



# Helicopter Parenting, Autonomy Support, and Student Wellbeing in the United States and South Korea

Eunjoo Jung<sup>1</sup> · Woosang Hwang<sup>1</sup> · Seonghee Kim<sup>2</sup> · Hyelim Sin<sup>2</sup> · Zhenqiang Zhao<sup>1</sup> · Yue Zhang<sup>1</sup> · Jenny Hanseul Park<sup>1</sup>

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## Abstract

**Objectives** This study sought to examine the relations between helicopter parenting and autonomy support on the wellbeing of emerging adult children across different countries from Eastern and Western cultures, using the mother-child relationship as a mediating mechanism.

**Methods** The participants consisted of 215 American and 171 Korean college students who completed a self-report questionnaire on their mother's parenting style, the mother-child relationship, and their mental and physical wellbeing. Multiple group analyses were conducted using the maximum likelihood method, and a bias-corrected bootstrap procedure was utilized to test indirect effects.

**Results** The findings showed an indirect association of autonomy support with student wellbeing through the mother-child relationship in both countries. The associations of autonomy support with the mother-child relationship and children's wellbeing are positive in both the United States and South Korea, and the effects were similar for students from both countries. However, our results further suggest that, controlling for autonomy support, helicopter parenting did not uniquely predict the quality of the mother-child relationship or students' wellbeing in the United States or South Korea.

**Conclusions** Providing greater autonomy support than helicopter parenting to children appears to enhance the mother-child relationship within the family and children's positive wellbeing in both countries with different cultural backgrounds. This study adds to the extant literature by using the mother-child relationship as a mediating variable, expanding the investigation of helicopter parenting and autonomy support with young adults, and providing a comparative examination of these prevalent yet under-examined parenting practices between countries with Eastern and Western cultures.

**Keywords** Helicopter parenting · Autonomy support · Mother-child relationship · Mental wellbeing · College students

Parents in all parts of the world want their college-age children to be mentally and physically healthy and satisfied in life. To support their children's mental and physical wellbeing, some parents tend to have greater involvement in their children's education and daily lives. Where this involvement is too intense, there is a danger of over-parenting, frequently called "helicopter parenting" (Bradley-Geist and Olson-Buchanan 2014; Schiffrin et al. 2014).

Studies have found that helicopter parenting, here defined as "parenting involving hovering parents who are potentially over-involved in the lives of their child" (Padilla-Walker and Nelson 2012, p. 1177), can play an adverse role in the development of children's wellbeing, especially as children grow into emerging adulthood (Arnett 2004). For emerging adults, feeling autonomous and confident in their abilities is an important base for healthy development. Their needs and desire for autonomy for healthy functioning and wellbeing are well espoused in basic psychological needs theory—a sub-theory developed under the framework of the self-determination theory (Deci and Ryan 1985, 2000; Ryan and Deci 2000). Helicopter parents however tend to pay less attention to their adult children's desire for autonomy and to exert excessive control over their children's day-to-day functioning and decision making (Reed et al. 2016; Rousseau and Scharf 2015).

✉ Eunjoo Jung  
ejung03@syr.edu

<sup>1</sup> Department of Human Development and Family Science, Syracuse University, Syracuse, NY 13244, USA

<sup>2</sup> Yonsei University, Seoul, South Korea

This helicopter parenting practice has been shown to be developmentally inappropriate for these emerging adults and to inhibit their developmental functioning (Kouros et al. 2017; Leung and Shek 2018). As such, helicopter parenting is generally regarded to be detrimental to, and to play an adverse role in children's wellbeing. The children of helicopter parents are more likely to experience mental health problems such as depression issues, reduced life satisfaction, poor health, and adjustment issues (LeMoyné and Buchanan 2011; Lindell et al. 2017; Nelson et al. 2015; Schiffrin et al. 2014).

While helicopter parenting for college students mostly has been judged developmentally inappropriate, findings on the role of helicopter parenting on child outcomes have been mixed. Some studies showed that helicopter parenting is not directly related to student wellbeing (Lampert 2009; Reed et al. 2016). For instance, Lampert (2009) found that intense level of parents' involvement (helicopter parenting) was not related with the level of students' adjustment to college life in the United States. Reed et al. (2016) further reported that helicopter parenting was not directly related to the students' mental and physical wellbeing in the United States when students' self-efficacy was considered as a mediating variable. They found that helicopter parenting indirectly influenced children's life satisfaction and physical health through children's self-efficacy. Nonetheless, another body of literature showed that helicopter parenting is not necessarily damaging to adult children and may in fact have a positive relation to children's outcomes and parent-child relationships (Abar and Turrisi 2008; Fingerman et al. 2012; Padilla-Walker and Nelson 2012; Turrisi et al. 2010). For instance, Fingerman et al. (2012) found that U.S. college students in their study who received helicopter parenting showed higher levels of life satisfaction, better psychological adjustment, and clearer life goals. They indicated that those young adult children seem to have favorably interpreted their parents' over-parenting as well intended support, and that favorable interpretation may have contributed to their positive outcomes. Others further suggested that the strong engagement of helicopter parents can be actively utilized to enhance children's adjustment to college and to reduce alcohol-related risks (Earle and LaBrie 2016). As shown by the literature, it is clear that the relation of helicopter parenting to children's outcomes remains the subject of dynamic debate.

Another parenting practice, which can be more developmentally appropriate for young adults than helicopter parenting, is parents' support of the autonomy of their children (Wang et al. 2007). Autonomy support, defined as "parents encourag[ing] developmentally appropriate independence in their child and instill[ing] confidence in their child's capacity to make decisions and actively solve problems" (Kouros et al. 2017, p. 940) is distinct from

helicopter parenting (Soenens and Vansteenkiste 2010). Conceptually, helicopter parenting is a controlling practice, whereas autonomy-supportive parenting expresses parents' support for their children's self-governance and self-reliance in decision making (Fingerman et al. 2012; Padilla-Walker and Nelson 2012; Wang et al. 2007). Both helicopter parenting and autonomy support constructs describe a parenting environment entailing varied levels and scope of support and control. However, they are qualitatively different from each other in terms of the nature of actual practices and developmental appropriateness (Reed et al. 2016). The positive role that autonomy support plays in children's functioning has been reported in the literature: it is associated with lowering depression, lessening anxiety, and promoting higher self-esteem (Jackson et al. 2005; Kouros et al. 2017; Lokes et al. 2010). Nevertheless, studies thus far have generally focused more on the role of helicopter parenting and overlooked the ways in which more developmentally appropriate parenting practices such as autonomy support may promote children's wellbeing. In consideration of young adults' needs for independence, autonomy, decision making (Kouros et al. 2017), and basic psychological needs as outlined in self-determination theory (Deci and Ryan 1985, 2000; Ryan and Deci 2000), investigating the relative weights that helicopter parenting and autonomy support carry in predicting adult children's wellbeing outcomes is in order.

