 607.77 | .82 | 110.41*** | | | | |
| Proportion | | | | | 74 | 26 | | |
| Mean I | | | | | 4.22*** | 3.38*** | | |
| Mean S | | | | | 0.01 | 0.00 | | |
| 3-class | 609.31 | 575.18 | .82 | 36.11** | | | | |
| Proportion | | | | | 51 | 42 | 7 | |
| Mean I | | | | | 4.27*** | 3.80*** | 3.12*** | |
| Mean S | | | | | 0.04** | -0.01 | -0.07[†] | |
| 4-class | 608.46 | 565.79 | .74 | 14.39 | | | | |
| Proportion | | | | | 46 | 27 | 20 | 7 |
| Mean I | | | | | 4.13*** | 4.35*** | 3.51*** | 3.13*** |
| Mean S | | | | | -0.02 | 0.05** | 0.03 | -0.07 [†] |

I intercept, S slope. The selected solution is represented in bold

[†] $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$

autonomy need frustration ($M_{LD} = 3.53$ vs. $M_{MS} = 3.06$ and $M_{HI} = 2.95$), as compared to the other two trajectories. Finally, the interactions between condition and trajectory also were significant in the prediction of both autonomy satisfaction and frustration. As depicted in Fig. 3, the difference between the two situations in autonomy need satisfaction and frustration was largest among adolescents in the high-increasing trajectory, suggesting that they derived the greatest benefits from the autonomy-supportive situation, in comparison to the two other parenting context trajectories.

The second RM MANOVA predicted adolescents' coping reactions in response to the parental request. Again, we found evidence for multivariate effects for situation [$F(4121) = 28.78, p < .001, \eta^2 = .49$], for context trajectory [$F(8242) = 5.65, p < .001, \eta^2 = .16$], and for the situation \times context interaction [$F(8242) = 5.54, p < .001, \eta^2 = .16$]. As can be seen in Table 4 (bottom half), subsequent univariate analyses indicated significant effects of situation on each of the coping reactions. Specifically, in analogy with Study 1, in response to the autonomy-supportive, as compared to the controlling, situation, adolescents reported

less oppositional defiance ($M_{AS} = 1.84$ vs. $M_{CON} = 2.53$), and less negotiation ($M_{AS} = 3.50$ vs. $M_{CON} = 3.68$), while, extending the findings of Study 1, they also reported less submission ($M_{AS} = 2.08$ vs. $M_{CON} = 2.78$) and more accommodation ($M_{AS} = 3.53$ vs. $M_{CON} = 3.12$). A similar pattern as in Study 1 emerged as a function of general parenting context, with significant differences between trajectories being found for oppositional defiance, submission, and negotiation (but not for accommodation). Specifically, adolescents in the low-decreasing trajectory reported significantly more oppositional defiance as compared to those in the high-increasing group ($M_{LD} = 2.43$ vs. $M_{HI} = 1.91$; $M_{MS} = 2.22$), as well as more submission as compared to the other two trajectories ($M_{LD} = 2.79$ vs. $M_{MS} = 2.30$ and $M_{HI} = 2.19$). Adolescents in the high-increasing trajectory, by contrast, reported significantly more negotiation as compared to the other two trajectories ($M_{HI} = 4.06$ vs. $M_{LD} = 3.28$ and $M_{MS} = 3.42$). Finally, the situation \times context interactions were significant in the prediction of oppositional defiance, submission, and negotiation, and are depicted in Fig. 4. Results for oppositional defiance and submission were similar. The difference between the two situations in oppositional defiance and submission was largest for adolescents in the high-increasing trajectory, relative to those in the two other trajectories, suggesting that adolescents growing up in an autonomy-supportive context benefit most from an autonomy-supportive communication style. As for negotiation, there seemed to be no difference between the two situations for adolescents in the high-increasing and moderate-stable trajectories, whereas adolescents in the low-decreasing trajectory especially reported lower levels of negotiation in response to the autonomy-supportive, as compared to the controlling, situation.

