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## Parental Control and Adolescent Wellbeing in Chinese Adolescents in Hong Kong

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### **Abstract**

Based on the responses of 2,369 Chinese adolescents in Hong Kong (mean age = 14.2; 48.5% girls), the interaction effects of parental behavioral control and psychological control on adolescent wellbeing (indexed by life satisfaction and hopelessness) were examined. Results indicated that the interaction of paternal behavioral control and paternal psychological control was associated with adolescent life satisfaction. Paternal behavioral control had a stronger impact on adolescent life satisfaction when paternal psychological control was at a higher level than at a lower level. While the relationship between maternal behavioral control and life satisfaction was stronger for boys than for girls, maternal psychological control was negatively related to life satisfaction for girls but not for boys. Regarding adolescent hopelessness, both paternal and maternal psychological control moderated the relationship between paternal behavioral control and adolescent hopelessness. The relationships between paternal behavioral control and adolescent hopelessness were negative when either paternal or maternal psychological control was at lower levels, but the relationships became non-significant when parental psychological control was at higher levels. The study implies that there are interaction effects of parental behavioral control and psychological control on wellbeing among Chinese adolescents, which provides important insights on the development of the family socialization model.

**Keywords:** parental behavioral control, parental psychological control, moderation, life satisfaction, hopelessness, Chinese

## Introduction

Parental control plays an important role in the Chinese socialization process that carries a strong sense of parental responsibility, commitment and dedication in nurturing and guiding their children (Leung, Shek and Lin 2017). In the Chinese culture, parental control includes the elements of “*guan*” (monitoring) and “*jiao*” (training), which determine the proper behavior that their children need to obey (Chao 1994; Stewart et al. 1998). Children are expected to be obedient, control their desires, show good conduct and fulfil filial obligations towards their families (Wu 1996). Though some studies examined the impacts of parental control on adolescent development in different Chinese communities (Leung and Shek 2016a; Shek 2007; Wang, Pomerantz and Chen 2007), we still know little about how different forms of parental control (particularly behavioral control and psychological control) interact with each other to influence adolescent wellbeing, especially in the Chinese context. As such, this study attempted to examine the interaction effects of parental behavioral control and psychological control on adolescent wellbeing (indexed by life satisfaction and hopelessness) in Hong Kong, which provides important insights on the development of family process models applicable to the Chinese communities.

### Parental control

Parental control is a distinctive feature of Chinese socialization (Chao and Tseng 2002). Chao (1994) suggested that Chinese parental control embodies strong messages of “*guan*” (i.e., monitoring) and “*jiao*” (i.e., training). While “*jiao*” refers to the training of moral standards and family obligations of the children by their parents, “*guan*” indicates parental monitoring and supervision of their children to comply with family and social standards (Chao 1994). To exercise parental control, different strategies intrinsic to the Chinese culture were used, including conformity training, quest for self-suppression and self-contentment,

shame strategy, modesty requirement, and punishment orientation (Yang 1981).

There are two forms of parental control: behavioral control and psychological control. While behavioral control is defined as parenting practice where parents enforce rules and set up standards to regulate and monitor their children's behavior (Smetana and Daddis 2002), psychological control is the family pattern where parents "intrude upon or impede the child's individuation processes, or the relative degree of psychological distance a child experiences from his or her parents and family" (Barber, Olsen, and Shagle 1994, p. 1121). The former focuses on parental awareness of the children's whereabouts, companions and daily routine, as well as regulation and monitoring of the children's behavior (Brown, Mounts, Lamborn and Steinberg 1993; Pettit, Laird, Dodge, Bates and Criss 2001), whereas the latter emphasizes parental attempts to inhibit children's autonomy and self-determination by means of invalidation of child's perspective, love withdrawal, guilt induction, instillation of child's anxiety and constraint of verbal communication (Barber 1996; Barber, Stolz and Olsen 2005; Soenens and Vansteenkiste 2010). According to Shek (2006b), Chinese parental control is a special combination of behavioral control and psychological control. In particular, parental control is an effective strategy to build up children's undisputable compliance towards their parents and maintain a high moral standard to protect the family's name from dishonor (Shek 2006b).

### **Parental control and adolescent wellbeing**

Theoretically, adolescents strive for greater independence and autonomy during the individuation process in adolescence (Daniels 1990; Grotevant and Cooper 1986). Though parental behavioral control may propose some restrictions for the adolescents to comply, this parenting strategy offers parental supervision, monitoring and guidance to regulate adolescent behavior, which is essential for adolescents to internalize the norms and standards of the

society (Barber et al. 2005; Patterson, Reid and Dishion 1992). Hence, parental behavioral control serves as a positive family function by enhancing behavioral regulation of adolescent children (Pettit et al. 2001). In contrast, psychological control inhibits adolescents' autonomy and self-direction by intruding into their psychological world and keeping them emotionally attached to their parents (Barber et al. 2005; Steinberg 1990). Adolescents lack the sufficient "space" to develop their independence as well as self-assertion to pursue their personal identity, which may adversely influence adolescent wellbeing (Barber 1996; Barber et al. 2005; Garber, Robinson and Valentiner 1997). Moreover, the suppression of personal emotions and induced guilt and shame further leads to adolescent internalizing problems such as depression, anxiety and withdrawal (Barber 1996; Barber and Harmon 2002), especially when a sense of insecurity and learned helplessness is experienced (Abramson, Metalsky and Alloy 1989). Specific to the Chinese communities, recent studies showed that behavioral control enhanced adolescent academic functioning and psychological competence (Leung and Shek 2013; Wang, Pomerantz and Chen 2007), whereas psychological control inhibited adolescent emotional functioning and self-identity (Shek 2007; Wang, Pomerantz and Chen 2007).

### **Interaction effects of behavioral control and psychological control on adolescent wellbeing**

Soenens and Vansteenkiste (2010) suggested that behavioral control and psychological control are "orthogonal" in nature, where behavioral control determines the "what" of parenting (i.e., clear rules and standards), and psychological control suggests the "how" of parenting (i.e., how these clear rules and standards are communicated to their children). According to some researchers (e.g., Gronlneck, 2003; Reeve, 2002), parental expectations and standards can be conveyed in an autonomy-supportive manner (i.e., less psychological control) or they can be communicated in a psychological controlling manner (i.e., more

psychological control). For instance, if the parents want to know the whereabouts of their children and set standard on the expected time when they ought to go back home, the parents can show their concerns on the children's safety and allow adolescents to decide (i.e., autonomy-supportive style), or they can convey the message by inducing shame and guilt (i.e., a psychological controlling style). The choice of using autonomy-supportive style versus psychological controlling style would affect the impact of behavioral control on adolescent wellbeing because it determines whether the message is conveyed to and accepted by the child. In other words, we expect that there would be interaction effect of behavioral control and psychological control on adolescent wellbeing. Unfortunately, research on examining the interaction of behavioral control and psychological control on child wellbeing is scarce.

