
Intergenerational transmission of parenting styles of the Chinese living in Singapore

Haikel A. Lim^{1, 2}, Rathi Mahendran^{1, 2, 3}, Lei Feng¹, Reshmi K. Kayanoth², John C.M. Wong^{1, 3}
Ee Heok Kua^{1, 3}

¹National University of Singapore

² Duke-NUS Medical School

³ National University Hospital

© 2017. Psychreg Journal of Psychology
ISSN: 2515-138X

The study seeks to initiate a newly developed Personal and Parents' Parenting Style Scale (PaPPS) to explore the mechanisms of intergenerational transmission between parental parenting style and personal parenting style in Asia. A total of 294 Chinese participants (67.4 ± 5.9 years old; 76% women; 7.0 ± 3.5 years of formal schooling) completed the PaPPS and a sociodemographic questionnaire. Findings suggest the distinct intergenerational transmission of parenting in an Asian population of immigrants and children of immigrants from China living in Singapore, although there remained gender difference. However, parental satisfaction and years of parenting did not seem to mediate the transmission; there may perhaps be key cultural differences that require further exploration between both Asian and Western cultures.

Keywords: Chinese parents, immigrants, intergenerational transmission, parenting, parenting styles,

BACKGROUND

Every parent possesses a distinctive style of parenting that dynamically evolves with the child's stage of life. Although these styles are affected by both the parents and the child's temperaments (Kendler, Sham, & McLean, 1997), and are largely based on one's socio-temporal culture (Keller, Borke, Yovsi, Lohaus, & Jensen, 2005), they are also influenced by one's parents (Conger, Belsky, & Capaldi, 2009; Serbin & Stack, 1998; Van Ijzendoorn, 1992). In this study, we specifically examine this intergenerational transmission of parenting styles in a sample of adults in Singapore.

Parenting styles, culture, and context

Parenting styles are standard strategies employed in child rearing, and although parenting styles differ among individuals and cultures, many believe that they share certain underlying traits. It is widely accepted that there are three general parenting styles (authoritative, authoritarian, and permissive) along two axes: responsiveness to the child, and how demanding the parent is (Baumrind, 1967, 1971, 1978).

Because of the difference in socialisation values and goals, the optimal parenting style is socio-demographically (Simons, Beaman, Conger, & Chao, 1993; Spera, 2005) and cultural-temporally specific (Keller et al., 2005). In most Western countries, authoritative parenting – where parents are demanding but also responsive – has been lauded as the optimal style (Steinberg, 2001). Children of authoritative parents often seem to be better adjusted (Nielsen, Vikan, & Dahl, 2002), have better academic success (Spera, 2005; Strage & Brandt, 1999), and even engage in more health-promoting behaviours (Sleddens, Gerards, Thijs, de Vries, & Kremers, 2011).

Elsewhere, however, the conclusions differ. Spanish children have been shown to flourish in general from permissive parenting (Garcia & Garcia, 2009), where parents are undemanding but unresponsive; Chinese children of immigrants to the US seem to respond better academically with an authoritarian parenting style, positive parenting – which focuses on child rearing strategies that create a warm, loving, caring, supportive, and positive environment built on the foundation of trust and respect – favourably impacts American children's social behaviours and their eventual inclinations to positive parenting (Hofferth, Pleck, & Vesely, 2012).

Intergenerational transmission of parenting styles

Given the far-reaching consequences of parenting styles (Duriez, Soenens, & Vansteenkiste, 2008), it seems pertinent to explore the determinants of parenting style. Research has identified a number of factors (see Berg-Nielsen et al., 2002 for a review on this topic): individual demography (education, ethnicity; e.g., Kendler et al., 1997, Quah, 2004), personality and psychopathological individual differences (e.g., Bayer & Cegala, 1992; Belsky, Crnic, & Woodworth, 1995), and cross-cultural changes and trends in parenting (e.g., Keller et al., 2005; Peterson, Smirles, & Wentworth, 1997). The bulk of contemporaneous research, however, has started to explore the intergenerational transmission of parenting styles (Kitamura et al., 2009), or, how personal parenting styles are influenced by parental parenting styles.