However, there have been relatively few studies that compared the roles of helicopter parenting and autonomy support for college students. One of the few studies showed that helicopter parenting was not directly related to the American students' wellbeing, whereas autonomy support was positively associated with their mental and physical wellbeing (Reed et al. 2016). By contrast, another study of American students showed a different picture: higher levels of helicopter parenting were related to a greater incidence of mental problems, while autonomy support was not directly or indirectly related to student wellbeing outcomes (Schiffrin et al. 2014). Another study that further investigated differences among these variables in different genders in American students showed that helicopter parenting was more detrimental to female students' wellbeing in the U.S. context, while the positive role of autonomy support was more noticeable in male students' wellbeing (Kouros et al. 2017). Nonetheless, the insight provided by these studies is generally limited to an American context, and, although the results vary, they mostly have indicated that helicopter parenting is associated with poorer child outcomes and that autonomy support is associated with positive results.

Previous studies showed that positive family dynamics, especially mother-child relationship, favorably affect both mental and physical health (Daruna 2012). In families where family members share positive interactions and

higher relational quality, the children tended to show better mental wellbeing and physical health. Here the quality of relationship can be defined as “the emotional bond formed between the parent and child (connectedness, closeness, mutuality of expression of positive emotions, or attachment security” (Pinquart 2013, p. 708). The quality of relationship hence indicates the level of support, care, and warmth that children receive from their parents, and that has an impact on outcomes in child development and wellbeing in different cultures and environments (Bornstein and Cheah 2006; Lutz et al. 2009; Mallers et al. 2010). This quality of relationship is a distinctly different concept from parenting behaviors. Parenting behaviors are mostly characterized as “approaches to childrearing that can shape how a child develops” (National Academies of Sciences, Engineering, and Medicine 2016, p. 11). Furthermore, the mother-child relationship has been found to be related to a range of psychological and physical wellbeing outcomes in students and is one of the most robust predictors of student wellbeing (Bornstein and Cheah 2006; Lutz et al. 2009).

Padilla-Walker and Nelson (2012) indicated that helicopter parenting is positively related to the parent-child relationship in American college students because some children have positive feelings about certain aspects of the relationship with their parents including emotional support and connectedness. Past literature further suggested that when children have favorable relationship with their parents or at least with one parent, they were found to have less mental health issues and low levels of risky behaviors involvement (Carr and Wolchik 2015). The positive mother-child relationship quality may serve as a protective factor for college students with helicopter parents who are transitioning from adolescence to adulthood while dealing with numerous social and developmental tasks and challenges. Parental support of autonomy has also been found to be positively associated with parent-child relationship quality in Chinese children, indicating a role for parental autonomy support in various contexts in explaining child outcomes (Yan et al. 2017). Therefore, the pathway from helicopter parenting and autonomy seems to work in a similar way via the mother-child relationship in predicting child mental and health outcomes. Considering that a positive mother-child relationship continues to play a critical role in the wellbeing of adult children, it may be that the mother-child relationship can serve as a mediator to explain the indirect link helicopter parenting and autonomy support have with students’ wellbeing. However, an examination of existing research shows that the mother-child relationship has not yet been investigated as a mediating mechanism for the role of parenting practices on children’s wellbeing, although other mechanisms such as depression, anxiety, and self-efficacy have been tested in the literature in investigating the relationship between

helicopter parenting and academic adjustment (Darlow et al. 2017).

While a wealth of past studies have provided insights into the relation between helicopter parenting and student wellbeing, most of these studies used samples from Western countries such as American college students (Kouros et al. 2017; Reed et al. 2016). Nonetheless, there have been discussions as to whether the effects of helicopter parenting are similar across cultures. The concept of cultural universality and specificity, espoused in the developmental niche framework, indeed holds that there may be similarities and differences between Eastern and Western cultures in terms of the roles that parenting practices play in children’s functioning (Harkness and Super 1992). The developmental needs of young adults to be autonomous and feel competent, and parenting practices that support these children’s needs would be positively related with the children’s outcomes across different backgrounds (Deci and Ryan 1985, 2000; Ryan and Deci 2000). These similarities in children’s functioning would be viewed through the lens of cultural universality. Hinde’s theory of relationships (Hinde 1979; Hinde and Stevenson-Hinde 1988) here provides a valuable lens for understanding the parent-child relationship; the theory suggests that this relationship refers to connection and bonding between individuals in all cultures, which also supports the notion of cultural universality (Harkness and Super 1992; Hinde 1979; Hinde and Stevenson-Hinde 1988; Wang et al. 2007). Considering the relational quality of the parent-child relationship in comparing cultural similarities and differences should be important, as children’s psychological wellbeing and health are known to be rooted in this relationship (Lutz et al. 2009).

Other research indicates that the role of helicopter parenting might differ across different cultural backgrounds. For instance, in Asian countries influenced by Confucian cultures, courteousness, relatedness, and obedience are more highly valued than in the Western countries (Park and Chesla 2007; Yim et al. 2011). This would suggest that the role of helicopter parenting on children’s outcomes might be more culture specific. At the same time, Eastern and Western cultures have different familial orientations. Families from Eastern cultures value interdependence and relatedness more, whereas those from Western cultures value independence, individualism, and autonomy (Chao and Tseng 2002), which would support the concept of cultural specificity (Harkness and Super 1992). To get a better understanding about the cultural differences as well as similarities, it is important to investigate these parenting practices in different cultural backgrounds, especially from Eastern and Western cultures. However, research examining both helicopter parenting and autonomy support as predictors of student

wellbeing is rare, and comparative study of Eastern and Western cultures is even rarer.

Likewise, the studies conducted with students from Asia or other students in non-U.S. contexts that have focused on the role of helicopter parenting have also provided mixed results. One study showed that helicopter parenting was negatively related to Korean-American students' physical wellbeing (Kwon et al. 2017). Another showed that the effects of parental control on young adolescents' functioning were negative in both the United States and China and that the negative relations were stronger in the United States than in China (Wang et al. 2017). Although the participants in these studies, young adolescents from the United States and China (Wang et al. 2017) and Korean-American students residing in the United States (Kwon et al. 2017), had different backgrounds and orientations, the focus of these works was not on capturing differences in the effects of helicopter parenting or autonomy support on college students' wellbeing in different cultures. This general lack of investigation of different contexts limits our understanding of helicopter parenting, which is an "emergent parenting style in both global and local contexts" (Leung and Shek 2018, p. 103). An expansion of the literature on the different types of parenting practices across cultures is in order.

Because helicopter parenting and autonomy support may play similar or different roles in the wellbeing of college students in different cultures, and given the mother-child relationship as a potential mediator in predicting student outcomes, we hypothesized that helicopter parenting would be negatively associated with student wellbeing, that autonomy support would be positively associated with student wellbeing, that helicopter parenting would be negatively associated with the mother-child relationship, that autonomy support would be positively associated with the mother-child relationship, and that the mother-child relationship would be positively associated with student wellbeing. Cultural specificity is expected for all main effects because families from Eastern culture value interdependence and relatedness more; whereas in Western cultures, families value independence and individualism more. We further expected that there would be indirect effect of mother-child relationship quality and that the indirect pathway would be the same for both cultural groups. Cultural universality is expected for indirect effects because the role of mother-child relationship will hold the same predictive power in both cultures. The purpose of this study was to advance discussions regarding the dynamics of autonomy supportive and helicopter parenting behaviors and examine how these parenting practices influence emerging adult children's wellbeing across different countries from Eastern and Western cultures. We sought to investigate what differences could be found between cultures relative to helicopter parenting and autonomy support

and their effects on student wellbeing, as well as whether the relations are stronger in one culture or the other.