Theoretically, adolescents show better wellbeing when they experience more behavioral control and less psychological control. Behavioral control is regarded as a "positive socialization strategy" that promote adolescent wellbeing (Caron et al. 2006), especially in the Chinese communities where "*guan*" (i.e., monitoring) and "*jiao*" (i.e., training) are stressed (Chao 1994). On the contrary, psychological control is an "intrusive parenting strategy" that dampens adolescent wellbeing (Barber and Harmon 2002; Caron et al. 2006). Hence, a higher level of behavioral control and a lower level of psychological control represent a desirable parenting strategy for adolescent behavioral regulation without intruding into their psychological world. In contrast, evidence from the U.S. has suggested that adolescents show poorer wellbeing when they perceive low behavioral control but high psychological control, which is an indication of parental hostility and coerciveness (Barber and Harmon 2002; Pettit et al. 2001). Furthermore, adolescents show lower levels of wellbeing when both behavioral control and psychological control are of low levels, which indicate a lack of supervision and attention from their parents (i.e., neglectful parenting; Logan-Greene and Jones 2015). Lastly, evidence from the U.S. has shown that high levels of

behavioral control are generally associated with poorer adolescent wellbeing when parents also exercise high levels of psychological control because the combination of two controlling strategies may make adolescents feel “smothered” and frustrated to meet with the demands (Caron et al. 2006). However, there is an alternate argument that Chinese parental control contains special features of training on conformity, self-suppression, shame strategies and punishment inclination (Yang 1981), which may transform psychological control into a “booster” of behavioral control that enforces parents’ rules and standards. As suggested by Markus and Kitayama (2003), Asian adolescents “don't appear to suffer any obvious negative consequences of the enormous pressure that is placed on them to achieve and live up to family expectations; in fact, they flourish” (p. 4). Clear parental expectations and standards are acknowledged and observed by Chinese adolescents when pressure is placed on them (Markus and Kitayama 2003). Hence, we hypothesize that stronger psychological control may link to better adolescent psychological outcomes when there is a higher level of behavioral control in the Chinese communities.

Among the limited studies on the interaction effects of behavioral control and psychological control, the results are equivocal in the U.S. context. While some studies show non-significant interaction effects (Garber, Robinson and Valentiner 1997; Roger, Buchanan and Winchell 2003), there are some studies showing that behavioral control and psychological control interacted to show positive effects on children’s internalizing and externalizing problems (e.g., Caron, Weiss, Harris and Catron 2006; Galambos, Barker and Almeida 2003). For instance, Caron and her colleagues (2006) found that a higher level of psychological control was related to a higher level of children’s internalizing and externalizing problems when there was a high level of behavior control. When there was a low level of psychological control, behavior control was related to a lower level of children’s externalizing problems and was unrelated to internalizing problems. Hence, we need more

scientific evidence in this field.

### **Effects of adolescent gender on the relationship between parental control and adolescent wellbeing**

There is limited evidence on gender differences in adolescents' experience of parental control, nor is there consistent empirical support for the moderating effect of adolescent gender (Barber and Harmon 2002; Soenens and Vansteenkiste 2010). Theoretically, as boys are more impulsive (Maccoby 1990; Rosenfield, Vertefuille and McAlpine 2000), behavioral control offers proper guidelines for adolescent to observe, which helps adolescent boys build up socially approved standards in their lives. On the contrary, girls are generally more sensitive to affective responses of parents (Rogers, Buchanan and Winchell 2003). Hence, psychological control may have greater impact on adolescent girls than boys, as girls may be more vulnerable to psychological distance from their parents. There is evidence showing that girls expressed more internalizing problems to psychological control than did boys in the U.S. (Pettit et al. 2001; Rogers, Buchanan and Winchell 2003).

It is also insightful to examine how parent gender and adolescent gender interacts to influence the impact of parental control on adolescent wellbeing. As mothers in Hong Kong typically spend more time with adolescents and perform more controlling roles than do fathers (Leung and Shek 2012; Shek 2008), it was hypothesized that: a) the association between maternal behavioral control and adolescent wellbeing would be stronger for boys than girls, and b) the association between maternal psychological control and adolescent wellbeing would be stronger for girls than boys.

### **The present study**



This study attempted to examine the relationship between perceived parental control (behavioral and psychological) and subjective wellbeing of Chinese adolescents in Hong Kong. In this study, two attributes of subjective wellbeing (life satisfaction and hopelessness) were used as the outcome variables. While life satisfaction refers to one's perception about one's quality of life (Diener 1984), hopelessness is one's negative perceptions about one's own future (Beck, Weissman, Lester and Trexler 1974). There are two reasons for using life satisfaction and hopelessness as the outcome variables. First, previous studies on parental control mainly focused on internalizing and externalizing problems of adolescents (Barber et al. 2005; Bean, Barber and Crane 2006; Pettit et al. 2001). Comparatively, less emphasis was put on the subjective wellbeing of adolescents, which can be regarded as the positive aspect of well-being. Though some studies used subjective wellbeing as the outcome measures (Shek 2007), the interaction effects of behavioral control and psychological control on subjective wellbeing remained unexplored. Second, life satisfaction and hopelessness are important wellbeing attributes that describe adolescents' perceptions of their qualities of life at present and in future. As adolescence is the stage in which an individual explores oneself and one's relationship with the external world (Erikson 1968), life satisfaction and hopelessness are important indicators that determine one's adaptive functioning (Antaramian, Huebner and Valois 2008). There are three research questions in this study:

Research Question 1: What are the associations between paternal and maternal control (behavioral and psychological) and adolescent subjective wellbeing (indexed by life satisfaction and hopelessness) of Chinese adolescents in Hong Kong? Based on different theoretical accounts (Barber et al. 2005; Pettit et al. 2001; Steinberg 1990) and previous research findings (e.g., Shek 2007; Wang, Pomerantz and Chen 2007), it was hypothesized that paternal and maternal behavioral control would be positively associated with life satisfaction (Hypothesis 1a and 1b) and negatively related to hopelessness of adolescents

(Hypotheses 1c and 1d), whereas paternal and maternal psychological control would be negatively associated with adolescent life satisfaction (Hypothesis 1e and 1f) and positively related to adolescent hopelessness (Hypotheses 1g and 1h).

Research Question 2: Are there any interaction effects between parental (paternal and maternal) behavioral control and psychological control on life satisfaction and hopelessness of Chinese adolescents in Hong Kong? Based on the “orthogonal” account of behavioral control and psychological control (Soenens and Vansteenkiste 2010) and previous studies (Caron et al. 2006), it was hypothesized that there would be interaction effects of behavioral control and psychological control on adolescent life satisfaction and hopelessness. Specifically, when behavioral control was at lower levels, there would be lower levels of life satisfaction and higher levels of hopelessness of adolescents when psychological control was at higher levels (Hypotheses 2a and 2b). However, at high levels of behavioral control, there are different views on whether psychological control pressurizes adolescent children, or it interacts with behavioral control to affirm parental standards (Caron et al. 2006; Markus and Kitayama 2003). As there is not much empirical evidence in this area, our analyses should be considered as exploratory.

Research Question 3: Does adolescent gender moderate the associations between parental control and wellbeing (indexed by life satisfaction and hopelessness) of Chinese adolescents in Hong Kong? Previous studies (Leung and Shek 2012, Shek 2008) showed that mothers took up stronger control over their children than did fathers. As boys are regarded to be more rebellious and impulsive who need more behavioral regulations (Rosenfield, Vertefuille and McAlpine 2000), it was hypothesized that the associations between maternal behavioral control and adolescent wellbeing (indexed by life satisfaction and hopelessness) would be stronger for boys than girls (Hypothesis 3a and 3b). On the contrary, as girls are more vulnerable to psychological distance from the parents (Pettit et al. 2001), it was

hypothesized that the associations between maternal psychological control and adolescent wellbeing (indexed by life satisfaction and hopelessness) would be stronger for girls than boys (Hypotheses 3c and 3d).