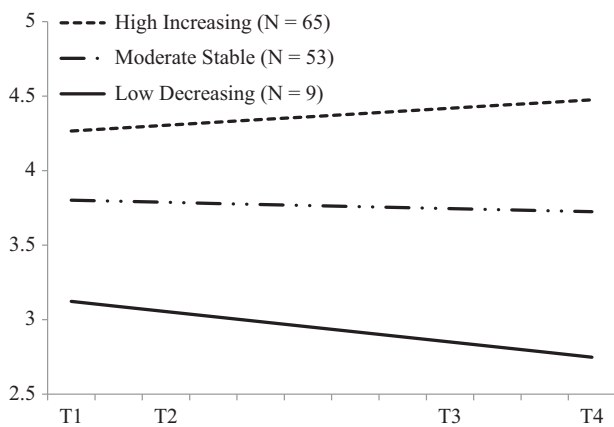


Fig. 2 Estimated mean values for perceived autonomy-supportive parenting context for the three parenting-trajectory classes (Study 2)

Discussion

Study 2 offered further insight into the determinants of adolescents' interpretations and reactions to a maternal

Table 4 *F*-values and η^2 -values for the RM MANOVAs predicting adolescents' appraisals and coping reactions, for Study 2

| | Situation | | Context trajectory | | Situation \times Context trajectory | |
|----------------------------|-----------|----------|--------------------|----------|---------------------------------------|----------|
| | <i>F</i> | η^2 | <i>F</i> | η^2 | <i>F</i> | η^2 |
| Appraisal | | | | | | |
| Autonomy need satisfaction | 188.18*** | .60 | 2.38 | .04 | 6.24** | .09 |
| Autonomy need frustration | 104.63*** | .46 | 4.13* | .06 | 6.21** | .09 |
| Coping | | | | | | |
| Oppositional defiance | 53.24*** | .30 | 4.32* | .07 | 3.42* | .05 |
| Submission | 56.15*** | .31 | 4.77* | .07 | 7.77*** | .11 |
| Negotiation | 7.69** | .06 | 13.59*** | .18 | 8.45*** | .12 |
| Accommodation | 29.90*** | .19 | 1.49 | .02 | 0.84 | .01 |

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

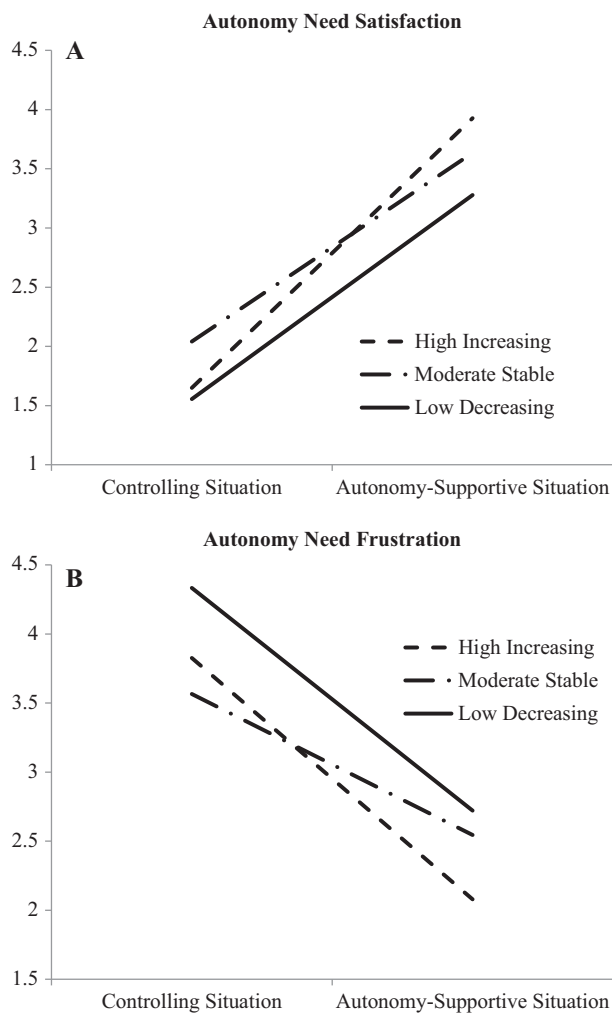


Fig. 3 Interaction between situation and perceived parenting context trajectory in the prediction of experienced autonomy need satisfaction (a) and autonomy need frustration (b) for Study 2

request to study more. In line with Study 1, the parents' situation-specific communication style played an important role, as adolescents reported more negative appraisals (i.e., less autonomy need satisfaction, more autonomy need frustration) and less constructive coping (i.e., more oppositional defiance, more submission, less accommodation, but more negotiation), when confronted with a controlling situation. In other words, these results corroborate the findings of Study 1 that showed that, in a situation where autonomy is threatened, behavioral responses are activated that aim at reclaiming freedom (i.e., adolescents reported more negotiation and oppositional defiance in response to the controlling situation; Radel et al. 2011). By contrast, when the threat to one's autonomy is relatively low (i.e., in the autonomy-supportive situation), adolescents especially seemed to accept and accommodate to the request; this is not surprising, as an autonomy-supportive communication