## Methods

### Participants

The participants were 416 American and 204 Korean students, all of whom were the biological children of their parents, recruited from college classes at private universities in the United States (the Western culture) and South Korea (Korea hereafter; the Eastern culture). To enhance the validity of cross-cultural comparison (Van De Vijver and Leung 1997), two universities were selected that had similar characteristics: both were mid-sized private institutions located in suburbs (3 to 4 h by car away from a major metropolitan area), and most undergraduate students at both institutions live on campus. The mean age of the participants was 19.61 ( $SD = 1.45$ ) for the Americans and 21.95 ( $SD = 2.05$ ) for the Koreans.

### Procedure

This study was approved by the Institutional Review Boards of both universities. The participants provided informed consent and completed a self-report questionnaire, for which they were compensated by receiving extra-credit points. The initial sample had an unequal distribution of parental marital status (59% of American students and 84.8% of Korean students had parents who were legally married). Different family structures tend to lead to variation in psychological well-being among young adult children (Love and Murdock 2004). Therefore, it may be that participants' perceptions of their mother's parenting style, the mother-child relationship, and their mental and physical wellbeing would differ due to their family's structure, but not due to their cultural context. For this reason, this study selected only students whose parents were legally married at the time of data collection to maintain the similarities in family configuration.

Regarding participants' ethnicity/race, in the American student group, 63.0% were White, 13.0% were African American, 7.7% were Asian, 7.0% were Hispanic, and 5.1% were other racial groups. In the case of Korean Student group, all respondents reported they are Korean. The American students in two-parent sample included more White students (78.1%) and less African American students (4.2%) compared to the full sample. However, the distribution of other racial groups were similar between the two-parent sample and full sample. The final sample consisted of 215 American college students and 171 Korean college students.

## Measures

All measures were created in both English and Korean versions. To achieve equivalence of meanings between the two languages, the measures were written in English and translated into Korean by researchers utilizing the back-translation method (Brislin 1980; Van De Vijver and Leung 1997), and using Brislin's (1980) model, more than two bilingual researchers translated the measures from the source (English) to the target language (Korean).

### Helicopter parenting

Helicopter parenting was measured using the subjects' reports of their mothers' parenting, employing five items from the Helicopter Parenting Scale (5-point Likert scale; Padilla-Walker and Nelson 2012). An example item was, "My mother solves any crisis or problem I might have." Higher scores represented greater helicopter parenting. All items were utilized as indicators for the latent construct for mothers' helicopter parenting ( $\alpha = 0.73$  in American students;  $\alpha = 0.79$  in Korean students).

### Autonomy support

Parents' autonomy support was measured using the subjects' reports of their mothers' autonomy support, employing six items of the Autonomy Support Scale (5-point Likert scale; Schiffrin et al. 2014). An example item was, "My mother encourages me to make my own decisions and take the responsibility for the choices I have made." Higher scores represented greater autonomy support. All items were utilized as indicators for the latent construct for mothers' autonomy support ( $\alpha = 0.74$  in American students;  $\alpha = 0.72$  in Korean students).

### Mother-child relationship

Mother-child relationship was measured using five items of the Affectual Solidarity Scale (6-point Likert scale; Mangen et al. 1988). The items were, "Taking everything into consideration, how close do you feel is the relationship between you and your mother at this point in your life?" "How is communication between you and your mother exchanging ideas or talking about things that really concern you at this point in your life?" "Overall, how well do you and your mother get along at this point in time?" "How well do you feel your mother understands you?" and "How well do you feel that you understand your mother?" Higher scores represented better mother-child relationships. All items were utilized as indicators for the latent construct for mother-child relationship ( $\alpha = 0.90$  in American students;  $\alpha = 0.88$  in Korean students).

## Life satisfaction

Life satisfaction was measured using five items of the Satisfaction with Life Scale (5-point Likert scale; Pavot and Diener 1993). An example item was, "I am satisfied with my life." Higher scores represented greater life satisfaction. All items were utilized as indicators for the latent construct for life satisfaction ( $\alpha = 0.86$  in American students;  $\alpha = 0.87$  in Korean students).

## Physical health

Physical health was measured using one item from the Physical Health Scale (5-point Likert scale; Reed et al. 2016). Higher scores represented greater physical health.

## Control variables

Based on previous studies, we included participants' age, gender, number of siblings, parents' education, and family income in the model as control variables (Kouros et al. 2017; Reed et al. 2016; Willoughby et al. 2015). We measured children's age, gender (dummy variable, 0 = male, 1 = female), and number of siblings with one item each. Mother's education was assessed with an ordinal measure (treated as continuous) ranging from 1 (*high school or less*) to 4 (*master's/doctoral degree*). Annual household income was assessed with a measure based on income categories ranging from 1 (under \$20,000 in American students and under ₩20,000,000 in Korean students) to 6 (\$100,001 or more in American students and ₩100,000,001 or more in Korean students). All control variables were mean-centered.

## Data Analyses

To examine the means, standard deviations, and correlations among study variables, this study conducted descriptive analysis and bivariate correlation analysis. Additionally, we used an independent *t*-test to compare the means of the study variables between the American students and Korean students. Multiple group analyses were conducted using the maximum likelihood method with Amos 25.0, based on the hypothesized model. Multiple group analyses took place in four steps (Brown 2006). First, as a single-group analysis, the hypothesized model was tested for acceptability for both participant groups. If one of the groups shows a poor model fit, the further examination of measurement and structural invariance evaluations is not necessary. Second, the measurement invariance test was conducted whether the factor loadings of the latent variable indicators were equivalent for both groups. In addition, the scalar invariance test was conducted whether the intercepts of the latent variable

indicators were equivalent for both groups. The last step, the structural invariance test, was used to examine which regression paths are equal or not for one group versus the other. These steps were followed to determine whether the Chi-square results for unconstrained model (factor loadings, intercepts, and regression paths are not constrained as equal) and constrained model (factor loadings, intercepts, and regression paths are constrained as equal) differed significantly and whether the measures had the same structure and meaning for different participant groups (Brown 2006).

The fit of the hypothesized model was evaluated using four criteria: the comparative fit index (CFI; values greater than 0.90 indicate a good model fit; Bentler 1990), the root mean square error of approximation (RMSEA; values below 0.08 indicates an acceptable fit and below 0.06 indicate a good model fit; Hooper et al. 2008), standardized root mean square residual (SRMR; values below 0.08 indicate a good model fit; Hu and Bentler 1999), and a normed Chi-square (Chi-square fit index divided by degrees of freedom; ratios below 5 indicate reasonable model fit; Wheaton et al. 1977). Byrne (2010) strongly recommended the use of RMSEA over other values as “it would appear to be adequately sensitive to model misspecification, commonly used interpretative guidelines would appear to yield appropriate conclusions regarding model quality, and it is possible to build confidence intervals around RMSEA values” (p. 80).

