

Social Pressure and Unfulfilled Dreams Among Chinese and Belgian Parents: Two Roads to Controlling Parenting via Child-Invested Contingent Self-Esteem

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Abstract

Chinese parents have been found to use more psychological control toward their children than Western parents. The present study examined whether Chinese, relative to Belgian, parents' experiences of social pressure to be an achievement-promoting parent and their own unfulfilled dreams could account for this country-level difference in psychologically controlling parenting. In turn, the association of social pressure and unfulfilled dreams with parental psychological control was expected to be accounted for (i.e., mediated) by child-invested contingent self-esteem. In a cross-cultural sample consisting of 412 Chinese (209 mothers and 203 fathers) and 418 Belgian (209 mothers and 209 fathers) parents of 14-year-old adolescents, we found that social pressure and unfulfilled dreams were related positively to child-invested contingent self-esteem which, in turn, was related to psychologically controlling parenting. Moreover, the hypothesized between-country differences in psychologically controlling parenting and child-invested contingent self-esteem were largely explained by between-country differences in parents' experiences of social pressure and unfulfilled dreams. Findings are discussed in light of the influence of the broader society on parents' self-worth and parenting practices.

Keywords

cross-cultural, unfulfilled dreams, social pressure, child-invested contingent self-esteem, achievement-oriented psychological control, parenting

Chinese parents have been found to engage in more psychologically controlling parenting behaviors, such as shaming and guilt-induction, compared with European and North-American parents (e.g., C. S. S. Cheung & Pomerantz, 2011). Such findings raise the question *why* Chinese parents have a higher tendency to engage in these controlling practices. A recent study by Ng, Pomerantz, and Deng (2014) indicated that Chinese parents' feelings of self-worth are implicated more

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strongly in their children's performance, which helped to account for their elevated use of psychological control. Yet, it remains unclear why Chinese parents' self-worth is interwoven more strongly with their children's successes and failures. The present study examined two potential explaining factors, that is, the elevated social pressure experienced by Chinese parents to make their children perform well and Chinese parents' greater likelihood of holding unfulfilled dreams.

Psychological Control and Child-Invested Contingent Self-Esteem

Parental psychological control refers to an intrusive and manipulative parenting style involving a conditionally approving attitude toward the child. Specifically, it manifests through a host of parental techniques that intrude into the psychological world of the child such as guilt-induction, shaming, and love withdrawal (Barber, 1996). Several studies have indicated that the more parents are perceived as psychologically controlling, the more children suffer emotionally and academically, a finding that emerged in both Western and Asian societies (e.g., Wang, Pomerantz, & Chen, 2007).

One critical life domain in which parents exert psychological control is children's performance and achievement. Achievement-oriented psychological control refers to engagement in intrusive parenting tactics to make the child comply with parental standards for achievement, for instance, in the academic domain (Soenens, Vansteenkiste, & Luyten, 2010). This manifestation of psychological control is especially prevalent among Chinese parents. Indeed, C. S. S. Cheung and Pomerantz (2011) reported that the more Chinese parents were involved in their children's learning, the more psychological control they exerted. This style of involvement stood in contrast to American parents' involvement, which was relatively more autonomy-supportive. Furthermore, research has shown that Chinese adolescents who perceived psychological control in the achievement domain displayed poorer time management and more distraction (Vansteenkiste, Zhou, Lens, & Soenens, 2005) and obtained lower grades (Wang, Chan, & Lin, 2012). Given the undesirable outcomes associated with psychological control and its higher prevalence among Chinese parents (e.g., C. S. S. Cheung & Pomerantz, 2011), it is of importance to investigate factors related to the heightened use of psychological control in Chinese parents.

In an initial study, Ng and colleagues (2014) demonstrated that Chinese parents' elevated levels of general psychological control were predicted by parents' feelings of self-worth being more contingent on their children's performance. Parental child-invested contingent self-esteem refers to parents' inclination to measure their own self-worth in terms of the successes and failures of their offspring (Wuyts, Vansteenkiste, Soenens, & Assor, 2015). When parents' self-worth is contingent on their children's achievements, they more easily conceive the use of psychologically pressuring strategies as a logical short-cut to achieve their desired goal of having a successful child. What remains unclear to date, however, is which factors lead parents to make their self-worth more contingent on their children's achievements, and whether these factors are particularly prevalent in the Chinese context. Specifically, we compared Chinese parents with Belgian parents. Research has shown that the use of psychological control (e.g., Soenens & Vansteenkiste, 2010) and the prevalence of child-invested contingent self-esteem (e.g., Wuyts et al., 2015) in Belgium are similar to other Western-European countries or the United States. By examining the psychological mechanisms that help to explain observed between-country differences in parenting, we aimed to heed recent calls to move beyond the mere documentation of between-country differences (Bond & van de Vijver, 2009).

Social Pressure on Chinese Parents

Parents' child-invested contingent self-esteem is likely affected by factors in parents' broader social environment. To the extent that parents experience that their social environment has

pressuring demands for them, they may transmit this perceived social pressure to their offspring via the activation of child-invested contingent self-esteem (Wuyts et al., 2015). One aim of the present study was to examine whether these social pressures differ between China and Belgium, two countries marked by a fairly different sociocultural climate. There are several interrelated arguments for why social pressure would be elevated among Chinese, relative to Belgian, parents (see also Wang & Chang, 2010).

First, within traditional Chinese society, compared with the Belgian context, more emphasis is placed on children's education and parents' responsibility for their offspring's education (Lee, 2000). Chinese parents have been found to strongly emphasize the importance of achieving academic excellence to their adolescent children (Fong, 2007). For instance, compared with American parents, they were found to have higher standards for and to display lower satisfaction with their children's academic achievement (Crystal et al., 1994). Such findings can be linked to the portrayal of China as a society focused on masculinity (Hofstede, 2001) and interdependence (Markus & Kitayama, 1991, 2003). Masculine societies are characterized by an emphasis on competition, achievement, and success, a cultural dimension on which Belgium had a more moderate score. Furthermore, China's cultural focus on interdependence (Markus & Kitayama, 1991, 2003) manifests in parents' frequent guidance and even intrusion into diverse life domains of the child, including schooling (Triandis, Bontempo, Villareal, Asai, & Lucca, 1988). Related to the notion of interdependence is the indigenous Chinese concept of "face," which refers to the importance attached to social recognition (Goffman, 1967). Previous research shows that Chinese parents "have most face" when their children are successful in their academic performance and careers (Hwang, 2006). In sum, these various traditional cultural factors may help to explain the elevated social pressure on Chinese parents to have a well-performing child.

