




Moderating the Association Between Overparenting and Mental Health: Open Family Communication and Emerging Adult Children's Trait Autonomy

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Received: 17 June 2022 / Accepted: 25 December 2022 / Published online: 4 January 2023
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Abstract

Research shows that overparenting (a.k.a. helicopter parenting) is associated with many child issues, among which disrupted mental health is one of the most consistently observed. The present study aims to examine if open family communication and child trait autonomy alter the associations between overparenting and emerging adult children's general self-efficacy, environmental mastery, anxiety, and depression. Cross-sectional data were collected from college students ($N = 442$, M age = 20.28 years, $SD = 1.48$) in the United States. Results showed that open family communication strengthened the negative association between overparenting and environmental mastery, and trait autonomy weakened the negative association between overparenting and general self-efficacy. None of these two moderators altered the associations between overparenting and child anxiety and depression. The effects of open family communication and trait autonomy in a controlling context are discussed. Overall, notwithstanding the moderation effects observed from open family communication and trait autonomy, the findings suggest that the effects of overparenting might be difficult to buffer.

Keywords Overparenting · Helicopter parenting · Emerging adulthood · Open family communication · Trait autonomy · Mental health

Highlights

- Open family communication amplified the negative association between overparenting and the child's environmental mastery.
- Child trait autonomy weakened the negative association between overparenting and their general self-efficacy.
- Neither open family communication nor trait autonomy altered the associations between overparenting and the child's anxiety or depression.
- The effects of overparenting on child mental health appeared difficult to buffer.

The phenomenon of overparenting (a.k.a. helicopter parenting) has received considerable attention in the past 15 years across a range of academic disciplines, such as communication, psychology, sociology, and family studies (e.g., Cui et al., 2019; Gagnon, 2019; LeMoyné &

Buchanan, 2011; Segrin et al., 2012). Overparenting is conceptualized as a form of developmentally inappropriate parenting that involves an excessive amount of parenting effort during the offspring's late adolescence and emerging adulthood (e.g., Segrin et al., 2012). In particular, the core feature of overparenting is the "over" part, in that parents get overly involved into their children's lives, and these parents engage in excessive levels of affection, protection, and control toward their children (e.g., Jiao & Segrin, 2022; Segrin et al., 2012). For example, an overparenting parent may constantly monitor their child's whereabouts, reach out to the professor who assigned their child a poor grade, or speak with the business manager for a salary increase on behalf of their child. Notwithstanding parents' benevolent

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intentions (e.g., overinvolvement for the child's happiness and success), overparenting has been found to relate to a wide range of child issues such as mental health problems, school burnout, and poor relationships with others (Cui et al., 2022; Love et al., 2020; Segrin et al., 2015, 2022). In the present study, we examined the effects of two potential moderators, open family communication and trait autonomy, in altering the negative associations between overparenting and child mental health.

Although overparenting could theoretically occur at any stage of the parent-child relationship, current theorizing and research focuses on understanding this particular parenting style during emerging adulthood (i.e., 18 to 29 years; Arnett, 2014), a life stage between late adolescence and established adulthood. During this “unique and fascinating” (Aquilino, 2006, p. 212) developmental stage, emerging adults explore their identities, experience uncertainties, and experiment with different life directions (Arnett, 2000). With regard to family relations, emerging adults continue their individualization process started from adolescence (Aquilino, 1997). In particular, “establishing an equal relationship with parents” (Arnett, 2001, p. 133) is one of the most central hallmarks of a successful transition to established adulthood. Thus, emerging adults renegotiate their relationships with the family and gradually become more independent from their heavy reliance on parents, whereas parents of emerging adults face the challenge of acknowledging their children's emerging *adult* status (Aquilino, 2006; Arnett, 2000). However, the serious tension between the emerging adult's increased desire for autonomy and independence and the overparenting parent's reluctance to reduce their excessive parenting effort predisposes parents to treat their emerging adult child as a younger child than they actually are. This occurs by doing things that should and could be done by the child themselves, such as getting their schedules ready and speaking to their professors or managers on behalf of the child. Nevertheless, by taking these additional roles and responsibilities, overparenting parents are indeed taking away the chances where the emerging adult child could learn how to organize and manage their own life and grow to a true adult. Indeed, research has shown many negative consequences of overparenting among emerging adult children, such as personality and psychological issues (e.g., entitlement, perfectionism), lack of adequate competencies (e.g., self-regulation, coping skills, friendship and dating competence), internalizing (e.g., anxiety, depression, low life satisfaction) and externalizing problems (e.g., substance abuse, social media addictions; Cook, 2020; Hong & Cui, 2020; Segrin et al., 2015).