This study utilized a bias-corrected bootstrap procedure to estimate the confidence intervals (CIs) and test indirect effects; if a 95% CI does not contain zero, then the indirect effects are significant at the 0.05 level (Selig and Preacher 2008). To account for the missing data (0–4% of each variable) in the analysis, full information maximum likelihood estimation was used (Acocck 2005).

## Results

Table 1 represents the results of the means, standard deviations, and independent *t*-tests among the study variables for the American and Korean students. The results of the independent *t*-tests showed that American students reported more mother’s autonomy support ( $t_{(381)} = 6.68, p < 0.001$ ), better mother-child relationship quality ( $t_{(384)} = 5.00, p < 0.001$ ), higher life satisfaction ( $t_{(381)} = 8.01, p < 0.001$ ), and better physical health ( $t_{(376)} = 9.20, p < 0.001$ ) than the Korean students. Helicopter parenting was not significantly different between the American and Korean students.

Table 2 presents the results of bivariate correlations among the study variables for the American and Korean students. Among the American students, the mother’s helicopter parenting was not significantly correlated with the other study variables, whereas the mother’s autonomy

support was positively correlated with the mother-child relationship ( $r = 0.32, p < 0.001$ ) and physical health ( $r = 0.14, p = 0.045$ ). In Korean students, however, the mother’s helicopter parenting was positively correlated with the mother’s autonomy support ( $r = 0.26, p < 0.001$ ) and the mother-child relationship ( $r = 0.23, p = 0.002$ ). Additionally, the mother’s autonomy support was positively correlated with the mother-child relationship ( $r = 0.28, p < 0.001$ ) and life satisfaction ( $r = 0.21, p = 0.004$ ).

Table 3 represents the results of a multiple-group analysis of the hypothesized model between American and Korean students. For the single-group analysis, each group of American and of Korean students showed an acceptable fit ( $\chi^2_{(200)} = 371.35, \chi^2/df = 1.85, CFI = 0.91, RMSEA = 0.06, SRMR = 0.07$ ;  $\chi^2_{(200)} = 410.70, \chi^2/df = 2.05, CFI = 0.88, RMSEA = 0.08, SRMR = 0.08$ ; respectively). The CFI was close to 0.90, which means a relatively good fit (Bentler 1990). Because these results satisfied the prerequisites of multiple-group analysis (Brown 2006), measurement invariance was evaluated as the next step. Unconstrained and constrained models were tested without control variables (Models 3 and 5) and with them (control variables were linked to all study variables; Models 4 and 6), separately. The results for unconstrained and constrained models without control variables were a relatively good fit for the data ( $\chi^2_{(400)} = 782.13, \chi^2/df = 1.95, CFI = 0.90, RMSEA = 0.05, SRMR = 0.07$  in Model 3;  $\chi^2_{(417)} = 808.03, \chi^2/df = 1.93, CFI = 0.89, RMSEA = 0.05, SRMR = 0.07$  in Model 5). Similarly, the results for equal-form and equal-factor-loading models with control variables were a relatively good fit for the data ( $\chi^2_{(570)} = 1037.25, \chi^2/df = 1.82, CFI = 0.88, RMSEA = 0.05, SRMR = 0.07$  in Model 4;  $\chi^2_{(587)} = 1063.69, \chi^2/df = 1.81, CFI = 0.88, RMSEA = 0.05, SRMR = 0.07$  in Model 6). Consequently, the model fits for equal-form and equal-factor-loading models were the same, regardless of the control variables. The measurement invariance test for Model 5 yielded a  $\Delta\chi^2$  value of 25.90 ( $df = 17, p > 0.05$ ) relative to Model 3. Likewise, Model 6 yielded a  $\Delta\chi^2$  value of 26.44 ( $df = 17, p > 0.05$ ) relative to Model 4. These results indicate all factor loadings for their respective measurement variables were invariant across the two groups, regardless of the control variables (Brown 2006).

However, the constrained intercepts model (Model 7; all intercepts are constrained as equal with control variables) showed a poor model fits ( $\chi^2_{(608)} = 1452.35, CFI = 0.78, RMSEA = 0.06$ ). Additionally, compared to constrained factor loadings model (Model 6), the constrained intercepts mode yield a  $\Delta\chi^2$  value of 388.84 ( $df = 21, p > 0.05$ ). Consequently, all intercepts for their latent variables are variant across American and Korean student groups, which implies the potential measurement bias (Hong et al. 2003). According to Byrne and Van de Vijver (2010), “although

**Table 1** Results of descriptive analysis

Variables	Range	American students ( <i>n</i> = 215)		Korean students ( <i>n</i> = 171)		<i>t</i> -test ( <i>df</i> )
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Age	–	19.61	1.45	21.95	2.04	<i>t</i> (384) = –13.11***
Gender (Female = 1)	0–1	0.68	0.46	0.51	0.50	<i>t</i> (382) = 3.35**
Mothers' education	1–4	2.92	0.90	2.18	1.06	<i>t</i> (381) = 7.33***
Family annual income	1–6	5.14	1.20	3.91	1.38	<i>t</i> (367) = 9.19***
Number of siblings	–	2.78	1.15	2.18	0.57	<i>t</i> (377) = 6.16***
Mothers' helicopter parenting	1–5	2.42	0.78	2.52	0.82	<i>t</i> (383) = –1.21
Mothers' autonomy support	1–6	4.78	0.82	4.19	0.89	<i>t</i> (381) = 6.68***
Mother-child relationship	1–6	5.02	0.95	4.52	0.98	<i>t</i> (384) = 5.00***
Life satisfaction	1–5	3.82	0.79	3.15	0.82	<i>t</i> (381) = 8.01***
Physical health	1–5	3.90	0.88	2.95	1.12	<i>t</i> (376) = 9.20***

\*\**p* < 0.01; \*\*\**p* < 0.001

**Table 2** Results of bivariate correlations among study variables

Variables	1	2	3	4	5	6	7	8	9	10
1. Age	–	–0.55**	0.07	0.04	–0.09	–0.18*	–0.08	–0.01	0.04	0.16*
2. Gender (female = 1)	–0.01	–	–0.04	–0.01	0.19*	0.13	0.09	0.11	0.04	–0.21**
3. Mother's education	–0.07	0.02	–	0.20**	–0.15	0.12	0.13	0.19*	0.09	0.01
4. Family annual income	–0.05	–0.08	0.41***	–	–0.05	0.01	0.02	0.13	0.13	0.11
5. Number of siblings	0.10	–0.05	–0.25***	0.09	–	0.02	0.01	0.02	–0.03	–0.01
6. Mother's helicopter parenting	–0.13	–0.07	0.08	0.24**	0.10	–	0.26**	0.23**	0.09	0.01
7. Mother's autonomy support	0.04	0.02	0.07	–0.07	0.01	–0.12	–	0.28***	0.21**	0.06
8. Mother-child relationship	–0.04	0.03	0.18**	0.26***	–0.03	0.11	0.32***	–	0.43***	0.26**
9. Life satisfaction	–0.02	–0.01	0.16*	0.23**	0.02	0.13	0.08	0.42***	–	0.45***
10. Physical health	0.01	–0.07	0.10	0.14*	0.01	0.10	0.14*	0.28***	0.55***	–