A second reason why Chinese parents may experience more social pressure relates to the Chinese one-child policy. This policy requires Chinese parents to invest their full attention, money, and efforts to only one single child (Fong, 2007). In contrast, in Belgian families, 85% of the children grew up with at least one sibling (Kind & Gezin, 2012). Because most Chinese parents have only one child, they only have one chance to "prove" that they are able to rear a successful child. Indeed, Chinese parents are willing to invest considerably in their child's successful development, as on average 66% of the family income reserved for the child is spent on after-school education (Dandy & Nettelbeck, 2002).

Third, due to the transition from state socialism to an open market economy over the last decades (Li, Li, & Zhang, 2000), the Chinese job market has become increasingly competitive. Together with this, the Chinese educational system is highly competitive as middle school students need to pass the National Higher Education Entrance Examination (*GaoKao*) to enter higher education. The necessity of outperforming peers to enter more qualified and more prestigious colleges and to obtain well-paid jobs (Fong, 2004) has strengthened the already prevailing societal ideas about the importance of academic performance and has elicited anxiety and worry among Chinese parents regarding the capacity of their single child to meet the heightened demands for academic success (Anagnost, 2008). In contrast, in the Belgian educational system, higher education is very accessible and participation in higher education is very high (Goossens & Luyckx, 2006).

Given the societal emphasis on academic success, the one-child policy, and the selection-oriented educational system, we expect Chinese, relative to Belgian, parents to experience more social pressure regarding the academic performance of their children. Given that parents are embedded in a network of social relations (Bronfenbrenner, 1979), these social pressures on parents may be conveyed through different channels, including the media, school directories, other parents, grandparents, and one's partner (Sperber, 1996). In a recent study, Wuyts and colleagues (2015) developed a new questionnaire tapping into these pressures. Among Belgian parents, social pressure to be an achievement-promoting parent was found to relate positively to

child-invested contingent self-esteem, which, in turn, related to psychologically controlling parenting. The present research builds on this research by examining whether between-country differences in child-invested contingent self-esteem and controlling parenting can be accounted for by differences in social pressure experienced by Chinese and Belgian parents.

Unfulfilled Dreams Among Chinese Parents

Apart from examining the role of social pressure to be an achievement-promoting parent, we also investigate whether parents' unfulfilled dreams would serve as a factor relating to parents' child-invested contingent self-esteem and their reliance on psychologically controlling practices. Unfulfilled dreams refer to people's lost ambitions and to the choices they regret in their life (Beike, Markman, & Karadogan, 2008). Both seminal writers, such as Freud and Jung, and contemporary parenting experts (Miller, 1997) suggest that parents cope with their unfulfilled ambitions by projecting their unrealized dreams onto their children. Consistent with this reasoning, Brummelman and colleagues (2013) recently showed that when parents are experimentally exposed to their own unfulfilled ambitions, they reported an increased desire for their child to redeem their unfulfilled dreams, at least when they thought of their child as a part of themselves. However, this study did not examine whether parents' desire for their child to realize their unfulfilled dreams would relate to their actual parenting practices, an issue we examine in the present study.

The Belgian parents in the current study, who are members of Generation X (i.e., the cohort of people born between 1960 and 1980), grew up in liberal and economically prosperous circumstances. In contrast, the same cohort of Chinese parents (i.e., the generation of people born shortly after the Cultural Revolution) grew up during the transition from a planned economy to an open market economy, which involved considerable financial instability. Apart from these financial constraints, the prevailing sociopolitical situation was still fairly conservative. This may explain why this generation, out of four generations (from the 1960s to the 1990s), holds the most negative view toward the social system and perceives highest unfairness and insecurity in life (Fudan Development Institute, 2014).

Thus, Chinese parents of this generation may have experienced more contextual obstruction to fulfill their personal dreams in life and to develop their own life trajectory (Ryan, 2011). This potential difference in developmental opportunities between China and Belgium also received some empirical confirmation in a pan-cultural study (Bond et al., 2004), which indicated that Belgium is ranked low in terms of "dynamic externality," while China takes a mid-position. A low score on dynamic externality is associated with more progressiveness and is indicative of higher social development and more freedom to choose one's own direction in life. As a result of these potential between-country differences in opportunities for personal development, Chinese (relative to Belgian) parents may more easily see their children's achievement as a compensation for their unfulfilled dreams and report increased self-esteem if their child achieves their unrealized ambitions. Unfortunately, because a stronger projection of parental unfulfilled dreams onto their offspring may elicit child-invested contingent self-esteem, it may relate to more use of psychologically controlling strategies.

The Present Study

This study aimed to extend the limited body of work on parental child-invested contingent self-esteem by examining its antecedents in greater detail and, in doing so, adopting a cross-national perspective. We examined the following four hypotheses. First, we tested an integrated model among Chinese and Belgian parents in which parents' perceived social pressure to be an achievement-promoting parent and their unfulfilled dreams would relate positively to child-invested

contingent self-esteem which, in turn, would relate positively to achievement-oriented psychological control (Hypothesis 1). Second, we expected our integrated model to be largely similar in the two countries. That is, when Belgian or Chinese parents experience more social pressure to be an achievement-promoting parent and report having more unfulfilled dreams, child-invested contingent self-esteem is more likely to be elevated which, in turn, would be linked to more psychological control (Hypothesis 2). Third, we predicted significant mean-level differences in the main study variables, such that Chinese, relative to Belgian, parents would report more social pressure, unfulfilled dreams, child-invested contingent self-esteem, and psychologically controlling parenting (Hypothesis 3). Finally, to understand the hypothesized between-country differences in child-invested contingent self-esteem and psychologically controlling parenting, we tested two specific process models derived from the integrated model. First, we hypothesized that child-invested contingent self-esteem would play a mediating role in the relation between country and achievement-oriented psychological control (Hypothesis 4a). Second, we hypothesized that social pressure and unfulfilled dreams would play a mediating role in the relation between country and child-invested contingent self-esteem (Hypothesis 4b). Before testing the structural relations in our model and inspecting mean-level differences between China and Belgium, we first examined the measurement equivalence (metric and scalar invariance) of the four study variables.