Notwithstanding that the main focus of overparenting scholarship has been to understand the associations between overparenting and child development in various domains

(see Cui et al., 2022 for a review), very few studies have examined what factors could alter these associations. In this paper, we argue that in addition to further examining other possible consequences of overparenting, an equally important question that should be addressed is, what factors could buffer the negative effects of overparenting? Indeed, a few recent studies have started addressing this question. For example, Hong and Cui (2020) examined the association between overparenting and college students' psychological maladjustment (i.e., anxiety, depression, and low life satisfaction), and found that residential status moderated the association. In particular, the positive association was stronger among those co-residing with their parents than those living away from home. McGinley and Davis (2021) examined the associations between overparenting and college students' drinking behaviors, and found that, in high-income families, overparenting was positively associated with alcohol consumption and drinking to intoxication, whereas in low-income families, overparenting was negatively associated with most of the negative drinking behaviors examined. In other words, the effects of overparenting on college students' drinking behaviors varied as a function of the economic status of the family. Leung and colleagues (2020, 2021) examined the moderating effects of family intactness (i.e., two married parents vs. remarried, divorced, separated, or widowed parents) and parent-child conflict on the associations between overparenting and early adolescent development in Hong Kong, China, and found that maternal overparenting was positively associated with positive youth development and psychological well-being under the conditions of high father-child conflict or family non-intactness. Thus, it appears that in less optimal family environments (e.g., high levels of family conflict, family non-intactness), early Chinese adolescents tended to interpret their mothers' overparenting practices as care and support that lead to positive developmental outcomes, as opposed to intrusion and control.

Mental health has been one of the most central domains of study in overparenting research. In their systematic review, Cui et al. (2022) noted that “the most studied domain of emerging adult outcome is psychological well-being” (p. 13). In particular, out of the 74 empirical studies they reviewed, 32 concern the psychological outcomes of overparenting. Given this predominant focus and the consistent finding that overparenting is negatively associated with emerging adults' mental health (e.g., Hong & Cui, 2020; Moilanen & Lynn Manuel, 2019), as well as that the mental health surge caused by Covid-19 has become a severe global public health challenge especially facing young people (e.g., Castaldelli-Maia et al., 2021; Xiong et al. 2020), the present study aimed to examine what factors buffer the negative associations between overparenting and child mental health, and in particular, general

self-efficacy, environmental mastery, anxiety, and depression. General self-efficacy refers to an individual's belief about their capacities to successfully achieve their goals and perform across a range of situations (Schwarzer & Jerusalem, 1995; Sherer et al., 1982). Environmental mastery concerns the extent to which people perceive themselves as capable in terms of managing events and situations in their living context (Ryff & Keyes, 1995). Both general self-efficacy and environmental mastery are robust indicators of psychological well-being (Knight et al., 2011; Luszczynska et al., 2005). Individuals with anxiety tend to overestimate threats in their environment, hold excessive fear and worries, and engage in cognitive and behavioral disturbances (e.g., trouble concentrating, avoidance; American Psychiatric Association [APA], 2013). Individuals with depression tend to feel sad and empty, have little interest in activities, and are highly irritable but not energetic (APA, 2013). Both anxiety and depression are common indicators of psychological ill-being. In overparenting research, the associations between overparenting and these four constructs are robust (e.g., Darlow et al., 2017; Hong & Cui, 2020; LeMoyné & Buchanan, 2011; Love et al., 2019; Moilanen & Lynn Manuel, 2019). For example, Love et al. (2019) found that overparenting was negatively associated with college students' self-efficacy and general competence (i.e., competence in life domains; a similar construct to environmental mastery) and was positively associated with their anxiety. Similarly, Moilanen and Lynn Manuel (2019) found that overparenting was related to young adults' low mastery and high depression. In a recent cross-cultural study, Segrin et al. (2022) found that, among both American and Chinese college students, overparenting was negatively associated with indicators of poor mental health. In particular, they observed negative associations between overparenting and college students' general self-efficacy and environmental mastery, and positive associations with anxiety and depression. In explaining the negative association between overparenting and child mental health, as noted by Cui et al. (2022), the most commonly used theory has been self-determination theory which posits that controlling contexts (e.g., overparenting) tend to frustrate individuals' basic psychological needs (i.e., autonomy, competence, and relatedness), which in turn leads to psychological ill-being or distress (Deci & Ryan, 2000). Other mechanisms linking overparenting and child mental distress include ineffective coping (Segrin et al., 2013), low distress tolerance (Perez et al., 2020), maladaptive perfectionism (Hong and Doh, 2018), lack of self-control or self-regulation (Hong & Cui 2020; Moilanen & Manuel 2019), and attachment insecurity in close relationships (Rousseau & Scharf, 2015). In summary, it appears that overparenting frustrates emerging adults' basic psychological needs and discourages the