The upper part indicates the bivariate correlations of Korean college students and the bottom part indicates the bivariate correlations of American college students

\**p* < 0.05; \*\**p* < 0.01; \*\*\**p* < 0.001

some researchers contend that this strong test of equivalence (e.g., test for invariant item intercepts) should always be conducted, others argue that analysis of only covariance structures may be the most appropriate approach to take in addressing the issues and interests of a study” (p. 111). Given that this study compared the relationships (regression coefficients) among helicopter parenting, autonomy support, mother-child relationship, and students' well-being variables across American and Korean students rather than compared latent mean scores across two countries, comparing factor variance and covariance across two groups are available when the factor loadings are invariant (Brown 2006). Moreover, Bujacz and colleagues (2014) mentioned that the discrepancy in intercepts between groups might occur in the cross-cultural studies because of different social and cultural contexts. Therefore, although the scalar

invariance test was not supported, this study chose Model 6 (constrained factor loadings model with control variables) as the final model and tested the structural invariance between the American and Korean students. This study constrained each regression path for equality (Models 8 to 15) and compared them to Model 6. The results showed that all model comparisons were not significant, indicating that all regression paths were equal between the American and Korean students.

Figure 1 represents the standardized coefficients for multiple-group analysis of the equal-factor-loading model with control variables (Model 6) in American and Korean students for comparison (the factor loadings for all latent variables are presented in Table 4). Overall, the hypotheses were partially supported among both American and Korean students. The hypothesis that the mother's helicopter

**Table 3** Results of the multiple group analysis

Model/Model description	$\chi^2$	df	$\chi^2/df$	CFI	RMSEA [CI <sup>a</sup> ]	SRMR	Model comparison	$\Delta\chi^2$ <sup>b</sup>	$\Delta df$ <sup>c</sup>
Single group analysis									
1. American students ( $N = 215$ )	371.35	200	1.85	0.91	0.06 [0.05, 0.07]	0.07			
2. Korean students ( $N = 171$ )	410.70	200	2.05	0.88	0.08 [0.07, 0.09]	0.08			
Measurement invariance test									
3. Unconstrained model without control variables	782.13	400	1.95	0.90	0.05 [0.05, 0.06]	0.07			
4. Unconstrained model with control variables	1037.25	570	1.82	0.88	0.05 [0.04, 0.05]	0.07	5 vs. 3	25.90	17
5. Constrained factor loadings model without control variables	808.03	417	1.93	0.89	0.05 [0.04, 0.05]	0.07	6 vs. 4	26.44	17
6. Constrained factor loadings model with control variables	1063.69	587	1.81	0.88	0.05 [0.04, 0.05]	0.07	7 vs. 6	388.84***	21
7. Constrained intercepts model with control variables	1452.35	608	2.38	0.78	0.06 [0.05, 0.06]	0.07			
Structural invariance test									
8. Model 6 with Helicopter parenting → Mother-child relationship was constrained equal	1063.70	588	1.81	0.88	0.05 [0.04, 0.05]	0.07	8 vs. 6	0.01	1
9. Model 6 with Helicopter parenting → Life satisfaction was constrained equal	1063.70	588	1.81	0.88	0.05 [0.04, 0.05]	0.07	9 vs. 6	0.01	1
10. Model 6 with Helicopter parenting → Physical health was constrained equal	1063.92	588	1.81	0.88	0.05 [0.04, 0.05]	0.07	10 vs. 6	0.23	1
11. Model 6 with Autonomy support → Mother-child relationship was constrained equal	1064.96	588	1.81	0.88	0.05 [0.04, 0.05]	0.07	11 vs. 6	1.27	1
12. Model 6 with Autonomy support → Life satisfaction was constrained equal	1064.69	588	1.81	0.88	0.05 [0.04, 0.05]	0.07	12 vs. 6	1.00	1
13. Model 6 with Autonomy support → Physical health was constrained equal	1063.88	588	1.81	0.88	0.05 [0.04, 0.05]	0.07	13 vs. 6	0.19	1
14. Model 6 with Mother-child relationship → Physical health was constrained equal	1063.75	588	1.81	0.88	0.05 [0.04, 0.05]	0.07	14 vs. 6	0.06	1
15. Model 6 with Mother-child relationship → Life satisfaction was constrained equal	1065.30	588	1.81	0.88	0.05 [0.04, 0.05]	0.07	15 vs. 6	1.61	1

\*\*\* $p < 0.001$

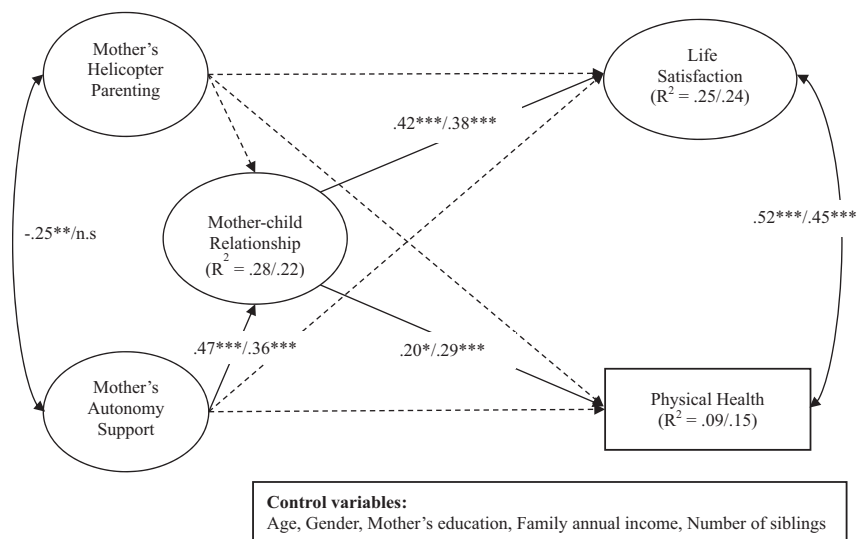
<sup>a</sup>90% confidence interval for RMSEA

<sup>b</sup>Difference in  $\chi^2$  values between models

<sup>c</sup>Difference in number of degrees of freedom between models



**Fig. 1** Results of the hypothesized model. The number to the left of the slash represents standardized coefficients for American college students. The number to the right of the slash represents standardized coefficients for Korean college students. Hence, the coefficients are presented as American college students/ Korean college students. Dashed line represents an insignificant path. ns not significant. \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$