Method

Participants and Procedure

We recruited a sample of Chinese and Belgian parents. The Chinese sample consisted of 209 mothers and 203 fathers. On average, mothers and fathers were 38.15 ($SD = 2.66$; range = 34-50) and 40.95 years old ($SD = 4.50$; range = 34-61), respectively. Fifty-nine percent of both mothers and fathers obtained a college or university degree. The majority of the parents (i.e., 92%) were married or living together with the other biological parent of the child. The mean age of their child was 13.71 years ($SD = 0.48$; range = 13-15), and 56% of the children were female.

The Chinese sample of parents was recruited through contacting a high school in an urban Chinese area (Shanghai). Each adolescent of the eighth grade received an envelope, containing questionnaires for their parents and a detailed invitation letter. Of all the parents who were asked to participate, 86% accepted the invitation. The first page of the instruction emphasized that participation was voluntary and that anonymity was guaranteed. Parents were asked to keep the target adolescent (from whom they received the questionnaire) in mind when filling out the questionnaire and to return the questionnaire with their child in a sealed envelope.

Participants in the Belgian sample were 209 mothers and 209 fathers living in the Dutch-speaking part of the country. Mothers and fathers were, respectively, 44.78 ($SD = 4.11$; range = 32-63) and 46.03 ($SD = 4.07$; range = 34-57) years old on average. Both Belgian mothers and fathers were highly educated with 75% and 68% having obtained a college or university degree, respectively. Furthermore, the majority of the Belgian families were intact, with 91% of the mothers and 92% of the fathers reporting to be married or living together with the other biological parent of the child. On average, 2.6 children ($SD = 1.01$; range = 1-9) were living in the Belgian families, with up to 91% families consisting of more than one child. The mean age of the target child was 13.85 years ($SD = 0.72$; range = 13-15), and 60% of the target children were female.

Belgian parents were recruited as part of an undergraduate course in developmental psychology. Students were asked to invite two families (who were not relatives or close friends of the student), one with a male adolescent and one with a female adolescent in the age range of 13 to 15 years, to participate in this study. Students were trained and instructed to approach potentially

interested families. They briefly explained the purpose of the study, asked written informed consent when parents decided to participate, and provided the questionnaires with detailed information and instructions. Parents were asked to keep the target adolescent in mind when they filled out the questionnaires. The first page of the instruction emphasized that participation was voluntary and that data would be treated confidentially. Belgian parents filled out the questionnaires at their own pace at home, enclosed the questionnaires in different envelopes, and contacted the student to pick up the sealed envelopes. The student then returned the envelopes to the researchers.

Chi-square analysis indicated that both samples are comparable in terms of child gender, $\chi^2(1) = 0.52$, *ns*; child age, $F(1, 284) = 2.39$, *ns*; fathers' educational level, $\chi^2(3) = 4.81$, *ns*; and both mothers' and fathers' marital status, $\chi^2(1) = 0.02$, *ns*, and $\chi^2(1) = 0.79$, *ns*, respectively. However, mothers' educational level differed among both countries, $\chi^2(3) = 15.93$, $p < .01$, with more Belgian (i.e., 75%) than Chinese (i.e., 59%) mothers having followed higher education. In addition, both Chinese mothers, $F(1, 345) = 285.79$, $p < .001$, and Chinese fathers, $F(1, 320) = 108.09$, $p < .001$, were younger than their Belgian counterparts, which is likely due to the Chinese one-child policy.

Measures

All scales were originally developed and available in Dutch (one of the main languages spoken in Belgium). To obtain the Chinese versions, we followed the guidelines of the International Test Commission to translate the questionnaires, first, from Dutch to English and, second, from English to Chinese (Van de Vijver & Hambleton, 1996). First, in each case, a researcher fluent in Dutch/English translated them into English/Chinese. Second, the back translations were done by a researcher fluent in both Dutch and English and an English-Chinese language teacher with expertise in both languages, respectively. Then the original and back translated versions of the items were compared to inspect their equivalence. Nonequivalent translations were discussed by the two translators to arrive at a consensual agreement on the final wording. All items were rated on a 5-point Likert-type scale ranging from 1 (*totally disagree*) to 5 (*totally agree*). Descriptive statistics and internal consistencies of each measure can be found in Table 1.

Child-invested contingent self-esteem. Parents filled out the Child-Invested Contingent Self-Esteem Scale (Wuyts et al., 2015). This scale contains items assessing the extent to which parents' self-esteem is contingent on children's achievement in general (three items; for example, "How I feel about myself is often related to my child's achievements") as well as on the child's successes (six items; for example, "When my child succeeds, I feel good about myself"), and on the child's failures (six items; for example, "My child's failure is also my failure").

Social pressure to be an achievement-promoting parent. This concept was measured using a 30-item scale tapping into five different sources of perceived social pressure (i.e., grandparents, partner, other parents, the school, and the media; Wuyts et al., 2015). Parents rated the extent to which each of these sources made them feel accountable for their children's achievements. The same set of 6 items was used for each of these five sources, with 3 of these 6 items being oriented toward the attainment of a positive outcome (e.g., "My partner makes me feel responsible for the performance of my child") and 3 items being oriented toward the avoidance of a negative outcome (e.g., "The school expects me to make sure my child doesn't fail").

Unfulfilled dreams. Six items were developed to tap into unfulfilled dreams. Parents rated the extent to which they regretted not having realized certain dreams, goals, and aspirations when they were younger (e.g., "I regret that I failed to realize important dreams during my childhood").

Table 1. Internal Consistencies and Correlations Between Child-Invested Contingent Self-Esteem and Its Antecedents and Outcomes Among Belgian (Top Half) and Chinese (Bottom Half) Parents.