## Method

### Participants

The sample was recruited from 12 secondary schools across Hong Kong. In Hong Kong, the secondary schools are categorized into three bands according to the academic performance of the students in the last two years of primary school study. Among the 12 participating schools, 3 belonged to the first band (admitting students with the best academic results), 4 belonged to the second band (admitting students with fine academic results) and 5 belonged to the third band (admitting students with the poorest academic results). A total of 2,515 students studying Secondary 2 and 3 (Grades 8 and 9 in the U.S. system) were invited to participate in this study. Among them, 2,369 students joined the study, with a response rate of 94.2%.

Among 2,369 students, 1,209 were boys (51.0%) and 1,149 girls (48.5%) were girls (11 did not respond). The mean age was 14.24 ( $SD = 0.98$ ), with 1,237 (52.2%) Secondary 2 (Grade 8 in the U.S.) students and 1,110 (46.9%) Secondary 3 (Grade 9 in the U.S.) students (missing data in 22 respondents). Majority of the respondents were Hong Kong born ( $n = 1,770$ , 74.7%), or had migrated to Hong Kong for 10 or more years ago ( $n = 311$ , 13.1%). Others were immigrants from mainland China who had resided in Hong Kong for less than 10 years ( $n = 262$ , 11.1%). There were 1,737 students (73.3%) growing up in intact families, while 530 students (22.4%) were from non-intact families (divorced, widowed, separated, remarried) (4.3% did not respond). While 1,199 respondents (50.6%) had one sibling, 681 respondents (28.7%) were only children and 472 respondents (20.0%) had more

than one sibling.

## **Procedures**

During data collection, the respondents and their parents were given information about the research purposes, procedures of data collection, the right to voluntarily participate in and withdraw from the study. Written informed consent from the respondents and their parents were obtained. The author or trained research assistants delivered the questionnaires that contained measures of perceived paternal and maternal behavioral control and psychological control, life satisfaction, and hopelessness to the students in class. Those who did not participate in the study were assigned to do some assignments. The respondents were given adequate time to complete the questionnaires. To safeguard the ethical standard of human research, ethical approval was obtained from the Human Subjects Ethics Sub-committee of an internationally recognized university.

## **Measurements**

### *Parental behavioral control*

*The Chinese Paternal/Maternal Behavioral Control Scale (PCON/MCON)*. PCON/MCON (Shek 2006b; Shek and Law 2014) was developed based on the literature on parental knowledge, monitoring and expectations (Kerr and Stattin 2000; Pettit et al. 2001). Each item is rated on a four-point Likert scale ranging from “1 = strongly disagree” to “4 = strongly agree”. A sample item is “My father/mother expects me to behave well in school”. A seven-item short form was adopted for the present study, with good psychometric properties in previous studies (Shek 2006b; Shek and Law 2014). Higher mean scores of PCON/MCON represent higher levels of paternal/maternal behavioral control. Both PCON and MCON showed good reliability in this study (PCON:  $\alpha = 0.87$ ; MCON:  $\alpha = 0.89$ ).

### *Parental psychological control*

*Chinese Paternal/Maternal Psychological Control Scale (PPSY/MPSY)*. Based on literature related to psychological control (Barber 1996, 2002), PPSY/MPSY was developed by Shek (2006a). Each item is rated on a four-point Likert scale ranging from “1 = strongly disagree” to “4 = strongly agree”. A sample item is “My father/mother always wants to change my views to fit his/her standard”. The scales showed good reliability and validity in previous studies (Shek 2006a). Higher mean scores of the PPSY/MPSY indicate higher level of paternal/maternal psychological control. PPSY and MPSY showed good reliability in this study (PPSY:  $\alpha = 0.84$ ; MPSY:  $\alpha = 0.89$ ).

### *Life satisfaction*

*Chinese Satisfaction with Life Scale (CSWLS)*. The *Satisfaction with Life Scale* (Diener, Emmons, Larsen and Griffin 1985) was used to assess one’s perception of life satisfaction, Shek (1992) translated it into CSWLS that can be applied in the Chinese community. A sample item reads “The conditions of my life are excellent”. Each item is rated on a 6-point Likert scale from 1 (strongly disagree) to 6 (strongly agree). Higher mean scores of CSWLS indicate higher level of one’s satisfaction with life. The CSWLS showed good reliability ( $\alpha = 0.86$ ).

### *Hopelessness*

*Chinese Hopelessness Scale (CHOPEL)*. Based on Hopelessness Scale developed by Beck et al., (1974), Shek (1993) translated and modified the CHOPEL that showed good psychometric properties in Chinese samples (Shek 1993, 2003). A five-item CHOPEL was used in the study (Shek and Li 2016). A sample item reads “The future seems vague and

uncertain to me”. Each item is rated on a 6-point scale from 1 (strongly disagree) to 6 (strongly agree). High mean scores of CHOPEL indicate higher levels of one’s perceptions of hopelessness. The CHOPEL showed good internal consistency in this study ( $\alpha = 0.90$ ).

### **Data Analyses**

Structural equation modelling using AMOS 23.0 was adopted to examine the main and interaction effects of behavioral control and psychological control on adolescent life satisfaction and hopelessness. The scores of paternal behavioral control, maternal behavioral control, paternal psychological control and maternal psychological control were mean-centered. Six interaction terms including “paternal behavioral control X paternal psychological control”, “maternal behavioral control X maternal psychological control”, “paternal behavioral control X maternal psychological control”, “maternal behavioral control X paternal psychological control”, “paternal behavioral control X maternal behavioral control” and “paternal psychological control X maternal psychological control” were constructed. To test the main and interaction effects between parental behavioral control and psychological control on adolescent life satisfaction, a structural model on the prediction of adolescent gender, paternal behavioral control, maternal behavioral control, paternal psychological control, maternal psychological control, and the six interaction terms on adolescent life satisfaction was tested. Three sets of indices were used to reflect the goodness-of-fit of the tested models, including (i) Chi-square ( $\chi^2$ ) test having a non-significant probability value (Hu and Bentler 1999); (ii) the Normed Fit Index (NFI) and Comparative Fit Index (CFI) values greater than .90 for a good model fit; and (iii) the Root Mean Square Error of Approximation (RMSEA) lower than .06 for a good model fit, and between .06 and .08 for an acceptable model fit (Hu and Bentler 1999). The effects of the main and interaction terms on adolescent life satisfaction were estimated. Identical procedures were

performed with adolescent hopelessness as the outcome variable.

To understand the influence of a significant interaction effect of parental behavioral control and psychological control, simple slope analyses (Cohen et al. 2003) on the regression of adolescent wellbeing (life satisfaction and hopelessness) by the predictor were conducted at high (1 *SD* higher than the mean) and low levels (1 *SD* lower than the mean) of the moderator.

To examine the difference of the tested model between adolescent boys and girls, multiple group analyses using structural equation modeling (SEM) were performed. The Chi-square difference test was employed to test the model difference between adolescent boys and girls.