development of adequate competencies and skills, which in turn lead to psychological distress.

Bronfenbrenner's (1977) ecological theory of human development, initially developed to understand child development, posits that human behavior and development are influenced by various individual and environmental factors. With regard to environmental factors, this theory identifies several systems ranging from micro (i.e., immediate environments such as family and school) to macro (i.e., societal values and norms). In the present study, we focused on one individual factor (i.e., trait autonomy) and one environmental factor from the microsystem (i.e., open family communication) to examine their effects in altering the associations between overparenting and child mental health. Open family communication involves a range of communicative behaviors that enable free exchanges of information between family members (Barnes & Olson, 1982). In such families, members freely share their opinions and feelings, actively listen to one another, openly show affection, and experience high levels of mutual understanding. In the Circumplex model of marital and family systems, communication is conceptualized as a third dimension that facilitates the family's adjustment on the other two dimensions (i.e., cohesion and flexibility; Barnes & Olson, 1985; Olson, 2000; Olson et al., 2019). In particular, open and effective family communication helps families adjust their levels of cohesion and flexibility to meet the situational or developmental needs of family members (Barnes & Olson, 1982; Olson et al., 2019). As noted by Barnes and Olson (1982), "communication is an essential ingredient to the establishment of the type of negotiation process families adopt to meet the developmental changes dictated by the growth of individual members" (p. 35). In addition to facilitating family negotiation and adjustment, open family communication is also beneficial to the child's psychological well-being (e.g., Ohanessian, 2013; Van Dijk et al., 2014; Xiao et al., 2011).

During emerging adulthood, open family communication facilitates the adjustment of parent-child boundaries and the balance between independence and dependence (Booth-Butterfield & Sidelinger, 1997; Cooper et al., 1983). Nevertheless, given emerging adults' increased needs for autonomy and independence, it remains questionable to what extent and under what conditions open family communication benefits their establishment of individual identities and transition to established adulthood (e.g., Guerrero & Afifi, 1995). In particular, one of the markers of adulthood is making independent decisions which requires relaxing reliance on parents for advice and guidance (Arnett, 1998). Thus, frequent and open parent-child communication may make it difficult for the emerging adult child to acquire experiences and competencies for independent decision-making. In other words, emerging adults

who constantly get in touch with their parents may not have enough chances to practice independent decision-making and consequently develop such competencies (Nelson et al., 2021). Moreover, such effects might be exacerbated when open family communication occurs in a controlling family environment. For example, Givertz and Segrin (2014) examined the effects of parental control on emerging adult children's self-efficacy (both general and social self-efficacy) and found that open family communication intensified such negative effects. Similarly, Jiao (2021) found that conversation-oriented family communication (i.e., open and unconstrained family interactions) strengthened the negative effect of conformity-oriented family communication (i.e., family interactions that emphasize hierarchy, conformity, and obedience) on emerging adults' attachment security in both parent-child and romantic contexts. Thus, it appears that in a controlling family environment, open family communication might indeed intensify, rather than mitigate, the negative effects from control and delay emerging adults' transition to established adulthood. It might be that open communication in a controlling family environment involves more communication about parental power and child obedience; in other words, parents might utilize open communication as a tool to exercise parental control, which in turn might exacerbate the negative effects associated with living in a controlling family environment. With regard to overparenting, overparenting parents have a predilection for excessively attempting to control child outcomes (Padilla-Walker & Nelson, 2012; Segrin et al., 2012). In a context of open parent-child communication, the parents' efforts to impose their will upon the child presumably become more explicit and therefore potentially aggravating to the child. Overall, although open family communication might prevent families from overparenting as it facilitates conversations about the renegotiation of parent-child boundaries, it might actually facilitate the emergence of negative effects if occurring in a controlling family environment, such as overparenting. The following hypothesis was therefore advanced:

H1: Open family communication strengthens the negative associations between overparenting and emerging adults' (a) general self-efficacy and (b) environmental mastery, and the positive associations between overparenting and (c) anxiety and (d) depression.