	1	2	3	4
Belgian sample				
α	.95	.89	.89	.79
1. Social pressure to be an achievement-promoting parent	—	.28***	.46***	.37***
2. Unfulfilled dreams	.22**	—	.34***	.27***
3. Child-invested contingent self-esteem	.40***	.21**	—	.47***
4. Achievement-oriented psychological control	.18**	.12	.53***	—
α	.95	.92	.88	.75
Chinese sample				
α	.95	.87	.88	.83
1. Social pressure to be an achievement-promoting parent	—	.40***	.63***	.31***
2. Unfulfilled dreams	.36***	—	.44***	.23**
3. Child-invested contingent self-esteem	.48***	.32***	—	.44***
4. Achievement-oriented psychological control	.33***	.15*	.54***	—
α	.96	.87	.86	.79

Note. Internal consistencies and correlations between the maternal variables are shown below the diagonal. Internal consistencies and correlations between the paternal variables are shown above the diagonal.

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

Results of an exploratory factor analysis on the current sample (using principal-axis factoring) supported one-factor solutions for both the maternal and the paternal data in Belgium and China. The scree plot indicated a clear elbow after the first retained factor, thereby explaining more than 60% of the variance in the Belgian and Chinese maternal and paternal responses. In addition, all items had a minimal loading of .65.

In the Belgian data set, we had additional measures that could be used to examine the validity of this scale. Specifically, we examined associations between unfulfilled dreams and measures of self-critical perfectionism (Depressive Experiences Questionnaire; Blatt, D'Afflitti, & Quinlan, 1976) and internalizing distress (Beck Depression Inventory; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961). It makes sense to predict that self-critical perfectionism is related to more unfulfilled dreams because people scoring high on self-critical perfectionism have excessively high personal standards (increasing the odds that standards will not be met and that feelings of unfulfilled aspirations will follow). Because they also have a tendency to engage in negative self-evaluation, they may be quick to conclude that their aspirations were unfulfilled. We also predicted that unfulfilled dreams would be related to internalizing distress because a discrepancy between aspired ambitions and realized goals is known to render people vulnerable to internalizing problems. As expected, the scale for unfulfilled dreams was related positively to both self-critical perfectionism ($r = .42, p < .001$ and $r = .54, p < .001$, for mothers and fathers, respectively) and internalizing distress ($r = .31, p < .001$ and $r = .28, p < .001$, for mothers and fathers, respectively).

Achievement-oriented psychological control. Achievement-oriented psychological control was assessed with the corresponding nine-item scale from the Dependency-Oriented and Achievement-Oriented Psychological Control Scale, a well-validated measure tapping into two domain-specific manifestations of psychologically controlling parenting (Soenens et al., 2010; for example, "I only show my love to my child if he or she gets good grades").

Results

Preliminary Analyses

Effects of background variables. We first conducted a MANCOVA on the maternal and paternal data separately. All study variables were included as dependent outcomes, with country of residence, adolescent gender, and family structure being defined as fixed factors and with adolescent age, parental age, parental education level, and number of children in the family being inserted as covariates.

As for the maternal data, family structure, Wilks's Lambda = .94, $F(4, 245) = 4.05$, $p < .01$; maternal education level, Wilks's Lambda = .90, $F(4, 245) = 7.03$, $p < .001$; and country of residence, Wilks's Lambda = .80, $F(4, 245) = 15.61$, $p < .001$, yielded a multivariate significant association. Follow-up tests indicated univariate associations between family structure and social pressure, $F(1, 248) = 10.78$, $p < .01$, with mothers of nonintact families reporting more social pressure ($M = 3.00$, $SD = 0.80$) than mothers from intact families ($M = 2.46$, $SD = 0.84$). Maternal educational level yielded a univariate association with unfulfilled dreams, $F(1, 248) = 16.51$, $p < .001$, indicating that with increasing level of education mothers reported less unfulfilled dreams, $B = -.37$, $p < .001$. The effects of country of residence will be discussed in greater detail in the main analysis.

As for the paternal data, paternal education level yielded a multivariate significant association, Wilks's Lambda = .92, $F(4, 233) = 4.91$, $p < .01$. Similar to the maternal data, a univariate association between paternal education level and unfulfilled dreams was obtained, $F(1, 236) = 8.09$, $p < .01$, with more highly educated fathers reporting less unfulfilled dreams, $B = -.22$, $p < .01$. Country of residence also showed a multivariate effect, Wilks's Lambda = .74, $F(4, 233) = 20.94$, $p < .001$, that will be discussed later on in the main analysis. Given the limited number of associations with background variables and given the fact that none of the background characteristics yielded a significant association with the dependent variables (i.e., child-invested contingent self-esteem, controlling parenting), we did not control for these background variables in our main analyses.

Correlations. Correlations between the study variables can be found in Table 1. In both countries, child-invested contingent self-esteem was significantly correlated with mothers' and fathers' use of achievement-oriented psychological control. Furthermore, social pressure to be an achievement-promoting parent and their unfulfilled dreams positively correlated with child-invested contingent self-esteem in both Chinese and Belgian mothers and fathers.

Measurement equivalence. We examined the measurement equivalence (metric and scalar invariance) of our four constructs across country of residence by performing multigroup Confirmatory Factor Analysis (CFA), thereby using the individual items of the scales as indicators of latent constructs. Specifically, we compared single-order CFAs for three out of four measures. Only for social pressure to be an achievement-promoting parent, we used a second-order CFA model with the five subscales, each represented by six items, being modeled as higher order factors. Following recommendations by Dimitrov (2010), we examined metric invariance by testing whether the item loadings were equivalent across groups. When metric invariance is reached (i.e., equal factor loadings across groups are obtained), it is legitimate to compare the relations between latent variables across groups. Next, we tested for scalar invariance by comparing the metric invariance model with a model where the intercepts were set equal as well. Scalar invariance (i.e., equal item intercepts across groups) is required to compare means across groups. The invariance of the constrained, relative to unconstrained, model was evaluated based on three difference-in-fit indices. Because a nonsignificant difference in Satorra-Bentler Scaled chi-square ($\Delta\text{SBS-}\chi^2$) is a less realistic criterion, especially when sample size is large, we took into account two other statistics

(G. W. Cheung & Rensvold, 2002), that is, the difference in comparative fit index (CFI; Δ CFI), which should be around .01, and the difference in Non-Normed Fit Index (Δ NNFI), which should be around .02. We assumed equivalence when two of the three criteria were met (G. W. Cheung & Rensvold, 2002; Vandenberg & Lance, 2000). In Table 2, detailed results with respect to the metric and scalar invariance of our four measures are presented.