**Table 4** Latent variables and factor loadings in the hypothesized model

Latent variables	Factor loadings	
	American students	Korean students
<b>Helicopter parenting</b>		
1. Makes important decisions for me	0.581***	0.589***
2. Intervenes in setting disputes with friends/roommates	0.737***	0.783***
3. Intervenes in solving problems with professors/employers	0.696***	0.853***
4. Solves any crisis/problems	0.563***	0.606***
5. Looks for jobs/opportunities for me	0.424***	0.473***
<b>Autonomy support</b>		
1. Encourages me to discuss any academic problems	0.368***	0.276***
2. Has given me tips regarding groceries economically	0.414***	0.391***
3. Encourages me to make my own decisions	0.785***	0.735***
4. Encourages me to deal with any interpersonal problems	0.695***	0.790***
5. Encourages me to keep a budget	0.523***	0.575***
6. Encourages me to choose my own classes	0.637***	0.653***
<b>Mother-child relationship</b>		
1. How close do you feel is the relationship between you and your mother	0.863***	0.869***
2. How is communication between you and your mother	0.802***	0.674***
3. How well do you and your mother get along	0.868***	0.893***
4. How well do you feel your mother understand you	0.830***	0.829***
5. How well do you feel that you understand your mother	0.708***	0.665***
<b>Life satisfaction</b>		
1. In most ways my life is close to my ideal	0.786***	0.792***
2. The conditions of my life are excellent	0.841***	0.834***
3. I am satisfied with my life	0.818***	0.821***
4. So far I have gotten the important things I want in life	0.714***	0.687***
5. If I could live my life over, I would change almost nothing	0.642***	0.709***

Standard coefficients are presented

\*\*\* $p < 0.001$

parenting would be negatively associated with college students' well-being (life satisfaction and physical health) was not supported in either American or Korean students. The hypothesis that autonomy support would be positively associated with college students' well-being was also not supported in either American or Korean students. The next hypothesis, that the mother's helicopter parenting would be negatively associated with the mother-child relationship, was not supported for either American or Korean students. The hypothesis that autonomy support would be positively associated with the mother-child relationship was fully supported in both American and Korean students. Mothers' autonomy support was significantly and positively associated with the mother-child relationship in both American and Korean students ( $\beta = 0.47$ ;  $p < 0.001$  in American participants,  $\beta = 0.36$ ;  $p < 0.001$  in Korean participants). The hypothesis that the mother-child relationship would be positively associated with student wellbeing was also fully supported in both American and Korean students. The mother-child relationship was significantly and positively associated with children's life satisfaction ( $\beta = 0.42$ ,  $p < 0.001$ ;  $\beta = 0.38$ ,  $p < 0.001$ ) and physical health ( $\beta = 0.20$ ,  $p = 0.021$ ;  $\beta = 0.29$ ,  $p < .001$ ) in both the American and the Korean students, respectively.

To test the indirect effects using bootstrapping estimation, the associations between the mother's autonomy support and the two types of student well-being variables via the mother-child relationship were examined (see Table 5). The results showed that all relations had significant indirect effects (zero not included in the 95% CIs) in both American and Korean students. Consequently, the mother's autonomy support was indirectly associated with both American and Korean students' life satisfaction and physical health through the mother-child relationship.

## Discussion

The findings of this study address the currently limited understanding of how helicopter parenting and autonomy

support are related to college students' life satisfaction and physical wellbeing across different cultures. Furthermore, we examined the mother-child relationship quality as a mechanism for helicopter parenting and autonomy support to impact students' wellbeing. This study contributes to the literature by using the mother-child relationship as a mediating variable, expanding the investigation of helicopter parenting and autonomy support with reference to adult children, and conducting a comparative examination of these prevalent parenting practices in Eastern and Western cultures.

The first major finding of the study pertains to the important role of the mother's autonomy support. In the current study, we found a clear connection between autonomy-supportive parenting and the quality of mother-child relationships in both the United States and Korea, supporting the hypothesis of the study. When mothers offer high levels of support for their children's autonomy, the mother-child relationship is better; this was evident for both American and Korean college students. Hinde's theory of relationship (Hinde 1979; Hinde and Stevenson-Hinde 1988) suggests that, in families where mothers give higher autonomy support, children perceive a better mother-child relationship. While autonomy support may be more in alignment with the individualism of Western cultures (Chao and Tseng 2002), our results show no evident difference in the conceptualization of autonomy support between the U.S. and Korean samples and that the mother's autonomy support exerts a similarly positive impact on family dynamics in both cultures. This confirms that at least in this particular ethnic/racial group of American and Korean students consisting of two parent families, the expectation that receiving autonomy-supportive parenting and feeling autonomous is an important universal foundation on which young adult children positively develop better relationships, allowing them to function better in college, both psychologically and physically (Deci and Ryan 1985; Jackson et al. 2005; Lekes et al. 2010).

The second major finding was that the association of autonomy support with student life satisfaction and physical

**Table 5** Indirect effects of mothers' autonomy support on students' wellbeing

Independent variable (IV)	Mediator (M)	Dependent variable (DV)	Effects from IV on M	Effects from M on DV	Indirect effect	Bootstrapped 95% confidence interval
American students						
Autonomy support	Mother-child relationship	Life satisfaction	0.544	0.341	0.185	[0.094, 0.296]
Autonomy support	Mother-child relationship	Physical health	0.544	0.193	0.105	[0.015, 0.212]
Korean students						
Autonomy support	Mother-child relationship	Life satisfaction	0.397	0.316	0.125	[0.050, 0.220]
Autonomy support	Mother-child relationship	Physical health	0.397	0.369	0.147	[0.049, 0.271]

health is indirect through the mother-child relationship for both cultures. That is, autonomy support from parents enhances the mother-child relationship, which in turn helps increase student life satisfaction, and promotes physical health in both the United States and Korea. The finding that the mother-child relationship serves as a link between autonomy support and children's wellbeing in both countries indicates that autonomy support and higher level of a mother-child relationship could reward the promotion of positive functioning in children's college experiences for both cultures. This finding is consistent with the previous research including the work of Reed et al. (2016) who found that parents' autonomy support was indirectly related with the children's life satisfaction and physical health through children's self-efficacy. In terms of the indirect relations, this finding however is contrast with the Schiffrin et al.'s study (2014) as they did not find this relationship. In their study with American students, no indirect relationship was found between autonomy support and mental health outcomes via satisfaction of students' basic psychological needs. In terms of the direct relations, we did not find the direct relations that Reed et al. (2016) found in their investigation. They found that parents' autonomy support was directly related to higher level of life satisfaction and physical health. However, our finding concurs with Schiffrin et al. (2014) in that there is no direct relationship between parents' autonomy supportive behavior and higher life satisfaction and health wellbeing.