## **Results**

### **Preliminary analyses**

The descriptive statistics of the measuring variables are listed in Table 1. As predicted, correlational analyses showed that adolescent life satisfaction was positively associated with paternal and maternal behavioral control; adolescent hopelessness was negatively related to paternal behavioral control, but positively related to paternal and maternal psychological control. Adolescent gender was also associated with maternal behavioral control, paternal and maternal psychological control, and life satisfaction, with girls perceiving higher maternal behavioral control, lower paternal and maternal psychological control, and lower life satisfaction than did boys. School banding was negatively associated with maternal control and positively related to adolescent life satisfaction. Adolescents growing up in intact families showed more paternal and maternal behavioral control and life satisfaction, but displayed less perceived maternal psychological control. Number of siblings was positively related to adolescent hopelessness. The results are presented in Table 1.

Full information maximum likelihood (FIML) estimation was used to handle missing data (Arbuckle 2007). The skewness and kurtosis values of all measuring variables were less than 2 and 7 respectively (Table 1), supporting the multivariate normality assumptions (Curran et al. 1996). Hence, the maximum likelihood method was adopted in the analyses.

### **Main effects and interaction effects of parental behavioral and psychological control on adolescent wellbeing**

School banding, family intactness and number of siblings were controlled for in the analyses. Regarding adolescent life satisfaction, the structural model (SM1) showed a good fit of the data, with CFI = .949 and NFI = .942 ( $> .90$ ; Hu and Bentler 1999); RMSEA = .055 ( $< .06$ ; Hu and Bentler 1999). While paternal and maternal behavioral control were positively associated with adolescent life satisfaction, paternal and maternal psychological control were negatively related to adolescent life satisfaction. These findings give support to Hypotheses 1a, 1b, 1e and 1f. The interaction term of “paternal behavioral control X paternal psychological control” was positively associated with adolescent life satisfaction. A simplified model (SM2) omitting the non-significant regression paths (i.e., setting the non-significant regression paths as zero) was also tested. The *Akaike's Information Criterion* (AIC) value of the simplified model (SM2) was smaller than that of the full model (SM1) (Table 2), suggesting that the simplified model (SM2) had a better fit to the data (Burnham and Anderson 2002). The regression coefficients of the independent variables and interaction terms on adolescent life satisfaction of the simplified model (SM2) are shown in Table 3. When adolescents perceived lower levels of paternal behavioral control, adolescents exhibited higher levels of life satisfaction when they also perceived lower levels of paternal psychological control. However, when adolescents perceived higher levels of paternal behavioral control, adolescents reported higher levels of life satisfaction regardless of



different levels of paternal psychological control (Figure 1). Simple slope analyses showed that the relationship between paternal behavioral control and adolescent life satisfaction was stronger when adolescents perceived higher than lower levels of paternal psychological control (Table 4).

For adolescent hopelessness, the structural model (SM3) also showed a good fit to the data, with CFI = .948 and NFI = .941 ( $> .90$ ; Hu and Bentler 1999); RMSEA = .053 ( $< .06$ ; Hu and Bentler 1999). It was found that paternal and maternal behavioral control were negatively related to adolescent hopelessness, but paternal and maternal psychological control were positively associated with adolescent hopelessness. These findings support Hypotheses 1c, 1d, 1g and 1h. The interaction term of “paternal behavioral control X maternal psychological control” was positively associated with adolescent hopelessness (Table 3), and the interaction term of “paternal behavioral control X paternal psychological control” was marginally linked with adolescent hopelessness. Similarly, a simplified model (SM4) omitting the non-significant regression paths showed a smaller *AIC* value when compared with the full model (SM3), indicating that a simplified model had a better model fit (Table 2). Simple slope analyses (Table 4) and the plotted graph (Figure 2) showed that when paternal behavioral control was at lower levels, adolescents reported higher levels of hopelessness when there were higher levels of paternal psychological control. Furthermore, when adolescents perceived higher levels of paternal behavioral control, adolescents reported the lowest levels of hopelessness when there was a low level of paternal psychological control. Similar patterns were observed in the interaction effect between paternal behavioral control and maternal psychological control on adolescent hopelessness (Figure 3). In summary, simple scope analyses showed that the relationship between paternal behavioral control and adolescent hopelessness was negative when adolescents perceived lower levels of either paternal or maternal psychological control, but the relationship became non-significant

when adolescents perceived higher levels of either paternal or maternal psychological control (Table 4). Hypotheses 2a and 2b were partially supported.

### **Effects of gender on the associations between parental control and adolescent wellbeing**

Regarding life satisfaction, multiple group analyses were performed to examine the difference of the main effects of parental control (behavioral and psychological) and their interaction effects on adolescent life satisfaction between adolescent boys and girls. Results suggested that both unconstrained model (i.e., all predictive paths were set freely across adolescent gender) and the constrained model (i.e., all predictive paths were set to be equal across adolescent gender) showed an acceptable data fit, with CFI = .975 and .964, NFI = .973 and .960, and RMSEA = .062 and .055, respectively (Hu and Bentler 1999; Table 5). Chi-square difference tests showed that there was significant difference between two models, with  $\chi^2 = 29.90$  ( $p < .01$ ). Subsequent chi-square difference tests were performed by constraining one regression path across adolescent gender to be equal at one time, showing that there were significant differences between adolescent boys and girls on the relationships between maternal behavioral control and adolescent life satisfaction, with  $\chi^2 = 5.51$  ( $p < .05$ ), and between maternal psychological control and adolescent life satisfaction, with  $\chi^2 = 11.31$  ( $p < .01$ ) respectively (Table 5). Simple slope analyses showed that the relationship between maternal behavioral control and adolescent life satisfaction was stronger in boys ( $\beta = .27$ ,  $p < .001$ ) than in girls ( $\beta = .16$ ,  $p < .001$ ; Table 4). Furthermore, the relationship between maternal psychological control and adolescent life satisfaction was negative in girls ( $\beta = -.17$ ,  $p < .001$ ), but was non-significant in boys ( $\beta = -.01$ ,  $p > .05$ ; Table 4). Figures 4 and 5 showed the relationships between maternal behavioral / psychological control and adolescent life satisfaction across adolescent gender respectively. Hypothesis 3a and Hypothesis 3c were supported.

For adolescent hopelessness, Chi-square difference tests indicated that there was non-significant difference between unconstrained model and constrained model on the main effects and interactive effects of parental behavioral and psychological control on adolescent hopelessness across adolescent gender, with  $\chi^2 = 7.37$  ( $p > .05$ ). Adolescent gender did not moderate the relationship between parental control (behavioral and psychological) and adolescent hopelessness (Table 5).

Further multiple group analyses were performed to examine whether there were differences of the tested models between intact and non-intact families, only children and adolescents having siblings, and among different school bandings respectively. The results indicated that there was invariance of the tested model between intact and non-intact families, only children and adolescents having siblings, and among different school bandings respectively (Table 5).

## Discussion

The study examined the main effects and interaction effects of perceived parental behavioral control and psychological control on the wellbeing (indexed by life satisfaction and hopelessness) of Chinese adolescents in Hong Kong. Relative to psychological control, behavioral control had a stronger association with adolescent life satisfaction. In contrast, psychological control showed a stronger association with adolescent hopelessness when compared with behavioral control. In the Chinese culture, behavioral control represents “*guan*” (monitoring) and “*jiao*” (training), which sets out moral standards (e.g., good behavior, family obligations) for their children to follow (Ho 1994). Hence, behavioral control not only gives proper guidelines to the adolescents, but also encompasses parental involvement and expectations that shape adolescent good behavior in the Chinese communities (Chao 1994; Stewart et al. 1998). Chinese adolescents show greater life

satisfaction when they are nurtured in families with stronger parental commitment and clearer standards (Shek 2007). On the contrary, hopelessness is the negative emotional state where adolescents lose their aspirations of the future. As psychological control triggers negative emotional expressions such as shame, guilt and despair, it is reasonable that there is greater adolescent hopelessness when adolescents perceive higher levels of paternal and maternal psychological control (Barber and Harmon 2002).