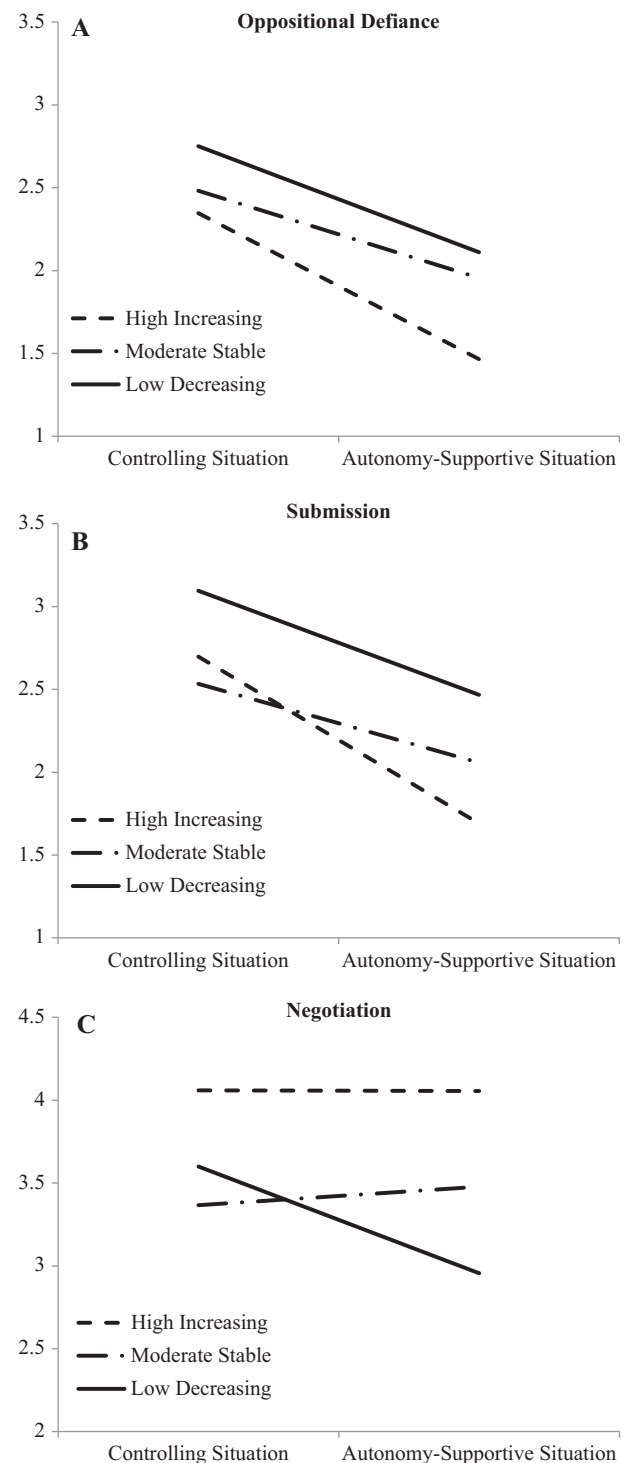


Fig. 4 Interaction between situation and perceived parenting context trajectory in the prediction of oppositional defiance (a), submission (b), and negotiation (c) for Study 2

style involves, among others, explaining the underlying reason of the request (Grolnick 2003).

Further, making use of four-wave data spanning a six-year interval, we were able to distinguish three different

trajectories of perceived autonomy-supportive parenting across the adolescent years, that is, a high-increasing, a moderate-stable and a low-decreasing group. Thereby, it is noteworthy that about half of the sample belongs to the high-increasing group: these adolescents perceived high initial levels of autonomy support, which only increased further across time. By contrast, we also identified a small group (7%) following the opposite developmental trajectory across time: these adolescents reported relatively low initial levels of perceived autonomy support, and experienced even *less* parental autonomy support across time. These adolescents seem to experience chronic need frustration and are likely to be most at-risk for psychopathology (e.g., Sheldon 2011; Vansteenkiste and Ryan 2013). In general, these findings suggest that there is considerable inter-individual variability in the way how adolescents' perceptions of their parents' rearing style develop throughout the adolescent years.