Another factor that has the potential to alter the effects of overparenting is emerging adults' trait autonomy. As an important topic across the lifespan, autonomy is a salient theme during adolescence and emerging adulthood (Arnett, 1998; Ryan et al., 2006). Since early adolescence, parents are expected to gradually reduce their control to meet their

child's developmental needs, such as increased needs for autonomy, to facilitate the child's transition to their next life stage (Eccles et al., 1991). Although autonomy tends to be regulated by the external environment (Ryan & Deci, 2000), individual differences also exist in people's general and stable tendencies to behave autonomously, a construct termed dispositional or trait autonomy (Deci & Ryan, 1985; Weinstein et al., 2012). Individuals high in trait autonomy have a strong and stable tendency to act on their own volition, values, and beliefs, and experience high levels of self-determination and consistency (Weinstein et al., 2012). Moreover, these individuals have the capacity to behave autonomously or volitionally despite the controlling elements in the environment (Ryan & Deci, 2017). As a result, individuals with high trait autonomy tend to experience high levels of psychological well-being as well as physical health and longevity (e.g., Deci & Ryan, 2012; Weinstein et al., 2019). Moreover, these individuals also tend to perceive stressful environments as challenging rather than threatening or overwhelming, and use more adaptive coping strategies to handle stress (Weinstein & Ryan, 2011). With regard to close relationships, individuals high in trait autonomy also tend to be autonomy-supportive to others, which is an essential element of high-quality and healthy relationships (Deci & Ryan, 2012; Ryan & Deci, 2017). Thus, given that individuals high in trait autonomy are still able to behave autonomously in a controlling environment, such as overparenting, the following hypothesis was advanced:

H2: Emerging adult children's trait autonomy weakens the negative associations between overparenting and their (a) general self-efficacy and (b) environmental mastery, and the positive associations between overparenting and (c) anxiety and (d) depression.

Method

Participants and Procedure

Participants were recruited from undergraduate Communication and Public Relations courses at a large U.S. university in the spring and fall semesters of 2021. They filled out a 10-minute online questionnaire in exchange for course credits. Among the 442 participants (M age = 20.28 years, $SD = 1.48$), 301 (68.1%) were female, 140 (31.7%) were male, and 1 (0.2%) participant indicated their sex as other. In terms of school year, 44 (10.0%) were first-year students, 165 (37.3%) were sophomores, 150 (33.9%) were juniors, 80 (18.1%) were seniors, and 3 (0.7%) selected the "other" option. For racial or ethnic background, 277 (62.7%) were

Caucasian/White, 69 (15.6%) were Latino/Hispanic, 13 (2.9%) were Asian/Asian American, 10 (2.3%) were Black/African American, 6 (1.4%) were Native American, 3 (0.7%) were Pacific Islander, 53 (12.0%) were multi-racial, and 11 (2.5%) selected the “other” option. In terms of living arrangement, 136 (30.8%) co-resided with their parents, and 306 (69.2%) did not live with their parents. For parent-child communication frequency (via phone, text messaging, face-to-face, etc.), 248 (56.1%) were in contact with their parents at least once a day, 173 (39.1%) were at least once a week, 19 (4.3%) were at least once a month, and 2 (0.5%) were less than once a month. This study was approved by the Institutional Review Board at the authors’ university. All participants provided informed consent.

Measures

Overparenting

Participants completed the 10-item Consolidated Helicopter Parenting Scale (Schiffirin et al., 2019; McDonald’s $\omega = 0.92$; e.g., “I feel like my parents sometimes smother me with their attention”). They indicated their level of dis/agreement with each of the items on a 7-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*). All scores were averaged with higher scores indicating a higher level of overparenting.