Furthermore, our pioneer findings indicate that the interaction between paternal behavioral control and paternal psychological control was linked to adolescent life satisfaction. There is evidence that fathers take up fewer parenting tasks than do mothers in Chinese communities (Leung and Shek 2012; Shek 2008). However, based on the patriarchal nature of Chinese parenting, paternal parenting is more influential to adolescent development when fathers participate in the socialization process (Lamb and Lewis 2010; Shek 1999). Hence, paternal psychological control may modify the relationship between paternal behavioral control and adolescent wellbeing.

The findings provide some support for the family process model (Barber et al. 2005). When adolescents perceived lower levels of behavioral control, adolescents reported lower levels of life satisfaction as a whole because of the weak guidance and instructions from their fathers, which is an indication of a loss of paternal concern and involvement to their development (Chao 1994; Leung 2016). The situation becomes worse when fathers exercise a high level of psychological control as well. Adolescents may experience cruelty and coercion from fathers, which may lead to resentment and emotional disturbance (Barber and Harmon 2002). Hence, among families having lower levels of paternal behavioral control, adolescents reported lower levels of life satisfaction when they perceived higher levels of paternal psychological control.

Interestingly, paternal psychological control serves as a catalyst that moderates the association between paternal behavioral control and adolescent life satisfaction. When adolescents perceived more paternal behavioral control, adolescent life satisfaction increased when adolescents also perceived more paternal psychological control. As paternal behavioral control represents the commitment, concern and expectations of fathers to adolescent development (Chao 1994; Leung 2016), adolescents may make meaning to paternal psychological control as paternal expectations to enforce family rules and standards. Adolescents become clearer on their fathers' instructions and follow the guidelines and standards, which help to enhance their wellbeing by obeying the family rules and performing socially approved behavior (Leung and Shek 2016b; Markus and Kitayama 2003). This is especially salient when fathers participate less in parenting in the Chinese communities because of gender role differentiation (Leung and Shek 2012; Shek 2008). Paternal involvement in behavioral control is highly valued by adolescents as a sign of concern, love and commitment of their fathers on their development (Chao 1994; Shek 2005), which enhances their life satisfaction regardless of the levels of paternal psychological control that they have anticipated.

For adolescent hopelessness, paternal and maternal psychological control moderated the association between paternal behavioral control and adolescent hopelessness. When adolescents perceive less parental psychological control, they can easily link behavioral control with parental expectations and commitment to their development, which may induce hope of adolescents. On the contrary, when adolescents perceive more psychological control, they may feel inferior and anxious because of parental intrusion and love withdrawal, and fail to recognize the genuine message behind behavioral control, i.e., to enforce family rules and standards. Hence, behavioral control does not reduce adolescent hopelessness when psychological control is at high levels because behavioral control is probably seen in a

negative light.

Furthermore, the results give support to the conjecture that maternal control has a stronger association with life satisfaction in boys than girls. As mothers take up more supervision and monitoring roles than do fathers (Leung and Shek 2012; Shek 2008), it is reasonable that the moderating effects happen in maternal control rather than paternal control. The findings provide evidence that maternal behavioral control is important in guiding adolescent boys to control their impulsive behavior (Rosenfield, Vertefuille and McAlpine 2000), and build up their socially approved standards. On the contrary, the association between maternal psychological control and life satisfaction was negative in girls, but the relationship was non-significant in boys. As girls are generally more sensitive to parental affective responses than are boys, psychological distance and affective withdrawal emerging from psychological control may lead to more emotional problems for girls than boys (Pettit et al. 2001). As mothers are physically and psychologically closer to children due to their caring roles in the family, maternal psychological control is more impactful to adolescent wellbeing than is paternal psychological control (Leung and Shek 2012).

There are several theoretical and practical implications of the study. First, it is insightful to identify that behavioral control has a stronger association with adolescent life satisfaction, whereas psychological control is linked to adolescent hopelessness. In fact, parents may affect different aspects of adolescent wellbeing via different parental control strategies. Hence, rather than considering subjective wellbeing as a unidimensional attribute, it is essential to examine the familial influence on different dimensions of adolescent wellbeing.

Second, the findings suggest that there are interaction effects between paternal behavioral control and paternal psychological control on adolescent life satisfaction and hopelessness, and between paternal behavioral control and maternal psychological control on adolescent hopelessness. In the Chinese culture, parents are inclined to be more controlling of

their children's behavior (Leung and Shek 2016a; Wang, Pomerantz and Chen 2007) and use different strategies (e.g., strict parenting, love withdrawal, use of shame) to enforce the rules and build up compliance of their children (Shek 2007). The findings suggest that at higher levels of paternal behavioral control, adolescents reported higher life satisfaction even when they experienced higher levels of paternal psychological control. The results support the unique feature of Chinese parenting that adolescents may interpret psychological control as a "booster" of paternal enforcement of family rules and regulations (Markus and Kitayama 2003), which is regarded as paternal commitment and involvement on their development. Echoing the comments of Markus and Kitayama (2003) that Asian children are "inordinately" responsive to the expectations of insistent and demanding parents" (p.4), the findings add an important empirical evidence to the existing literature.

Third, the study revealed that maternal behavioral control was associated with better life satisfaction in boys, whereas maternal psychological control was linked with poorer life satisfaction in girls, which brings valuable insights on the gender study on the impacts of Chinese socialization on adolescent wellbeing.

Practically, family practitioners and youth counselors may need to be sensitive to the controlling behavior of parents that may affect adolescent life satisfaction and hopelessness. Though Chinese parents regard parental control as "training" and "monitoring" that illustrate their concern and commitment (Chao 1994), their ways to exercise parental control affect adolescent subjective wellbeing. Family practitioners can help parents exercise parental control more effectively. Furthermore, though paternal psychological control enhances the positive relationship between behavioral control and adolescent life satisfaction, it weakens the negative relationship between paternal behavioral control on adolescent hopelessness. Hence, family practitioners and youth counselors may need to be aware of parent-child interaction in the families, and the psychological responses of adolescents.

There are several limitations of the study. First, the data were based on a cross-sectional study which has the limitation to infer causal effects of the relationships between parental control and adolescent subjective wellbeing. Hence, a longitudinal study is suggested in future studies. Second, the data were collected from the perspectives of adolescents. It is deemed to consider the adolescents' perspectives as adolescents are the "recipients" of family contributions (Elstad & Stefansen, 2014) and the ways they make meanings to parental control is in fact critical in affecting their subjectively wellbeing (Leung, Shek and Lin 2017). However, parents may have different perceptions of parental control and their perspectives are also important in examining the relationship (Leung, Shek and Lin 2017). Hence, it is more methodologically favorable when both parents' and adolescents' perspectives are considered together. Third, the data were based on a Chinese sample in Hong Kong. It is suggested to replicate the study in other Chinese communities (e.g., mainland Chinese, American Chinese) to replicate the findings in different Chinese populations.