As can be seen in the top half of Table 2, metric invariance was achieved for all maternal and paternal measures except for paternal child-invested contingent self-esteem, for which we needed to free 1 out of 15 (i.e., 7%) loadings, and for maternal achievement-oriented psychological control, for which we needed to free 3 out of 9 (i.e., 33%) loadings to achieve invariance, Δ SBS- $\chi^2(13) = 32.45$, $p < .01$, Δ CFI = .011, Δ NNFI = .005; and Δ SBS- $\chi^2(5) = 12.22$, $p < .05$, Δ CFI = .014, Δ NNFI = .008, respectively. The measure of social pressure to be an achievement-promoting parent also displayed second-order metric invariance, Δ SBS- $\chi^2(4) = 15.61$, $p < .01$, Δ CFI = .001, Δ NNFI = .001; and Δ SBS- $\chi^2(4) = 3.76$, *ns*, Δ CFI = .002, Δ NNFI = .001, for maternal and paternal ratings, respectively.

As can be seen in the bottom half of Table 2, we obtained scalar invariance for unfulfilled dreams and social pressure. For child-invested contingent self-esteem, we needed to free 4 of the 15 intercepts for maternal ratings (i.e., 27%) and 5 for paternal ratings (i.e., 33%) to achieve invariance, Δ SBS- $\chi^2(10) = 31.01$, $p < .001$, Δ CFI = .013, Δ NNFI = .000; and Δ SBS- $\chi^2(9) = 33.42$, $p < .001$, Δ CFI = .013, Δ NNFI = .003, respectively. Also, for achievement-oriented psychological control, we needed to free some intercepts to obtain invariance. Specifically, for maternal ratings 2 (i.e., 22%) and for paternal ratings 4 (i.e., 44%) of the 9 intercepts were set free to obtain scalar invariance, Δ SBS- $\chi^2(6) = 13.30$, $p < .05$, Δ CFI = .014, Δ NNFI = .006; and Δ SBS- $\chi^2(4) = 3.58$, *ns*, Δ CFI = .001, Δ NNFI = .006, respectively. The measure of social pressure to be an achievement-promoting parent also displayed second-order metric invariance for maternal ratings, Δ SBS- $\chi^2(1) = 404.85$, $p < .001$, Δ CFI = .016, Δ NNFI = .016 for second-order scalar invariance, but not for paternal ratings, Δ SBS- $\chi^2(1) = 348.83$, $p < .001$, Δ CFI = .022, Δ NNFI = .022).

To conclude, in both maternal and paternal data, we found satisfying metric invariance, which allows us to directly compare the relations between latent variables across groups. The one exception was the scale for maternal achievement-oriented psychological control that reached satisfying metric invariance for only 67% of the items. In spite of this result, we decided to continue using the full scale in the maternal data given that, first, the cross-cultural validity of this measure was shown in a study involving Korean and Belgian adolescents (Soenens, Park, Vansteenkiste, & Mouratidis, 2012) and, second, no equivalence problems with the measure emerged in the paternal data.

Full scalar invariance was obtained for unfulfilled dreams and social pressure to be an achievement-promoting parent in both the maternal and paternal data (although the paternal scale of social pressure did not display full second-order scalar invariance). For child-invested contingent self-esteem and achievement-oriented psychological control, however, we obtained only partial scalar invariance. Therefore, we examined whether the mean-level comparisons yielded different findings when using the full scales compared with when using scales from which the nonequivalent items were removed. Also, we examined whether the structural model yielded different results when using the full scales or the shortened scales.

Primary Analyses

Hypothesis 1 and 2: Structural equivalence of the integrated model. To test the hypothesized integrated model (Hypothesis 1) and to check whether the structural relations in our hypothesized model were equivalent across country (Hypothesis 2), we performed structural equation modeling (SEM) analyses using MPlus 6 software with robust maximum likelihood estimation (Muthén & Muthén, 2010). Latent variables were constructed through parceling, with each latent variable

Table 2. Measurement Equivalence as a Function of Country of Residence Among Belgian and Chinese Mothers and Fathers.

Metric	Social pressure to be an achievement-promoting parent		Unfulfilled dreams		Child-invested contingent self-esteem		Achievement-oriented psychological control	
	Mothers	Fathers	Mothers	Fathers	Mothers	Fathers	Mothers	Fathers
Metric invariance								
Δ SBS- $\chi^2(df)$	(25) = 35.13	(25) = 36.40	(5) = 5.13	(5) = 0.92	(14) = 34.62**	(14) = 50.13***	(8) = 40.74***	(8) = 18.44
Δ CFI	0.002	0.002	0.003	0.001	0.013	0.019	0.070	0.015
Δ NNFI	0.002	0.001	0.010	0.013	0.005	0.002	0.068	0.001
Scalar invariance								
Δ SBS- $\chi^2(df)$	(24) = 87.36***	(24) = 41.24*	(5) = 16.41**	(5) = 13.57*	(14) = 114.94***	(14) = 138.00***	(8) = 106.93***	(8) = 101.35***
Δ CFI	0.008	0.002	0.012	0.011	0.058	0.063	0.194	0.134
Δ NNFI	0.005	0.000	0.003	0.005	0.040	0.047	0.195	0.123

Note. SBS- χ^2 = Satorra-Bentler Scaled χ^2 ; CFI = comparative fit index; NNFI = Non-Normed Fit Index.

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

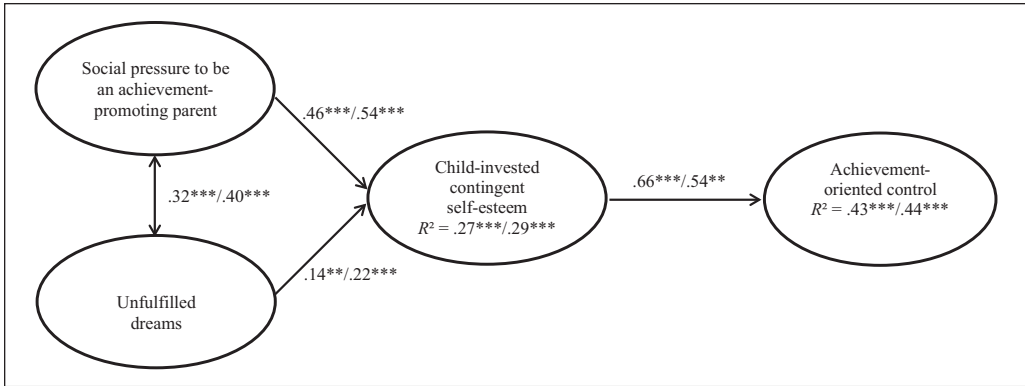


Figure 1. Constrained multigroup structural model with standardized parameter estimates.