The idea that parenting behaviours is transmitted from one generation to another is not new (Belsky, Conger, & Capaldi, 2009; Conger et al., 2009). Over the past two decades, research on the transmission

of parenting behaviours have seen a wealth of empirical evidence; much of the work, however, has focused exclusively on 'dysfunctional' behaviours (see Conger et al., 2009), and not parenting styles per se. For example, parental abuse has been shown to be transmitted through the generations (Hops, Davis, Leve, & Sheeber, 2003), via neuropsychological changes during child development (DeGregorio, 2013), and harsh – but not specifically authoritative/authoritarian – parenting seems to span three generations, from grandparents to grandchildren via parents (Bailey, Hill, Oesterle, & Hawkins, 2009).

More recently, studies have started examining the transmission of parenting styles, heeding the call to examine transmission mechanisms (Belsky et al., 2009; Conger et al., 2009). One examined how parental satisfaction as well as individual marital satisfaction and educational attainment in adulthood were related to the intergenerational transmission of parenting, with this effect was stronger for men than women (Chen, Liu, & Kaplan, 2008). Another showed that authoritarian styles of parenting were mediated by parental extrinsic goal promotion (Duriez et al., 2008). Finally, the transmission of positive parenting was mediated by individuals' educational attainment, whereas harsh parenting was mediated by individuals' externalising behaviour (Neppel, Conger, Scaramella, & Ontai, 2009); in fact, another study showed that men were more likely to engage in the positive parenting of their sons simply if they were positively fathered and less harshly mothered (Hofferth et al., 2012).

However, almost all of the studies have focused on sample populations in the US; those on Asian cultures have comparatively sampled intra- American cohorts, and, perhaps inadvertently, have come to somewhat ethnocentric conclusions (e.g., Tajima & Harachi, 2010). It therefore seemed imperative to examine the transmission of parenting styles in an Asian country like Singapore. Further, to the best of our knowledge, the only other study that examined parenting styles in Singapore focused on the differences in parenting due to ethnicity and education, did not account for gender and educational attainment, and did not use widely acknowledged ('universal') parenting styles (Quah, 2004).

Determining and assessing parenting styles

In order to examine this, however, it is essential to first quantify parenting styles. There is a myriad of tools quantifying parenting styles via observation and self-reports. One of the more frequently used tools is the Parenting Styles and Dimension Questionnaire (PSDQ; Robinson, Mandleco, Olsen, & Hart, 2001); also sometimes referred to as the Parenting Style Questionnaire, Parenting Practices Questionnaire, or Parenting Style Dimension), a 62-item self-report that assesses parenting styles and their underlying sub-dimensions. Even though the PSDQ has been used in 53 different studies, and shows strong reliability and validity, much criticism has been levelled at its length and lack of cross-cultural applicability (Olivari, Tagliabue, & Confalonieri, 2013). The PSDQ also only measures personal parenting styles.

To measure how parents were parented, researchers often use the Parental Authority Questionnaire (PAQ; Buri, 1991), a 30-item self-report measure that investigates how an adult's parents acted toward them when the adult was a child. Each of the three general parenting styles has 10 questions, on a five-point Likert-type format, measuring the degree to which the adult agrees with the statement. The PAQ, and its revised versions, similarly shows strong reliability and validity (Reitman, Rhode, Hupp, & Altobello, 2002), but has not been extensively used as the PSDQ. However, the PAQ only measures how adults were parented; our review of the literature did not surface any questionnaire in which both the perception of personal parents' parenting styles were examined.

The present study

To the best of the authors' knowledge, there has been no study or measure that simultaneously examine how parents were parented, how satisfied they were with their own parenting, and how this affects their own parenting styles, especially in an Asian context. This study thus had two objectives: first, to

develop and preliminarily examine the psychometric properties of a newly developed PaPPS, and second, and more importantly, to explore the mechanisms of transmission between parental parenting style and personal parenting style in an Asian context.

Therefore, in addition to examining the psychometric properties of PaPPS on Singaporean adults, this exploratory study had the following hypotheses:

Hypothesis 1: (the perception of) Personal parenting style would be positive correlated with (the perceptions of) parents' parenting style.