These findings are interesting as we build on to the children's individual characteristic variables that previous studies used. Both Reed et al. (2016) and Schiffrin et al. (2014) incorporated the self-determination theory framework in their studies to carefully examine the mediating role of individual student variables such as basic psychological needs. However, the current study used a family environmental variable, mother-child relationship, as a mediating variable and relational framework to explain students' wellbeing outcomes. As shown, the way families perceive their parent-child relationship seem to provide useful insights into the way that helicopter parenting plays in students' wellbeing outcomes. Therefore, the use of the mother-child relationship as a mediating variable as tested in the current study can be an additional helpful mechanism in explaining the path from autonomy support to child wellbeing outcomes in both American and Korean students. The mother-child relationship is rooted in the emotional bond established between the mother and child, and it serves as the universal base of children's connectedness and attachment security (Pinguart 2013). Our finding suggests that the mother-child relationship may be a potent variable for explaining the path from autonomy support to child wellbeing outcomes, and seems to serve a crucial role in adult children's wellbeing and positively relates with a

variety of indicators of student psychological and physical wellbeing (Bornstein and Cheah 2006). In the current study, it showed that the mother-child relationship quality was indeed a powerful predictor of students' wellbeing outcomes.

In terms of the cultural similarities and differences, mother-child relationship quality in our study was found to be a significant mediator for autonomy support in both the United States and Korea, although helicopter parenting was not. As earlier studies suggested, helicopter parenting and autonomy support are different but related concepts (Soenens and Vansteenkiste 2010; Wang et al. 2007). Helicopter parenting is generally a controlling parenting practice, while autonomy support is parental support for the child's self-governance (Wang et al. 2007). This finding supports the common college student desire for decision-making power and self-reliance (Kouros et al. 2017). Our result also leads to the conclusion that more developmentally appropriate parenting practices, such as autonomy support, rather than helicopter parenting, promote children's adjustment and wellbeing. Our findings add to the literature that autonomy-supportive parenting is more beneficial for college students across cultures than helicopter parenting.

The third notable finding was that, controlling for autonomy support, helicopter parenting did not uniquely predict the quality of the mother-child relationship or students' life satisfaction or physical health. This goes against previous research that has indicated that helicopter parenting is not a beneficial parenting practice for college students and is detrimental to student outcomes (e.g., LeMoyne and Buchanan 2011; Schiffrin et al. 2014; Segrin et al. 2015). LeMoyne and Buchanan (2011) held that helicopter parenting has adverse relations with psychological wellbeing of American college students. Schiffrin et al. (2014) also showed that helicopter parenting is related to the increased prevalence of mental problems and lowered life satisfaction, and Segrin et al. (2015) further found that helicopter parenting (over-parenting in their study) was associated with lower levels of satisfaction of family life. Nonetheless, findings of the current study are consistent with those of previous studies, including the work of Lampert (2009) and Reed et al. (2016), who reported that helicopter parenting is not related to college students' adjustment to college, or mental and physical wellbeing in the United States.

In considering our findings, we notice that some prior research showed that parental warmth appears to moderate the relationship between helicopter parenting and child outcomes. For instance, Willoughby et al. (2015) suggested that parental warmth significantly moderated the relations between helicopter parenting and children's attitudes toward future relationships. They indicated that helicopter parenting practices may ultimately have an adverse impact

on their children's relational wellbeing in spite of parental warmth. Nelson et al. (2015) further suggested that helicopter parenting is detrimental to children when parents showed a low level of warmth with their children. Yet they indicated that higher levels of mothers' warmth may serve as a protective factor in helicopter parenting practices harmful influence on children's wellbeing outcomes. We therefore speculated whether using the parent-child relationship as a moderator rather than as a mediator, or using parental warmth as a mediator rather than the parent-child relationship in this cultural comparative study could have produced another important contribution to the field of comparing helicopter parenting and autonomy support across different cultures. Other investigators, although relatively few, have argued that helicopter parenting plays a positive role in students' life satisfaction, parent-child relations, and reducing drinking problems (Earle and Labrie 2016; Fingerman et al. 2012; Padilla-Walker and Nelson 2012). Further studies are needed that consider relational qualities, such as the mother-child relationship or parental warmth, as an explanatory mechanism, and students' individual characteristics, such as their personal perception of their control or autonomy, in different cultures and environments. Incorporating these results and considering more relevant variables, future studies should also consider the implications in terms of whether to encourage (Fingerman et al. 2012), discourage (Turrisi et al. 2010), or disregard helicopter parenting, or to find other ways to enhance helicopter parenting practices (Earle and LaBrie 2016). Because helicopter parenting is generally regarded to be problematic, a more in-depth investigation on the effects of helicopter parenting on student wellbeing outcomes is warranted.

It is notable to mention here that, although Schiffrin et al. (2014) reported a positive correlation between helicopter parenting and autonomy support in their study of American students, our results suggested that helicopter parenting and autonomy support were negatively correlated in the U.S. sample but not in the Korean sample. In our study, the level of American students' autonomy support was higher than that of Korean students, although the level of helicopter parenting did not show significant differences. Therefore, American students in our study may have had stronger perceptions of their parents' autonomy support than Koreans students did, which may have become explicit through the different associations between helicopter parenting and autonomy support across the two countries. We also noticed that while Schiffrin et al. investigated students at a small public liberal arts college in the mid-Atlantic region of the United States, Reed et al. (2016) examined students at a large public university in the southeastern region of the United States, our study focused on students at mid-sized private universities in the northeastern region of the United

States and the eastern region of Korea. The question is clearly posed whether location in the United States affected the correlation between helicopter parenting and wellbeing in a significant way. In contemplating the results, mediators, locations, and student characteristics of these studies, we realized that the relative weights of individual and relational characteristics in addition to cultural orientation should be considered because variations in the results may stem from those characteristics rather than cultural differences. Expanding upon the extant literature, these variables call for further investigation in various contexts. In addition to different results across studies in the literature being due to geographic location, we speculate that it is also possible that university size might have an impact, as students who need more support may seek out smaller schools rather than larger universities. While the knowledge base on helicopter parenting and autonomy support for college students must be built by expanding on previous literature, it would be helpful for future research to control for the effects of institution location and size in determining cultural differences between the populations studied.

In both the United States and Korea, mothers' autonomy support was strongly and significantly related to increased life satisfaction and better physical health through the mother-child relationship. Supporting the cultural-universality theory, we found that the mother's autonomy support was beneficial to children's psychological and physical wellbeing in both countries. It was significant to note that similar results were observed in both the United States and Korea in spite of individual and familial differences in these students across the two different cultures. Some previous work has indicated that the negative effects of parental control on psychological functioning are stronger in the West than in the East (Pomerantz and Wang 2007). Similarly, Wang et al. (2007) indicated that the beneficial effects of autonomy support on children's psychological wellbeing were generally stronger in the United States than in China. In the current study, however, the beneficial effects of autonomy support on student mental wellbeing through the mother-child relationship were similar for students from both the United States and Korea. Although Korean students, being from an Asian culture, value interpersonal connectedness and interdependence more highly due to their cultural orientation, and American students in Western culture value independence more, our results support the interpretation that young adults' psychological wellbeing and health are rooted in the parent-child relationship (Lutz et al. 2009). The feeling of understanding and connection between the mother and the child continues to be influential in various contexts and across different cultures, at least in Korea and the United States, as shown in this investigation and in others (Bornstein and Cheah 2006; Lutz et al. 2009; Mallers et al. 2010).