Open family communication

Participants completed the 10-item open family communication subscale from the Parent-Adolescent Communication Scale (Barnes and Olson, 1982; McDonald’s $\omega = 0.92$; e.g., “It is very easy for me to express all my true feelings to my parents”). They indicated their level of dis/agreement with each of the items on a 7-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*). All scores were averaged with higher scores indicating a higher level of open family communication.

Trait autonomy

Participants completed two subscales (five items on each subscale) from the Index of Autonomous Functioning Scale (Weinstein et al., 2012). These included authorship/self-congruence (e.g., “I strongly identify with the things that I do”) and interest-taking (e.g., “I am interested in understanding the reasons for my actions”) with an overall reliability of McDonald’s $\omega = 0.85$. They indicated their level of dis/agreement with each of the items on a 5-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*). All scores were averaged with higher scores indicating a higher level of trait autonomy.

General self-efficacy

Participants completed the eight-item New General Self-Efficacy scale (Chen et al., 2001; McDonald’s $\omega = 0.94$; e.g., “When facing difficult tasks, I am certain that I will accomplish them”). They indicated their level of dis/agreement with each of the items on a 7-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*). All scores were averaged with higher scores indicating a higher level of general self-efficacy.

Environmental mastery

Participants completed the nine-item environmental mastery subscale from the Scales of Psychological Well-Being (Ryff, 1989; McDonald’s $\omega = 0.82$; e.g., “I am quite good at managing the many responsibilities of my daily life”). They indicated their level of dis/agreement with each of the items on a 7-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*). After reversing scores for applicable items, all scores were averaged with higher scores indicating a higher level of environmental mastery.

Anxiety

Participants completed the seven-item anxiety subscale from the Hospital Anxiety and Depression Scale (Zigmond & Snaith, 1983; McDonald’s $\omega = 0.84$; e.g., “I feel restless as if I have to be on the move”). They indicated how often they had the described feelings in the past week on a 4-point Likert scale (1 = *not at all*, 4 = *very often*). After reversing scores for applicable items, all scores were averaged with higher scores indicating a higher level of anxiety.

Depression

Participants completed the 10-item Center for Epidemiologic Studies Depression Scale Revised (Miller et al., 2008; Radloff, 1977; McDonald’s $\omega = 0.81$; e.g., “I felt that everything I did was an effort”). They indicated how often they had the described feelings in the past week on a 4-point Likert scale (1 = *rarely*, 4 = *most often*). After reversing scores for applicable items, all scores were averaged with higher scores indicating a higher level of depression.

Results

Table 1 shows the correlations, means, standard deviations, and ranges for all the study variables. There were no missing data involved. To examine if open family communication and trait autonomy (separately) moderated the associations between overparenting and the criterion

Table 1 Bivariate correlations, means, standard deviations, and ranges of study variables

Variable	1	2	3	4	5	6	7
1. Overparenting	–						
2. Open Family Communication	–0.53***	–					
3. Trait Autonomy	–0.12*	0.18***	–				
4. Self-Efficacy	–0.16***	0.24***	0.38***	–			
5. Environmental Mastery	–0.36***	0.36***	0.19***	0.52***	–		
6. Anxiety	0.29***	–0.22***	0.04	–0.28***	–0.50***	–	
7. Depression	0.32***	–0.31***	–0.01	–0.32***	–0.63***	0.69***	–
<i>M</i>	2.89	5.57	3.93	5.91	4.68	2.36	2.06
<i>SD</i>	1.41	1.23	0.66	0.98	1.01	0.64	0.57
Range	1–7	1–7	1.80–5	1–7	1.89–7	1–3.86	1–3.80

* $p < 0.05$, *** $p < 0.001$

Table 2 Moderating effects of open family communication on the associations between overparenting and criterion variables

	Self-Efficacy	Environmental Mastery	Anxiety	Depression
R^2 change	0.01	0.04***	0.00	0.00
–1 <i>SD</i>	0.01 [–0.08, 0.10]	–0.05 [–0.14, 0.03]	0.11*** [0.05, 0.17]	0.08** [0.03, 0.13]
<i>M</i>	–0.04 [–0.12, 0.04]	–0.19*** [–0.26, –0.11]	0.11*** [0.07, 0.16]	0.09*** [0.05, 0.14]
+1 <i>SD</i>	–0.05 [–0.19, 0.01]	–0.32*** [–0.41, –0.23]	0.11*** [0.05, 0.18]	0.11*** [0.05, 0.16]
R^2 by the full model	0.08***	0.21***	0.13***	0.15***