Hypothesis 2: These perceptions of personal and parenting styles would differ across genders.

Hypothesis 3: These perceptions of personal and parenting styles would be mediated by their satisfaction with their parent's parenting.

Hypothesis 4: These perceptions of personal and parenting styles would also be mediated by their satisfaction with parents' parenting.

Given the lack of available information in Asians, and the use of a newly developed measure, no effect sizes were calculated.

METHOD

This study obtained ethics approval from the National University of Singapore Institutional Review Board, and all participants provided written informed consent before commencing the study.

Sample

Two hundred and ninety-four ethnically Chinese participants completed the PaPPS, in addition to a sociodemographic questionnaire, as part of another ongoing survey of the Singapore elderly in Jurong, a residential area on the western side of the island. Singapore is an island-state in Southeast Asia that has a multi-ethnic population of primarily Asian immigrants, particularly from China, Malaysia and the Malay Archipelago, and India. The majority ethnic group (Chinese) was selected for this study because of the homogeneity of their cultural parenting style as most, if not all, participants were second-generation immigrants, and whose parenting practices and culture were more representative of the general East Asian region.

Participants from a community sample in this age group were targeted as we deemed them to be the best representative of the group that had completed parenting. In order to participate, participants would have to themselves be parents, and because of potential cognitive impairments in this sample population, score in the normal range (≥ 23) on the Modified Mini-Mental State Examination for Singapore (Feng, Chong, Lim, & Ng, 2012), which would mitigate the issue of recall biases. Research nurses translated unclear items to the participants' first language if it was not English (85% translated to Chinese language/dialect).

Table 1 details the demographics of the participants by gender (75% women). Participants ranged from 55-92 years of age ($M = 67.4$ years, $SD = 5.9$) and were predominantly married (71%) women and (76%) who identified as Taoist/Buddhist (70%; Christian = 16%; other religions = 15%). On average, participants completed 7.0 ± 3.5 years of formal schooling (Range = 0-18 years) with 30% not completing their primary level education (Primary = 39%, Secondary = 21%, Tertiary and Higher = 10%). A majority of the sample was not actively employed (80%) and stayed in 4-5 room apartments (70%; 1-3 rooms = 19%; 5 rooms or more = 11%) with their spouse (71%).

Table 1
 Demographic Characteristics of Combined Sample and Sample Separated by Gender

Demographic Variable	Total (<i>N</i> = 24)	Men (<i>n</i> = 72; 25%)	Women (<i>n</i> = 222; 75%)
Age	67.43 ± 5.89	69.67 ± 6.51	66.70 ± 5.49
Education			
No formal	87 (30)	15 (21)	72 (33)
Primary	113 (39)	23 (32)	39 (41)
Secondary	62 (21)	24 (33)	38 (17)
Pre-University	25 (9)	7 (10)	18 (8)
University	6 (2)	3 (4)	3 (1)
Years of Formal Education	7.03 ± 3.55	8.30 ± 3.58	6.59 ± 3.45

Note: Data are presented either as *N*(%) or as *M* ± *SD*.

Measures

Participants completed a basic sociodemographic questionnaires as well as a newly developed parenting questionnaire for this study.

The PaPPS allows researchers to examine the relationship between parents' child-rearing strategies and how they were parented as children. Using the Delphi method (Hsu & Sandford, 2007), three experts in the field, comprising a child psychiatrist (JW), a psychologist (RK), and a geriatric psychiatrist (EHK), collectively conceptualised the initial pool of items based on the Baumrind's (1971) three parenting styles (authoritative, authoritarian, and permissive) and positive parenting, with reference to the PSDQ and the PAQ.

In the interest of brevity, the final version of the PaPPS administered to participants consisted of 12 items that simultaneously asked participants how frequently (on a five-point Likert-type scale) an agent (i.e., their father, mother, or themselves) engaged in specific behaviour to them/their children (if any). In addition, two other items asked participants how satisfied they were with their parents' parenting, bringing the total number of items to 14.