Despite these limitations, the study provides important insights on the interactive effects of behavioral control and psychological control on adolescent subjective wellbeing. The study also shows the effects of different aspects of parental control on adolescent life satisfaction and hopelessness across adolescent gender. As commented by Soenens and Vansteenkiste (2010), an important future direction of family research is "to develop culturally sensitive assessments of psychological control that better allow participants and researchers to grasp the specific meaning and expression of psychological control in different cultural and ethnic contexts" (p.95). The present study reveals that behavioral control plays an important role on enhancing adolescent subjective wellbeing whereas psychological control alters the relationship between behavioral control and adolescent wellbeing, which contributes to the future studies of the family and adolescence in the Chinese communities.



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**Table 1.** Correlations of the measuring variables

	Range	Mean	SD	Skewness	Kurtosis	Cronbach's alpha	1	2	3	4	5	6	7	8	9
1. Paternal behavioral control	1-4	2.49	.65	-.27	.10	.89									
2. Maternal behavioral control	1-4	2.83	.63	-.48	.63	.89	.48***								
3. Paternal psychological control	1-4	2.19	.72	.33	-.17	.84	.29***	.18***							
4. Maternal psychological control	1-4	2.28	.79	.29	-.46	.89	.11***	.25***	.49***						
5. Hopelessness	1-6	3.06	1.21	-.24	-.07	.90	-.04*	-.03	.22***	.25***					
6. Life satisfaction	1-6	3.84	1.07	.26	-.39	.86	.31***	.30***	.01	-.01	-.30***				
7. Adolescent gender (boys = -1, girls = 1)	N.A.	N.A.	N.A.	.05	-1.99	N.A.	.02	.09***	-.07***	-.05*	.03	-.09***			
8. School banding	1-3	2.02	.82	-.05	.05	N.A.	-.00	-.05*	.02	.03	.03	.04*	-.26***		
9. Family intactness (non-intact = -1, intact = 1)	N.A.	N.A.	N.A.	-.13	-.30	N.A.	.08***	.06**	.01	-.04*	-.04	.09***	.03	.14***	
10. Sibling number	0-4	.87	N.A.	1.10	-1.77	N.A.	-.02	-.02	.04	.02	.05*	.02	.07**	.02	.08***

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$



Table 2. Goodness-of-fit indices on the structural models of the main and interactive effects of behavioral control and psychological control to adolescent wellbeing

Outcome	Model	Description	$\chi^2$	$df$	CFI	NFI	RMSEA	AIC	Group comparison	$\Delta\chi^2$	$\Delta df$
Life satisfaction	Structural model:										
	SM1	Full model (with all predictors and interaction terms)	399.47***	49	.949	.942	.055	571.474			
	SM2	Simplified model (omitting non-significant predictors)	401.62***	54	.949	.942	.052	563.474	SM2 & SM1	2.15	5
Hopelessness	Structural model:										
	SM3	Full model (with all predictors and interaction terms)	396.67***	49	.948	.941	.053	523.750			
	SM4	Simplified model (omitting non-significant predictors)	400.40***	53	.948	.941	.055	420.383	SM4 & SM3	3.72	4

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

**Table 3.** Father (mother) and adolescent reports of paternal (maternal) sacrifice as a predictor of adolescent developmental outcomes

		Adolescent					
		Life satisfaction			Hopelessness		
		<i>b</i>	<i>SE</i>	<i>B</i>	<i>b</i>	<i>SE</i>	<i>B</i>
Full model	Adolescent gender	-.12	.02	-.11***	.07	.02	.06**
	Paternal behavioral control	.26	.02	.24***	-.09	.03	-.07**
	Paternal psychological control	-.09	.03	-.08***	.18	.03	.15***
	Maternal behavioral control	.25	.02	.23***	-.09	.03	-.07**
	Maternal psychological control	-.08	.02	-.08***	.23	.03	.19***
	Paternal behavioral control X	.09	.02	.10***	.04	.02	.05†
	Paternal psychological control						
	Maternal behavioral control X	.01	.02	.01	-.02	.02	-.02
	Maternal psychological control						
	Paternal behavioral control X	.02	.02	.03	.07	.03	.07**
	Maternal psychological control						
	Maternal behavioral control X	-.01	.02	-.01	.03	.03	.03
	Paternal psychological control						
	Paternal behavioral control X	-.02	.02	-.02	-.03	.02	-.03
	Maternal behavioral control						
Paternal psychological control X	.01	.02	.01	.02	.02	.02	
Maternal psychological control							
	<i>R</i> <sup>2</sup>			.18			.11
Simple model	Adolescent gender	-.12	.02	-.11***	.07	.02	.06**
	Paternal behavioral control	.26	.02	.24***	-.09	.03	-.07**
	Paternal psychological control	-.08	.02	-.07**	.18	.03	.15***
	Maternal behavioral control	.25	.02	.23***	-.09	.03	-.07**
	Maternal psychological control	-.09	.02	-.08***	.23	.03	.19***
	Paternal behavioral control X	.09	.02	.11***	.04	.02	.05*
	Paternal psychological control						
	Paternal behavioral control X	N.A.	N.A.	N.A.	.07	.02	.07**
Maternal psychological control							
	<i>R</i> <sup>2</sup>			.17			.11

† $p < .01$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

**Table 4.** Simple slope analyses of the prediction of adolescent-reported parental sacrifice on adolescent developmental outcomes with parent-reported parental sacrifice as a moderator

Outcome	Predictor		Moderator			
				<i>b</i>	<i>SE</i>	<i>B</i>
Life satisfaction	Paternal behavioral control	Paternal psychological control	Higher level (+ 1 SD)	.47	.03	.44***
			Lower level (- 1 SD)	.28	.03	.26***
	Maternal behavioral control	Adolescent gender	Boys	.29	.03	.27***
			Girls	.18	.03	.16***
	Maternal psychological control	Adolescent gender	Boys	-.01	.03	-.01
			Girls	-.18	.03	-.17***
Hopelessness	Paternal behavioral control	Paternal psychological control	Higher level (+ 1 SD)	-.02	.04	.02
			Lower level (- 1 SD)	-.23	.03	-.19***
	Paternal psychological control	Maternal psychological control	Higher level (+ 1 SD)	.03	.03	.03
			Lower level (- 1 SD)	-.22	.03	-.18***

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table 5. Goodness-of-fit indices on invariant tests of the main and interactive effects of behavioral control and psychological control to adolescent wellbeing by adolescent gender, family intactness, sibling number and school banding