Note. The first coefficient shown is for maternal ratings and the second coefficient is for paternal ratings.

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

being represented by three or five parcels by combining a random selection of their respective scale items. Parceling has the advantage of minimizing the effects of bias at the item level and helps to avoid overall model complexity (Little, Cunningham, Shahar, & Widaman, 2002). For each model, we inspected the CFI, which should have values of .95 or higher, and the root mean square error of approximation (RMSEA), which should be equal to or lower than .06 (Hu & Bentler, 1999).

We first tested a constrained model in which the path coefficients were set to be equal across both subsamples. Second, we tested an unconstrained model in which the path coefficients were allowed to vary. The constrained model yielded an acceptable fit, $\Delta\text{SBS-}\chi^2(164) = 282.99$, $p < .001$, $\text{RMSEA} = .06$, $\Delta\text{CFI} = .95$, $\Delta\text{NNFI} = .95$, and $\Delta\text{SBS-}\chi^2(164) = 260.06$, $p < .001$, $\text{RMSEA} = .05$, $\Delta\text{CFI} = .96$, $\Delta\text{NNFI} = .96$, for the maternal and paternal models, respectively. The unconstrained model did not yield a better fit than the constrained model, $\Delta\text{SBS-}\chi^2(4) = 8.56$, ns , $\Delta\text{CFI} = .001$, $\Delta\text{NNFI} = .000$, for the maternal ratings, and $\Delta\text{SBS-}\chi^2(4) = 8.13$, ns , $\Delta\text{CFI} = .002$, $\Delta\text{NNFI} = .001$, for the paternal ratings, indicating that the model was structurally invariant for both mothers and fathers. This was also the case when using the shortened scales (i.e., the scales excluding the nonequivalent items).

The constrained model is depicted graphically in Figure 1. All estimated paths were significant in both the maternal and paternal model. Next, we investigated whether the two antecedents (i.e., social pressure and unfulfilled dreams) yielded a direct and unique association with achievement-oriented psychological control above the indirect association through child-invested contingent self-esteem. Adding these paths did not improve model fit, $\Delta\text{SBS-}\chi^2(2) = 0.59$, ns , $\Delta\text{CFI} = .001$, $\Delta\text{NNFI} = .002$, and $\Delta\text{SBS-}\chi^2(2) = 3.50$, ns , $\Delta\text{CFI} = .001$, $\Delta\text{NNFI} = .000$, for maternal and paternal ratings, respectively, and the added paths were not significant. Next, bootstrap analyses were conducted with 5,000 samples to test the significance of the indirect effect. This test indicated that the indirect associations between social pressure and achievement-oriented psychological control through child-invested contingent self-esteem were significant ($\beta = .30$, $p < .001$, confidence interval [CI] = [.22, .38] and $\beta = .29$, $p < .001$, CI = [.21, .38], for maternal and paternal ratings, respectively). Similarly, the indirect associations between unfulfilled dreams and achievement-oriented psychological control through child-invested contingent self-esteem were significant ($\beta = .09$, $p = .01$, CI = [.02, .14] and $\beta = .12$, $p < .001$, CI = [.06, .19], for maternal and paternal ratings, respectively). Thus, in both the Belgian and Chinese samples, social pressure and unfulfilled dreams were positively linked with child-invested contingent self-esteem which, in turn, relates to higher achievement-oriented psychological control.

Table 3. *F*-Statistics and Effect Sizes of Mean Level Differences Between Belgian and Chinese Mothers and Fathers.

	Belgium		China	
	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>F</i> (1, 409)	η^2
Mother report				
1. Child-invested contingent self-esteem	2.39 (0.63)	3.32 (0.68)	203.48***	.33
2. Social pressure to be an achievement-promoting parent	2.28 (0.69)	3.25 (0.79)	176.48***	.30
3. Unfulfilled dreams	2.53 (1.06)	3.24 (0.95)	50.55***	.11
4. Achievement-oriented psychological control	1.50 (0.48)	2.45 (0.75)	233.21***	.36
Father report				
	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>F</i> (1, 395)	η^2
1. Child-invested contingent self-esteem	2.52 (0.63)	3.27 (0.73)	119.73***	.23
2. Social pressure to be an achievement-promoting parent	2.35 (0.69)	3.41 (0.73)	220.99***	.36
3. Unfulfilled dreams	2.53 (0.97)	3.17 (0.98)	43.76***	.10
4. Achievement-oriented psychological control	1.77 (0.55)	2.52 (0.83)	114.15***	.22

*** $p < .001$.

Hypothesis 3: Mean-level differences. To check whether there were mean-level differences between the two countries, we performed a MANOVA. The effect of country was significant for both the maternal ratings, Wilks's Lambda = .54, $F(4, 406) = 85.57$, $p < .001$, $\eta^2 = .46$, and the paternal ratings, Wilks's Lambda = .60, $F(4, 392) = 64.92$, $p < .001$, $\eta^2 = .40$. Given that only partial equivalence was obtained for some measures, we reanalyzed the data, this time making use of the reduced scales (i.e., the scales from which the nonequivalent items were removed). No substantial drop in the effect size emerged when using the reduced scales instead of the original scales ($\Delta\eta^2 = .03$ and $\Delta\eta^2 = .02$, for maternal and paternal data, respectively). Follow-up univariate analyses showed that both Chinese mothers and fathers scored higher on each of the study variables compared with their Belgian counterparts, as can be seen in Table 3. Specifically, Chinese parents reported higher levels of social pressure, unfulfilled dreams, child-invested contingent self-esteem, and achievement-oriented psychological control than their Belgian counterparts. This was also the case when using the reduced scales.