Values are unstandardized regression coefficients unless otherwise noted. Values in the brackets are confidence intervals. ** $p < 0.01$, *** $p < 0.001$

variables (i.e., self-efficacy, environmental mastery, anxiety, and depression), a set of eight moderation tests was conducted in SPSS 27.0 using model 1 from the PROCESS macro (Hayes, 2017). The predictor variables (i.e., overparenting, open family communication, and trait autonomy) were mean centered prior to analysis. Participant age, sex [dummy coded as 0 = female, 1 = nonfemale], and living arrangement [dummy coded as 0 = live with parents, 1 = not live with parents] were included as covariates in these analyses. A bias-corrected bootstrapping procedure including 5000 bootstrap samples was used to estimate the 95% confidence intervals around the effects.

The results from the moderation analyses (shown in Table 2 and Fig. 1) indicated a significant interaction effect between overparenting and open family communication in predicting environmental mastery. This significant interaction was decomposed by calculating the associations between overparenting and environmental mastery at three different levels of open family communication (i.e., –1*SD*, the mean, and +1*SD*). The Johnson–Neyman regions indicated that the association between overparenting and child environmental mastery was statistically positive below the original/non-mean centered value of 2.46 of open family communication, was negative above the value of 4.59, and was non-significant between the values of 2.46 and 4.59.

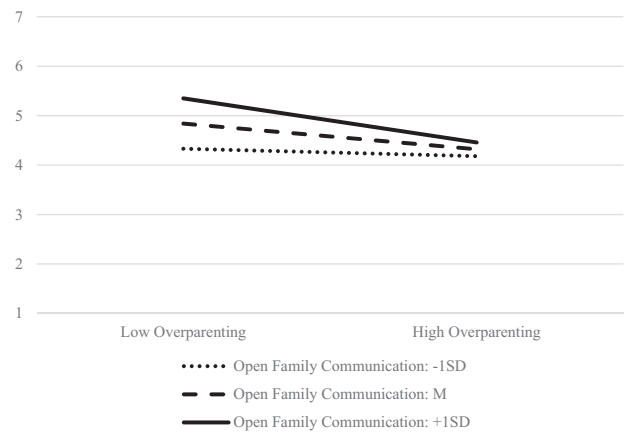


Fig. 1 Decomposition of the Overparenting × Open Family Communication Interaction Effect on Environmental Mastery

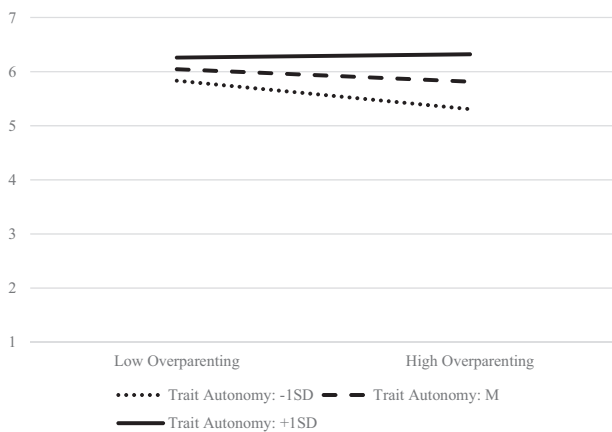
The results showed that with the increase of open family communication, the association between overparenting and child environmental mastery changed from positive to negative.

The results (shown in Table 3 and Fig. 2) also indicated a significant interaction effect between overparenting and trait autonomy in predicting general self-efficacy. This significant interaction was decomposed by calculating the associations between overparenting and self-efficacy at

Table 3 Moderating effects of trait autonomy on the associations between overparenting and criterion variables

	Self-Efficacy	Environmental Mastery	Anxiety	Depression
R^2 change	0.02***	0.00	0.00	0.00
$-1 SD$	-0.19*** [-0.28, -0.11]	-0.25*** [-0.34, -0.16]	0.12*** [0.06, 0.18]	0.11** [0.06, 0.16]
M	-0.09** [-0.15, -0.03]	-0.25*** [-0.31, -0.19]	0.13*** [0.09, 0.17]	0.13*** [0.10, 0.17]
$+1 SD$	0.02 [-0.06, 0.10]	-0.24*** [-0.33, -0.16]	0.15*** [0.09, 0.20]	0.15*** [0.10, 0.20]
R^2 by the full model	0.19***	0.16***	0.13***	0.13***