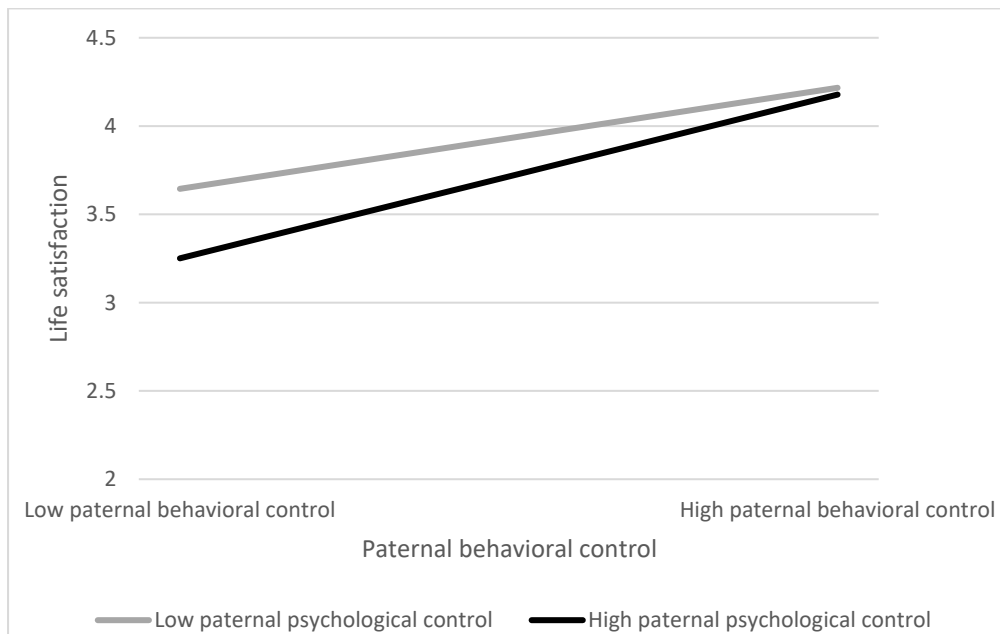
Outcome	Model	Description	$\chi^2$	<i>df</i>	CFI	NFI	RMSEA	AIC	Group comparison	$\Delta\chi^2$	$\Delta df$	
Life satisfaction	Invariant tests by adolescent gender:											
	IM1a	Unconstrained model	60.73***	6	.975	.973	.062	156.732				
	IM1b	Constrained model	90.64***	11	.964	.960	.055	176.635	IM1b & IM1a	29.90***	5	
	IM1c	Constraining paternal behavioral control to be equal across gender	53.52***	7	.975	.972	.059	157.516	IM1c & IM1a	2.78	1	
	IM1d	Constraining paternal psychological control to be equal across gender	61.02***	7	.976	.973	.057	155.020	IM1d & IM1a	.29	1	
	IM1e	Constraining maternal behavioral control to be equal across gender	66.24***	7	.973	.971	.060	157.458	IM1e & IM1a	5.51*	1	
	IM1f	Constraining maternal psychological control to be equal across gender	72.04***	7	.971	.968	.063	160.239	IM1f & IM1a	11.31**	1	
	IM1g	Constraining paternal behavioral control X paternal psychological control to be equal across gender	63.46***	7	.975	.972	.059	166.044	IM1g & IM1a	2.73	1	
	Invariant tests by family intactness:											
	IM2a	Unconstrained model	51.33***	6	.978	.975	.058	147.326				
	IM2b	Constrained model	57.78***	11	.977	.972	.043	143.781	IM2b & IM2a	6.46	5	
	Invariant tests by sibling number:											
	IM3a	Unconstrained model	31.75***	6	.988	.985	.043	127.748				
	IM3b	Constrained model	40.71***	11	.986	.981	.034	126.712	IM3b & IM3a	8.96	5	
Invariant tests by school banding:												
IM4a	Unconstrained model	200.38***	33	.924	.911	.046	296.383	IM4b & IM4a	2.92	5		
IM4b	Constrained model	203.30***	38	.925	.910	.043	289.300					
Hopelessness	Invariant tests by adolescent gender:											
	IM5a	Unconstrained model	121.98***	12	.962	.959	.062	237.984				
	IM5b	Constrained model	129.35***	18	.962	.956	.051	233.351	IM5b & IM5a	7.37	6	
	Invariant tests by family intactness:											
IM6a	Unconstrained model	113.90***	12	.963	.959	.061	229.903					
IM6b	Constrained model	118.33***	18	.963	.958	.050	222.328	IM6b & IM6a	4.43	6		

Table 5. Goodness-of-fit indices on invariant tests of the main and interactive effects of behavioral control and psychological control to adolescent wellbeing by adolescent gender (Con't)

Outcome	Model	Description	$\chi^2$	$df$	CFI	NFI	RMSEA	AIC	Group comparison	$\Delta\chi^2$	$\Delta df$
Hopelessness	Invariant tests by sibling number:										
	IM7a	Unconstrained model	86.380***	12	.974	.970	.051	202.380			
	IM7b	Constrained model	97.913***	18	.972	.966	.043	201.913	IM7b & IM7a	11.53	6
	Invariant tests by school banding:										
	IM8a	Unconstrained model	268.582***	47	.925	.911	.045	384.582			
	IM8b	Constrained model	274.973***	53	.925	.909	.042	378.973	IM8b & IM8a	6.39	6

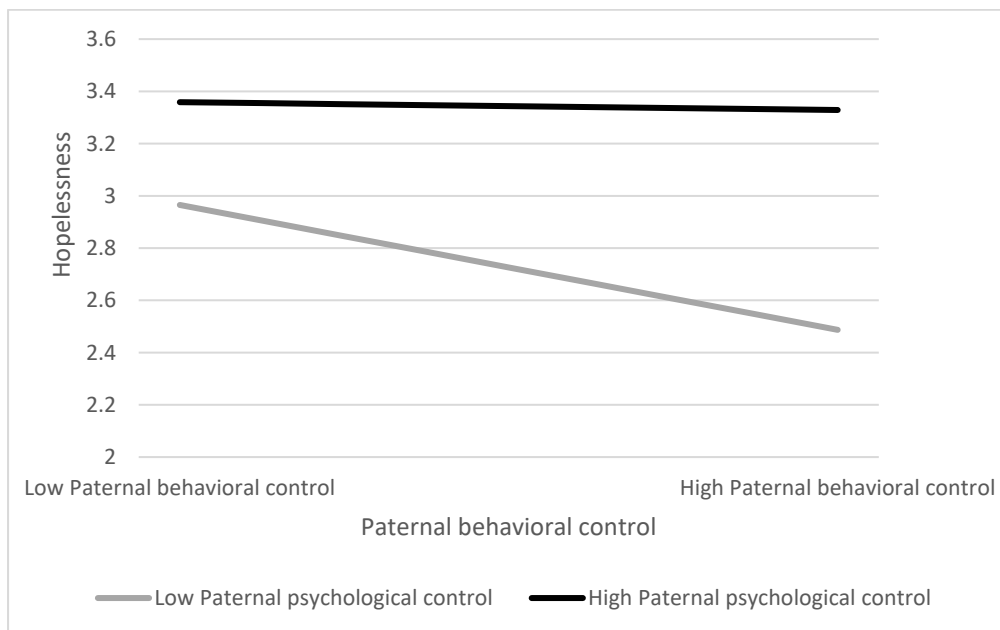
\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Figure 1. Regression of adolescent life satisfaction by paternal behavioral control in high and low levels of paternal psychological control



		No. of adolescents in each category (n)	
		Paternal psychological control	
		High	Low
Paternal behavioral control	High (1 SD above the Mean)	112	46
	Low (1 SD below the Mean)	39	137

Figure 2. Regression of adolescent hopelessness by paternal behavioral control in high and low levels of paternal psychological control



		No. of adolescents in each category (n)	
		Paternal psychological control	
		High	Low
Paternal behavioral control	High (1 SD above the Mean)	112	46
	Low (1 SD below the Mean)	39	137

Figure 3. Regression of adolescent hopelessness by paternal behavioral control in high and low levels of maternal psychological control