Results showed that adolescents' membership to these estimated parenting context trajectories played an important role in their interpretation and reaction to the hypothesized situation. In line with theorizing (e.g., Skinner and Zimmer-Gembeck 2007) and with Study 1, we found evidence for main effects of adolescents' parenting context trajectory. Adolescents in the high-increasing trajectory reported more constructive coping (i.e., more active negotiation), whereas adolescents in the low-decreasing trajectory reported a more negative interpretation of the situation (i.e., more autonomy need frustration) and a tendency to cope through maladaptive strategies (i.e., oppositional defiance and submission). More importantly, we also found consistent evidence that adolescents' perceived parenting context moderated the effects of situation on appraisal and coping. Specifically, adolescents in the high-increasing trajectory especially were most sensitive to the positive effects of an autonomy-supportive situation, both in terms of appraisals (i.e., greater autonomy need satisfaction, less autonomy frustration) and coping responses (i.e., less oppositional defiance, less submission). These findings are in line with the notion that responses to threats to the need for autonomy would depend on individuals' history of autonomy-relevant needs experiences, with a long-term, chronic exposure to autonomy need satisfaction being most beneficial (Radel et al. 2011). That is, adolescents in the high-increasing trajectory (i.e., those likely with a long-term history of need support) seem most sensitive for the beneficial effects of a new need-supportive situation as they derive the most autonomy need satisfaction and the least autonomy frustration from such a situation; in addition, these adolescents seem more likely to cope in constructive ways when facing a short-term deprivation of the need for autonomy (see also Vansteenkiste and Ryan 2013; Weinstein and Ryan 2011). By contrast, adolescents from the low-decreasing group (i.e., those likely with a

history of chronic need frustration) seem less sensitive to the beneficial effects of a new need-supportive situation, and seem to lack the skills required to engage in more constructive coping. In fact, this group reported the lowest engagement in negotiation, while being highest in defiance and submission.

General Discussion

An important task for parents is to communicate rules and expectations for appropriate behavior (e.g., Barber and Xia 2013; Kochanska et al. 1995; Maccoby 2007). However, children are more than passive receivers of these messages—they also actively influence and shape their own socialization (Kakihara and Tilton-Weaver 2009; Kuczynski 2003; Soenens et al. 2015). In the present investigation, we examined how and why adolescents differ in their appraisals (i.e., interpretations) and in their coping reactions vis-à-vis a situation involving a parental request to study more for school. Using both cross-sectional and longitudinal data, we showed that their appraisals and coping responses depended upon characteristics of the situation as such (i.e., the maternal communication style in that specific situation), the general parenting context in which the adolescent is growing up, as well as the interaction between both.

Consistent with theoretical principles (Ryan and Deci 2000) and with previous research (e.g., Pomerantz et al. 2007; Van Petegem et al. 2015; Vansteenkiste et al. 2014), the current findings support the importance of implementing rules and communicating requests in an autonomy-supportive instead of a controlling way. Indeed, a controlling communication style clearly seemed less effective, as adolescents reported more negative appraisals (e.g., more autonomy need frustration) and more maladaptive reaction patterns (e.g., more oppositional defiance, less accommodation) in a controlling as opposed to an autonomy-supportive situation. Yet, adolescents' appraisals and coping responses were determined not only by the situation-specific communication style but also by their perception of growing up in a generally autonomy-supportive (vs. controlling) parenting context (Skinner and Edge 2002; Zimmer-Gembeck and Skinner 2016). Using both a cross-sectional variable-centered (Study 1) and a longitudinal person-oriented approach (Study 2) to chart the perceived general parenting context, we found evidence that the context affected adolescents' appraisals and coping reactions both directly (i.e., a main effect), but also modified their responses to specific situations (i.e., a situation \times context interaction). Thus, adolescents' interpretations of the new parenting situation was partly colored by their previous socialization experiences, which is in line with a symbolic interactionist perspective (Blumer 1969; Mead 1934), as

well as with Kuczynski's (2003) thesis that parent-child interactions should be understood in the context of the long-term relationship in which such interactions are embedded. In other words, it seems that adolescents' history of being exposed to an autonomy-satisfying (vs. frustrating) environment sensitizes them for the benefits associated with new autonomy-satisfying situations (cf. Radel et al. 2011; Sheldon 2011; Vanhalst et al. 2015). More specifically, we found that adolescents who perceived their mother to be more autonomy-supportive (Study 1) or who reported a history of accumulated maternal autonomy support (Study 2) seemed especially sensitive and receptive for new opportunities to experience need-support (i.e., the autonomy-supportive situation), as these adolescents perceived more parental autonomy support (Study 1) and derived a greater sense of autonomy need satisfaction and less autonomy need frustration (Study 2) from the autonomy-supportive situation specifically.