Values are unstandardized regression coefficients unless otherwise noted. Values in the brackets are confidence intervals. ** $p < 0.01$, *** $p < 0.001$

**Fig. 2** Decomposition of the Overparenting \times Trait Autonomy Interaction Effect on Self-Efficacy

three different levels of trait autonomy (i.e., $-1SD$, the mean, and $+1SD$). The Johnson–Neyman regions indicated that the association between overparenting and child self-efficacy was negative below the original/non-mean centered value of 4.09 of child trait autonomy and was non-significant above 4.09. The results showed that trait autonomy weakened the negative association between overparenting and self-efficacy.

No significant interaction effects were observed for the criterion variables anxiety and depression. As shown in Tables 2 and 3, the associations between overparenting and anxiety and depression were significant and positive at all levels of open family communication and trait autonomy. Both H1 and H2 were only partially supported.

Discussion

In light of the many negative effects of overparenting among emerging adult children, the present study examined if open family communication (an environmental factor) and child trait autonomy (an individual factor) moderated the associations between overparenting and child mental

health. The results showed that open family communication strengthened the negative association between overparenting and environmental mastery, and trait autonomy weakened the negative association between overparenting and general self-efficacy. None of these two potential moderators altered the associations between overparenting and child anxiety and depression.

Open family communication strengthened the negative association between overparenting and emerging adult children's environmental mastery. In particular, when overparenting parents and their emerging adult children engaged in high levels of open communication (e.g., frequently and actively expressing the self and listening to one another, sharing high levels of understanding and affection), the emerging adult child reported the lowest levels of environmental mastery. However, when they engaged in low levels of open communication, the child's environmental mastery was not associated with overparenting. Moreover, when they engaged in even lower levels of open communication (below $-2.5SD$), overparenting was positively associated with child mastery. In other words, under the condition of constrained family communication, overparenting might have benefited emerging adults' environmental mastery. It could be that frequent and open communication with overparenting parents led emerging adult children to heavily rely on their parents for advice and guidance, which further constrained their chances to learn how to navigate their lives through their own thinking and independent decision-making. As a result, these emerging adult children failed to develop a strong sense of mastery over their own lives and surrounding world. This finding is consistent with previous research that shows, in a controlling family environment, open family communication had negative effects on emerging adults' self-efficacy and relationships with others (Givertz & Segrin, 2014; Jiao, 2021). This finding suggests that in absence of high levels of open family communication, overparented emerging adults might not experience reduced environmental mastery. Further, it suggests that although overparenting has been connected

with many negative child outcomes, emerging adult child could protect themselves from these negative effects (at least environmental mastery) through reducing their open communication with their overparenting parents. Indeed, in light of the negative and strong association between overparenting and open family communication observed in the present study and other studies (e.g., Segrin et al., 2022), open family communication is less likely to occur in an overparenting family. Thus, most overparented emerging adults might not experience low levels of environmental mastery due to the lack of open communication they have with parents. Given the negative effects of open family communication when occurring in a controlling context, it would be beneficial for future research to examine its effects on other developmental constructs during emerging adulthood (e.g., transition to established adulthood, marriage intentions), and its effects at other life stages (e.g., childhood and adolescence).

Another plausible explanation for the moderating effect of open family communication on the association between overparenting and child mastery is that overparented emerging adults in different family contexts might interpret overparenting differently, which in turn leads to different outcomes. In particular, consistent with the findings from Leung and colleagues (2020, 2021) where they found maternal overparenting facilitated positive youth development and psychological well-being under the conditions of high father-child conflict or family non-intactness, it might be that emerging adults from less optimal family environments (e.g., low levels of open communication, high levels of family conflict, family non-intactness) interpreted overparenting as positive parental involvement and care as opposed to overinvolvement and intrusion. Future research is encouraged to further examine the plausibility of this explanation.