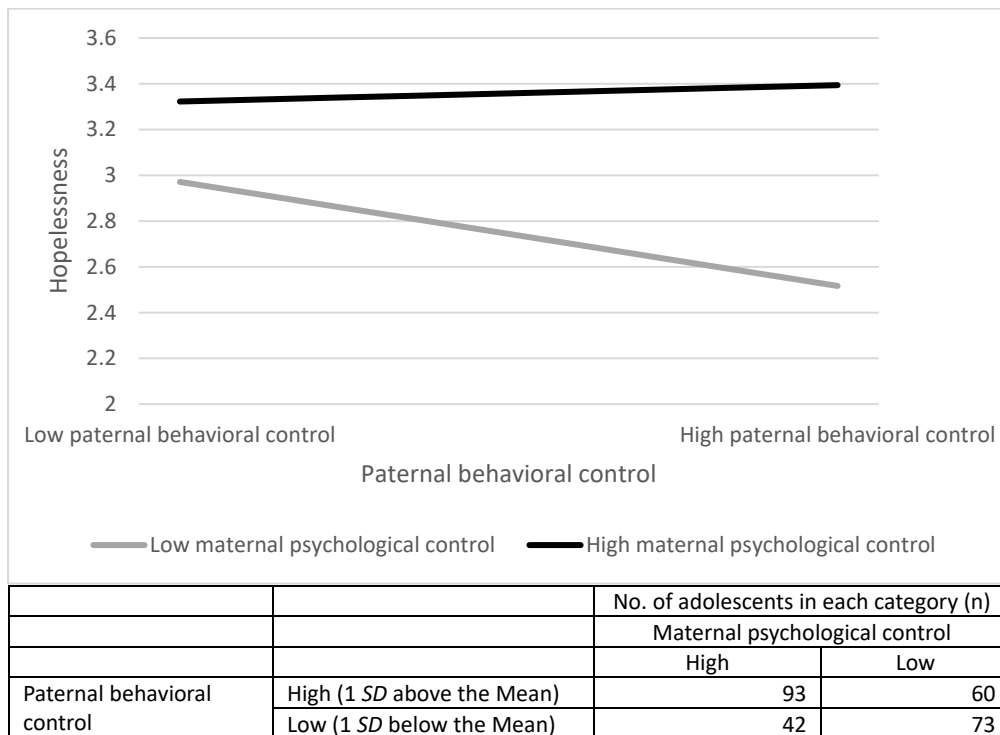




Figure 4. Regression of adolescent life satisfaction by maternal behavioral control across adolescent gender

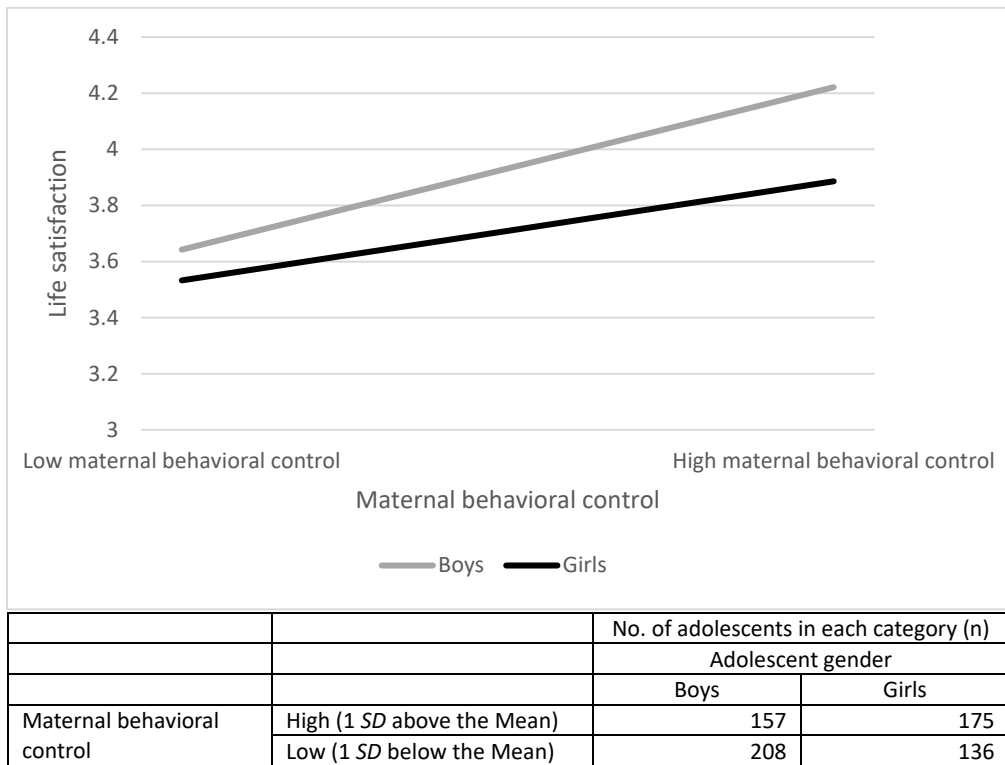
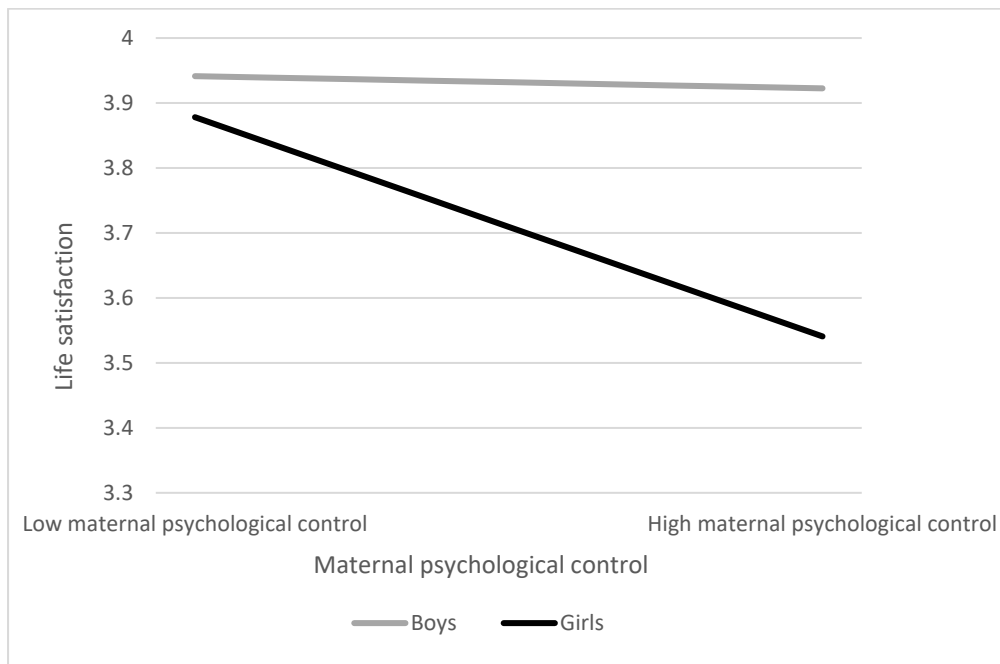


Figure 5. Regression of adolescent life satisfaction by maternal psychological control across adolescent gender



		No. of adolescents in each category (n)	
		Adolescent gender	
		Boys	Girls
Maternal psychological control	High (1 SD above the Mean)	156	143
	Low (1 SD below the Mean)	181	180