Moreover, adolescents with a perceived autonomy-supportive parenting history also were inclined to engage in more constructive coping (i.e., less oppositional defiance and submission, more negotiation), confirming the importance of the larger context in which children's coping skills develop (Kliewer et al. 1994; Power 2004; Zimmer-Gembeck and Skinner 2016). The findings for negotiation were particularly intriguing. Whereas the findings of Study 1 suggest that adolescents from an autonomy-supportive family context were inclined to engage in negotiation in response to a controlling situation specifically, the findings of Study 2 indicated that those growing up in a family context of accumulated autonomy-support reported using more negotiation in response to both an autonomy-supportive and controlling situation. Overall, this pattern suggests that an autonomy-supportive home context is conducive to the development of adolescents' negotiation strategies, perhaps especially when adolescents feel pushed into an unwanted direction by their parents (i.e., in a controlling situation). Hence, an autonomy-supportive parenting context may function as a resilience factor (cf. Vansteenkiste and Ryan 2013; Zimmer-Gembeck and Skinner 2016), possibly because these adolescents may have acquired greater social skills to engage in a constructive and open dialogue—even under potentially threatening conditions—through modeling (Kliewer et al. 1994; Power 2004). Future research should investigate these possible mechanisms explaining the effect of autonomy-supportive parenting on appraisals and coping.

Finally, it is noteworthy that a perceived autonomy-supportive parenting context related to more negotiation, whereas associations with accommodation were non-significant. As the recent findings of Legault et al. (2017) suggest, the coping strategy of accommodation (which is more passive) may be socialized in a different way than the

strategy of negotiation (which is more active). For instance, parental responsiveness might be a more important predictor for the development of accommodative strategies, as accommodation is relatively more relationally oriented and more focused on meeting the needs of the other (Finkel and Campbell 2001; Legault et al. 2017). However, future research is needed to examine this hypothesis. Similarly, future studies also could examine why some adolescents, growing up in controlling families, are more inclined to respond through oppositional defiance, whereas others rather would react through submission. Possibly, adolescents' personality profile may play a moderating role, with adolescents with a more high-inhibitory or overcontrolled profile being more likely to cope through submission, whereas those with a low-inhibitory or undercontrolled profile being more inclined to respond through oppositional defiance (Soenens et al. 2015; Zimmer-Gembeck and Skinner 2016).

Limitations

Although the present study had several strengths, including the vignette-methodology and the longitudinal design of Study 2, there are also a number of limitations that can be addressed in future work. Given the sole reliance upon self-reports and the use of hypothetical vignettes to assess adolescents' *anticipated* coping reaction to a parenting situation, future researchers may make use of different methodologies, such as standardized observations (see Altshuler et al. 1995). Further, given our unique focus on maternal parenting style, future research may examine whether our findings generalize to fathers' parenting style and may explore possible interactions between maternal and paternal parenting style. Moreover, future research could manipulate the content of the rules and requests formulated by parents, as the present study only focused on the specific situation of a parental request about an academic issue. Therefore, it would be important to investigate how children appraise and react to parental rule-setting in different domains of children's lives. Decision-making about moral issues, for instance, would remain to some extent more under the parents' jurisdiction even when adolescents grow older (Smetana 1988, 2006). Personal issues, by contrast, are private aspects that pertain to adolescents' identity and are typically regulated by adolescents themselves, rather than by the parents (Nucci 1996). Hence, whereas parental requests in the moral domain may be perceived less easily as a threat to the need for autonomy than requests in the academic domain, parental attempts at regulating the personal domain may especially be experienced as meddling and intrusive (see e.g., Kakihara and Tilton-Weaver 2009; Smetana 2006; Van Petegem et al. 2017). Finally, the current study focused on how one specific microsystem

(i.e., the general parenting context) affected adolescents' appraisals and coping responses. However, specific individual difference variables (e.g., personality) as well as macrosystem variables (e.g., cultural orientation) also may play an important role in determining how adolescents interpret and respond to specific parenting situations (Chen et al. 2016; Soenens et al. 2015; see also Bronfenbrenner and Morris 2006). Future research would do well broadening the scope in that respect as well.

Author Contributions S.V.P. coordinated the project, conceived of the study, analyzed and interpreted the data, and wrote the manuscript. M.Z.G., B.S. and M.V. helped in the conception of the study, interpretation of the data, and writing the manuscript. K.B. helped in the data collection and in writing the manuscript. E.M. helped in writing the manuscript. J.V. helped in the analysis and interpretation of the data, and writing the manuscript. G.Z. helped in the interpretation of the data and in writing the manuscript.

Compliance with Ethical Standards

Conflicts of Interest The authors declare that they have no competing interests.

Ethical Approval All procedures performed involving human participants in this study were in accordance with the ethical standards of the Ghent University Institutional Review Board and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consents were obtained from all participants included in the study.

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