Emerging adult children's trait autonomy weakened the negative association between overparenting and their general self-efficacy. In particular, for overparented emerging adults who had low levels of trait autonomy, they experienced the lowest levels of self-efficacy. In contrast, for those who had high levels of trait autonomy, their self-efficacy was not associated with overparenting. This finding reveals that trait autonomy protected overparented emerging adults from experiencing self-efficacy problems, and aligns with the literature that individuals with high trait autonomy have the capacity to overcome the controlling elements in the environment, such as overparenting, and behave autonomously regardless (Ryan & Deci, 2017). It suggests that although overparenting is robustly associated with low self-efficacy (e.g., Bradley-Geist & Olson-Buchanan, 2014; Darlow et al., 2017; Love et al., 2019), if emerging adults have a strong and stable tendency to act on their own values and beliefs, their self-efficacy may not be disrupted by

overparenting. Nevertheless, considering the negative (but weak) association between overparenting and child trait autonomy observed in the present study ($r = -0.12$; thus showing that at emerging adulthood, overparenting was not a strong predictor of child trait autonomy and therefore the variable trait autonomy truly captured the individual differences on trait autonomy), it appears less likely that an overparented emerging adult would have very high levels of trait autonomy that buffers the negative association between overparenting and self-efficacy. Given the many benefits of trait autonomy (e.g., psychological well-being and healthy relationships; Ryan & Deci, 2017) and its buffering effect observed in the present study, it would be valuable to further examine how overparenting at an earlier developmental stage (e.g., adolescence) affects the child's trait autonomy in future research.

Neither open family communication nor child trait autonomy altered the associations between overparenting and child anxiety and depression. In particular, regardless to what extent the family engaged in open communication and how autonomous the child was, overparenting was positively associated with the child's anxiety and depression. This finding is consistent with previous overparenting research that shows positive associations between overparenting and mental distress constructs. Moreover, these associations were observed across different cultures (e.g., American, Chinese, Finnish, South Korean; Cui Janhonen-Abruquah et al., 2019; Jung et al., 2019; Segrin et al., 2022). Together with these findings, results from the present study suggest that the associations between overparenting and emerging adults' anxiety and depression might not be easily altered and are robust across cultures.

The findings from the present study could inform overparented emerging adults that for the sake of their mental well-being, actively reducing their frequent and open communication with parents and behaving in a way that is more autonomous would protect them from feeling incapable in navigating their own lives and achieving goals. From an intervention perspective, the findings suggest that more attention should be devoted to anxiety and depressive symptoms when overparented emerging adults seek help from counselling and therapy programs as these problems might be more difficult to effectively address through straightforward changes in family communication patterns or how autonomously they behave. Further, the findings are also informative to health providers and therapists that when emerging adults seek out for services on mental health issues, in addition to utilizing individual therapy strategies, they could also assess the degree of inappropriate parental involvement and consider using family therapy techniques to address the issues at the family level.

Several limitations should be noted when interpreting the findings. First, this study's reliance on convenience

sampling limits the generalizability of the findings to the population. Future studies are encouraged to gather samples that are more diverse and representative to further examine what factors could buffer the negative effects of overparenting, especially in light of recent cross-cultural studies showing that the effects of overparenting are more common than unique across different cultures. Second, the cross-sectional design prevents causal inferences between the variables. Longitudinal or experimental designs would be helpful in future research to further explicate the dynamics between these variables. Third, although it is reasonable to measure overparenting from the child's perspective when examining its effects, having the perspectives from both children and parents may help provide a more wholistic understanding of such effects as some elements of overparenting may not occur entirely within the emerging adult child's awareness.

Recognizing the abundant evidence on seemingly deleterious effects of overparenting, there is a substantial need for research examining factors that could buffer these effects. In the present study, although both moderators examined (i.e., open family communication and child trait autonomy) altered some of the associations between overparenting and child mental health, it should be noted that overall, they had no such buffering effect on mental health problems, namely symptoms of depression and anxiety. This suggests difficulties in buffering the negative effects of overparenting on child mental health, at least by the two moderators examined in this investigation. Future research is encouraged to examine if other factors (e.g., child gratitude and understanding of parental anxiety and involvement) might help buffer the negative effects of overparenting on mental health and other consequences.

Data Availability

The data used in this research are not available. The materials used in this research are available and can be obtained via email from the corresponding author.

Compliance with Ethical Standards

Conflict of Interest The authors declare no competing interests.

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