Hypothesis 4: Mediation analysis. Finally, we performed mediation analyses to test (a) whether the between-country difference in achievement-oriented psychological control can be explained by between-country differences in child-invested contingent self-esteem (Hypothesis 4a) and (b) whether the between-country difference in child-invested contingent self-esteem, in turn, can be explained by between-country differences in its hypothesized antecedents (Hypothesis 4b). We followed the guidelines provided by Holmbeck (1997) for testing mediation with SEM models. In the first step, we examined the effect of the independent variable (i.e., country of residence) on the dependent variable (i.e., child-invested contingent self-esteem or achievement-oriented psychological control). The results of this first step are shown in the first column of Table 4. Then, we estimated both a full mediation model—that is, a model including only indirect associations between the independent and dependent variables through the mediator(s)—and a partial mediation model—that is, a model including direct associations between the independent and dependent variables in addition to the indirect associations. Full mediation is shown when the partial mediation model does not provide a better fit than the full mediation model and when the indirect effects are significant. Partial mediation is shown when the partial mediation model fits better than the full mediation model, when the indirect effects are significant, and when the initial direct effects (Step 1) are reduced substantially by including the mediator(s).

Table 4. Child-Invested Contingent Self-Esteem as a Mediator Between Country of Residence and Achievement-Oriented Psychological Control (Top Half) and Social Pressure to Be an Achievement-Promoting Parent and Unfulfilled Dreams as Mediators Between Country of Residence and Child-Invested Contingent Self-Esteem (Bottom Half).

	β		95% bias-corrected and accelerated bootstrap CI
	Step 1	Step 2	
Achievement-oriented psychological control			
Mother report			
Step 1: Country of residence	.67***	.31***	
Step 2: Child-invested contingent self-esteem		.61***	[.29, .43]
Father report			
Step 1: Country of residence	.53***	.27***	
Step 2: Child-invested contingent self-esteem		.51***	[.20, .32]
Child-invested contingent self-esteem			
Mother report			
Step 1: Country of residence	.60***	.30***	
Step 2: Social pressure to be an AP parent		.46***	[.19, .33]
Unfulfilled dreams		.12**	[.01, .08]
Father report			
Step 1: Country of residence	.51***	.06	
Step 2: Social pressure to be an AP parent		.60***	[.29, .47]
Unfulfilled dreams		.21***	[.03, .11]

Note. CI = confidence interval; AP = achievement-promoting.

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

As shown in Table 4 (top half), the conditions for partial mediation were met when modeling child-invested contingent self-esteem as a mediator of the association between country and achievement-oriented psychological control. That is, the best fitting model included an indirect association between country and achievement-oriented psychological control through child-invested contingent self-esteem as well as a direct path from country to achievement-oriented psychological control, $SBS-\chi^2(12) = 67.43, p < .001, RMSEA = .11, CFI = .96, NNFI = .93$, for the maternal model; and $SBS-\chi^2(12) = 80.52, p < .001, RMSEA = .12, CFI = .96, NNFI = .93$, for the paternal model. Thus, both in the maternal and paternal data, country still had a direct effect on achievement-oriented psychological control in addition to its indirect association via child-invested contingent self-esteem. Yet, the original effects of country on achievement-oriented psychological control were reduced to half of their size. Furthermore, as shown in Table 4, bootstrap analysis with 5,000 samples indicated that the indirect path from country of residence to psychological control via child-invested contingent self-esteem was significant for both maternal and paternal ratings.

Next, we examined whether social pressure and unfulfilled dreams would serve as mediators of the relation between country of residence and child-invested contingent self-esteem (see Table 4, bottom half). We found evidence for partial mediation in the maternal ratings and for full mediation in the paternal ratings. Although in the maternal ratings the partial mediation model was the best fitting model, $SBS-\chi^2(49) = 113.10, p < .001, RMSEA = .06, CFI = .98, NNFI = .97$, in the paternal ratings the partial mediation model did not have a better fit than the full mediation model, which yielded adequate fit, $SBS-\chi^2(50) = 93.61, p < .001, RMSEA = .05, CFI = .98, NNFI = .98$. In the maternal ratings, the initial association for country of residence remained significant, yet was reduced with 50%. In the paternal ratings, the initial direct effect became nonsignificant (further

indicating full mediation). Finally, as shown in Table 4, bootstrap analyses with 5,000 samples indicated that the indirect associations between country and child-invested contingent self-esteem through social pressure and unfulfilled dreams were significant for both mothers as fathers.

Discussion

Given that Chinese parents have been found to use more psychological control toward their children than Western parents, it is important to gain insight in this between-country difference. A recent study by Ng and colleagues (2014) uncovered one tip of the veil by showing that Chinese parents' self-esteem is more contingent on their children's achievements which, in turn, is related to their use of psychological control. Yet, it remains unclear why Chinese parents' self-esteem is more strongly intertwined with their children's performance. In the present research, we examined two different roads to child-invested contingent self-esteem and subsequent psychological control, one being interpersonal in nature (i.e., experiences of social pressure) and the other being more intrapersonal in nature (i.e., parents' personal history of unfulfilled dreams).

Two Roads to Psychological Control Through Child-Invested Contingent Self-Esteem

Although the literature on psychologically controlling practices has burgeoned over the past two decades, less attention has been paid to *domain-specific manifestations* of psychological control (Soenens et al., 2010). Given that the assessment of child-invested contingent self-esteem involved a clear reference to children's achievements, we deemed it most appropriate to focus on achievement-oriented psychological control in the present study. Consistent with Ng et al. (2014), we reasoned that one important reason why parents rely on more controlling practices in the achievement domain is because they feel that their own self-worth is implicated in the performances of their child. This prediction was confirmed, with parental child-invested contingent self-esteem emerging as a robust predictor explaining up to 43% of the variance in parents' use of psychological control.

A more novel aspect of the present research involved the examination of factors relating to child-invested contingent self-esteem. Social pressure has been identified as one key source of influence on parental behavior (Grolnick, 2003). Herein, we focused specifically on perceived social pressure to be an achievement-promoting parent, which involves the experience that parents are held accountable by different societal actors for the success and failures of their child (Wuyts et al., 2015). We found that such social pressure relates to parents' tendency to hinge their self-worth on the achievements of their child. Presumably, this vulnerable form of self-worth gets activated through the social pressure placed on parents, which then leads parents to transfer this experienced pressure to their children through the use of psychological control. We hasten to emphasize that this association may be bidirectional, an issue we could not examine because of our correlational research design. Indeed, it is well possible that parents high on child-invested contingent self-worth more easily experience pressuring social cues or even elicit social pressure.