## Limitations

Some limitations of the study should be noted. First, the finding of this study is limited to generalize in the U.S. context because we only focused on the two-parent families. Before we chose the two-parent families in both American and Korean groups, we initially analyzed the hypothesized model with full samples. However, the measurement invariance test showed that the factor loadings were not equal between two groups (see Table 6). Therefore, although the hypothesized model with full sample showed similar significant relationships among study variables in both American and Korean groups (see Fig. 2), we did not use this model because the measurement invariance test was not supported. Regarding the hypothesized model with two-parent sample, although one fit index was low (e.g., CFI = 0.88), the other fit indices supported an acceptable model fit (RMSEA, SRMR,  $\chi^2/df$ ). Nonetheless, the scalar invariance test was not supported. Therefore, additional studies with the larger sample are required to generalize the hypothesized model in American and Korean contexts. Especially, we found positive association between helicopter parenting and parent-child relationship in the full sample model. Given that the full sample model includes both biological and stepfamilies, it would be interesting to see in future studies whether helicopter parenting is related to stepparent-child relationships and stepchildren's wellbeing. Second, in relation to the first limitation, one of the reasons that cultural differences were not found between the US and Korean samples in this study could be because the US sample was selected to match the family structure of the Korean sample (two-parent families). Therefore, it may be the case that there are cultural differences, however, they may have

been lost when we investigated the similar types of families across cultures. With a relatively less diverse US sample in our study, no cultural differences may have been found between these particular ethnic/racial groups of two parents families of American students and Korean students. Third, the study's findings were based on correlational data; therefore, no causal conclusions can be drawn from it. Fourth, the findings were based on student reports of their mothers' parenting practices and their mother-child relationship, life satisfaction, and physical health. Therefore, a single-informant bias issue might appear. Finally, we examined the effects of helicopter parenting and autonomy support in only two countries, each representing broadly Eastern or Western culture. Future studies should include additional countries to investigate more fully cultural similarities and differences and the roles of helicopter parenting and autonomy support in child outcomes. Another limitation lies in the testing of mediation using cross-sectional data, as the hypothesized temporal order of relations cannot be determined in this context. It may be the case that the students who function better have better relations with their mothers, thereby eliciting more autonomy-support behaviors from their mothers (Cole and Maxwell 2003).

Despite these limitations, the results of this study highlight important points for parenting practices, college students' functioning, and family research. Our data showed that providing greater autonomy support than helicopter parenting to children appears to enhance the mother-child relationship within the family and children's positive wellbeing in both of the countries and cultural backgrounds. Using the results of this single study, we are not able to make any recommendations for best practices on the

**Table 6** Results of the multiple group analysis between American and Korean students with full sample

Model/Model Description	$\chi^2$	<i>df</i>	$\chi^2/df$	CFI	RMSEA [CI <sup>a</sup> ]	SRMR	Model comparison	$\Delta\chi^2$ <sup>b</sup>	$\Delta df$ <sup>c</sup>
Single group analysis									
1. American students ( <i>n</i> = 416)	513.22	200	2.56	0.92	0.06 [0.05, 0.07]	0.06			
2. Korean students ( <i>n</i> = 204)	439.06	200	2.19	0.88	0.08 [0.07, 0.09]	0.08			
Measurement invariance test									
3. Unconstrained model without control variables	952.60	400	2.38	0.91	0.05 [0.04, 0.05]	0.06			
4. Unconstrained model with control variables	1216.80	570	2.13	0.90	0.04 [0.04, 0.05]	0.06			
5. Constrained factor loadings model without control variables	995.27	417	2.38	0.90	0.05 [0.04, 0.05]	0.07	5 vs. 3	42.67***	17
6. Constrained factor loadings model with control variables	1258.82	587	2.14	0.90	0.04 [0.04, 0.05]	0.07	6 vs. 4	42.02***	17

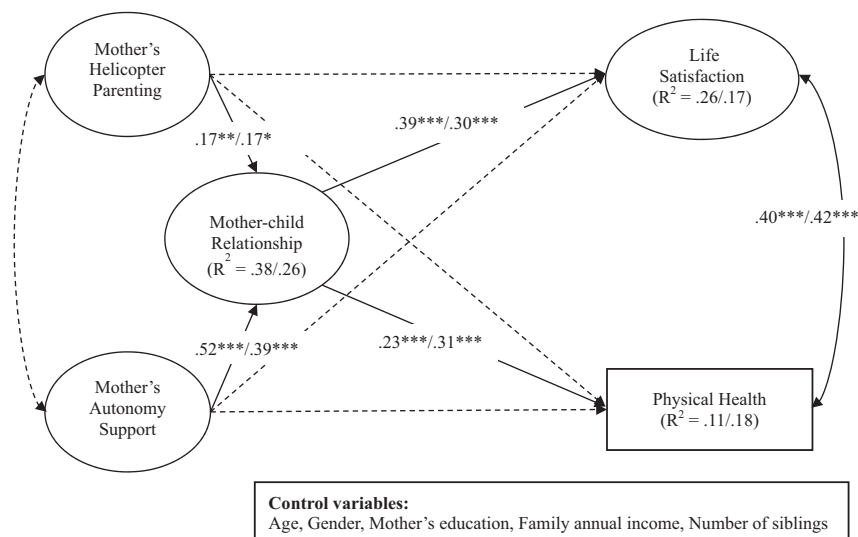
\*\*\**p* < 0.001

<sup>a</sup>90% confidence interval for RMSEA

<sup>b</sup>Difference in  $\chi^2$  values between models

<sup>c</sup>Difference in number of degrees of freedom between models

**Fig. 2** Results of the hypothesized model with full samples. The number to the left of the slash represents standardized coefficients for American college students. The number to the right of the slash represents standardized coefficients for Korean college students. Hence, the coefficients are presented as American college students/Korean college students. Dashed line represents an insignificant path. ns not significant. \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$



encouragement or discouragement of helicopter parenting. However, we believe our findings constitute strong evidence that parents' support of their children's autonomy is an important factor to consider in intentional efforts to enhance children's wellbeing while in college, in both the United States and Korea. Although an adverse judgment of the role of helicopter parenting in student outcomes is generally shared, we suspect more research is needed that would involve relevant mediators and moderators to consider cultural differences and better explain mechanisms of such relations. Family practitioners, educators, and parents are encouraged to realize that helicopter parenting, regardless of its location or cultural background, appears not to play a beneficial role in children's wellbeing, at least none that was found in this study. Such individuals may consider providing more autonomy support than helicopter parenting for their adult children because this approach seems more beneficial in enhancing children's positive wellbeing.

**Author Contributions** E.J.: designed and executed the study, assisted with the data analyses, and wrote the paper. W.H.: collaborated with the design, data analyses, and writing of the study. S.K.: collaborated with the design and data collection. H.S.: collaborated with data collection. Z.Z. and Y.Z.: collaborated with data collection and assisted with literature review. J.H.P.: assisted with data collection.

### Compliance with Ethical Standards

**Conflict of Interest** The authors declare that they have no conflict of interest.

**Ethical Approval** All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical

standards. Both Syracuse University and Yonsei University provided IRB approval for the study.

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

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