In addition to this interpersonal pressure, we investigated the relation with a more intrapersonal factor, namely, parents' personal unfulfilled dreams. Brummelman and colleagues (2013) provided experimental evidence suggesting that parents want their child to redeem their broken dreams when they see their child as part of themselves. We showed that when parents report regrets for insufficiently realizing their personal ambitions, their self-esteem is implicated more strongly in their child's performance, which helps to explain why unfulfilled dreams relate positively to parents' use of achievement-oriented psychological control. Presumably, parents with unfulfilled dreams project their unfulfilled aspirations onto their children. A qualitative study

may help to obtain more insight in the precise dynamics. For instance, the type of studies or hobbies that parents orient their children to may be function of their own deprived personal aspirations.

The structural associations in the integrated model did not differ between Chinese and Belgian parents. Regardless of parents' cultural background, parents' perceived social pressure and unfulfilled dreams were associated with a higher tendency to imply their self-worth in the child's performance, which in turn related positively to achievement-oriented pressure toward their offspring. Of course, the finding that structural associations between our study variables were equivalent across the two countries does not preclude the possibility of important mean-level differences between these countries.

Country-Level Differences and Underlying Mechanisms

As expected, we found evidence for elevated levels of social pressure among Chinese parents, which resonates with the idea that Chinese society is more heavily focused on performance and excellence than Belgian society. Both Belgium and China have an open market society, but they differ markedly (a) in their focus on achievement in the cultural heritage, (b) in their family structure (i.e., number of children), and (c) in the importance placed on high-stakes testing and entrance exams. Although the present research was not able to identify exactly which of these country differences accounted for the observed elevated levels of social pressure among Chinese parents, we did find that differences in perceived social pressure were related to the way parents think about their parenting role (Sperber, 1996). The notion that Chinese parents increasingly feel pressured to rear successful and high achieving children has been around for a while in the popular media. For instance, in 2011, Amy Chua published the book *Battle Hymn of the Tiger Mother*, in which she characterized the Confucian tradition as involving high expectations on Chinese parents' responsibility of raising successful children. Our findings seem consistent with Amy Chua's claim. Yet, we want to highlight that even among Chinese parents, the mean levels of the measured constructs were not excessively high.

Furthermore, Chinese parents reported more unfulfilled dreams than Belgian parents. These heightened levels of unrealized dreams may reflect the restrictions of personal aspiration and growth that Chinese, relative to Belgian, parents experienced in the society (Bond et al., 2004). The observed mean-level differences in experienced social pressure to be an achievement-oriented parent and unfulfilled dreams were reflected in the mean-level differences in parents' child-invested contingent self-worth. Specifically, we demonstrated that these pressures constitute the underlying mechanisms (i.e., mediators) that explain at least partially Chinese parents' heightened susceptibility for hinging their self-worth on their child's performance. In turn, this fragile form of self-worth was associated with parents' reliance on psychologically controlling strategies. Indeed, parents' child-invested contingent self-esteem appeared to be an important factor explaining at least partially the mean-level differences in Chinese (vs. Belgian) parents' use of achievement-oriented psychological control.

Limitations, Future Directions, and Practical Recommendations

The current research has some limitations. First, our study was limited by the reliance on self-reports. To avoid possible response bias in future research, more objective measures of pressures and behavioral measures of parenting are needed. Second, the cross-sectional nature of our studies prevented us from examining reciprocal relations between the measured concepts. Experimental work relying on manipulations of pressure on parents would shed light on the hypothesized causal relation between social pressure and contingent self-worth. Third, given that our samples were not representative of the broader Chinese or the Belgian population, instead representing a relatively

homogeneous subset, one may raise concerns about the generalizability of our findings. For instance, our Chinese sample was gathered in Shanghai, a more developed and economically prosperous area in China. Future research could include more diverse samples in terms of socioeconomic status. Fourth, it would be interesting for future research to include cultural markers indicating exactly how the two samples differ. Including cultural markers would also be helpful to examine the role of within-country differences in cultural orientation. Such differences may be equally important or even more important than between-country differences.

A number of future research directions are proposed. First, because our cross-national comparison included only two nations, more research is needed to test the generalizability of our model across nations characterized by a different cultural climate. For instance, it would be interesting to invest the proposed model in a nation in which excellence and performance are of less importance than those included in the present study. We expect that within such a society, decreased levels of pressures among parents would be found. Second, because we measured parental child-invested contingent self-esteem at a relatively high level of generality (i.e., with reference to the child's overall achievement and performance), future research may examine these dynamics within more specific life domains, such as schooling, sports, or arts.

Finally, in terms of practical utility, the identification of key predictors of parents' reliance on psychologically controlling strategies is critical because accumulating evidence shows that such parenting is associated with maladjustment across the globe (see Pomerantz, Ng, Cheung, & Qu, 2014, for a review). The current research suggests that parents' reliance on achievement-oriented psychological controlling strategies can be, at least partially, predicted by pressures situated in the broader socioeconomic and cultural environment. In light of such findings, it is advisable to consider ways to diminish pressures on parents, for instance, by deemphasizing parents' accountability for their offspring's achievements. Furthermore, downplaying an emphasis on competition and excellence at the societal level may help to take away some of the pressures on parents.

Given that it may be very difficult to achieve a reduction of interpersonal pressures at the societal level, it may also be important to train parents to become aware of the pressures in their surroundings and in their own functioning and to provide them with the necessary support and skills to cope with these pressures. Such coping skills may help to counter the adverse effects of these pressures. This suggestion does not imply that parents should withdraw all involvement with and concern about their children's schooling. Yet, the type of involvement parents display would be different, that is, it would be less controlling and more autonomy-supportive in nature (e.g., Katz, Kaplan, & Buzukashvily, 2011).

Conclusion

This cross-cultural study showed that, regardless of the parents' country of residence, the more parents perceive pressure from their social environment to rear a successful child and the more they regret having failed to realize important personal dreams, the more their self-worth is implicated in the performances of their child. Such a fragile form of self-worth is related to parents' use of psychologically controlling practices to push their child to achieve well. Especially Chinese parents were found to experience these social pressures and to report unfulfilled dreams, which helped to explain their heightened tendency to hinge their self-worth on their children's performance and their vulnerability to engage in a detrimental, psychologically controlling style of interacting with their children.

Declaration of Conflicting Interests

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