Data analysis

The statistical significance level was set to 0.5 for all procedures and performed all analyses with SPSS. As the data were free from acquiescence bias (Rughinis & Toader, 2010), suitable for factoring based on Kaiser-Mayer-Olkin measure of sampling adequacy and Bartlett's test of sphericity (Sharma, 1996), and had only one random missing data as determined by Little's Missing Completely at Random test (1988), we used all participants' responses for the exploratory factor analysis (EFA). Although the PaPPS consist of 14 items, the final two items ask participants to rate their level of satisfaction with their parents' parenting; these items were excluded from EFA only because they were not directly related to parenting styles per se.

An EFA was selected because the PaPPS scale had yet to be validated elsewhere (Ferguson & Cox, 1993). The criteria for factor selection were based upon a combination of a Scree plot assessment and parallel analysis to avoid under-factoring (Ford, MacCallum, & Tait, 1986). We ran the EFA separately for different agents and extracted factors via a common factor analysis with an oblique rotation (Promax). Because Shapiro-Wilk tests suggested non-normality, we proceeded with non-parametric tests for

subsequent analyses – Wilcoxon-Mann Whitney U test, Kruskal-Wallis test, or Spearman's correlations, where appropriate – to determine the relationship between the various factors of the PaPPS and gender. To examine the mechanisms of the transmission of parenting styles, we conducted mediation analyses (Baron & Kenny, 1986).

Scale analysis

The first and only iteration of our scale analyses suggested a three-factor model each for all three agents: father, mother, and personal. Table 2 details the factor-loading matrix for the 12 items across the agents. The reliability (Cronbach's alpha) of the different factors varied in acceptability, from .39 to .88, across the three agents. The large variance was primarily caused by Factor 3, which had the lowest reliability, $\alpha = .39-.60$ (inter-item correlations range = .01-.47); the other two factors had acceptable alphas ranging .75-.88 (inter-item correlations range = .39-.71) across the three agents. Table 3 details the mean scores on the PaPPS for both the total sample and individual genders.

Table 2
Factor Loading Matrix for PaPPS for Total Sample and Separated by Gender

PaPPS Item	Father			Mother			Personal/Individual		
	Factor 1	Factor 2	Factor 3	Factor 1	Factor 2	Factor 3	Factor 1	Factor 2	Factor 3
Positive Parenting Q1	.757	.196	.331	.746	.219	.414	.754	.100	.159
Positive Parenting Q2	.835	.210	.229	.818	.202	.224	.781	.099	.078
Positive Parenting Q3	.732	.221	.318	.738	.262	.278	.760	.284	.098
Authoritative Parenting Q1	.844	.215	.319	.778	.125	.352	.744	.123	.304
Authoritative Parenting Q2	.808	.372	.332	.821	.185	.459	.767	.115	.322
Authoritative Parenting Q3	.735	.301	.120	.762	.188	.177	.693	.041	.120
Authoritarian Parenting Q1	.280	.857	.045	.174	.867	.181	.141	.787	.096
Authoritarian Parenting Q2	.239	.915	.164	.192	.922	.112	.064	.848	-.015
Authoritarian Parenting Q2	.323	.825	.256	.340	.828	.205	.210	.815	.218
Permissive Parenting Q1	.299	.207	.813	.396	.181	.803	.051	.183	.789
Permissive Parenting Q2	.240	-.048	.702	.291	-.003	.793	.212	.037	.733
Permissive Parenting Q3	.150	.257	.441	.159	.258	.577	.253	.035	.716

Table 3
PaPPS Item and Subscale Descriptives Separated by Gender

Item	Men			Women		
	Father	Mother	Individual	Father	Mother	Individual
<i>Positive-Authoritative</i>	$\alpha = .87$	$\alpha = .89$	$\alpha = .86$	$\alpha = .88$	$\alpha = .86$	$\alpha = .83$
My parents encouraged me in my career. (I encourage my kids in their career.)	1.71 ± 1.07	1.94 ± 1.30	2.88 ± 1.32	1.56 ± 1.14	1.79 ± 1.26	3.07 ± 1.38
My parents talked to me about values. (I talk to my kids about values.)	1.73 ± 1.09	2.22 ± 1.39	2.96 ± 1.19	1.91 ± 1.22	2.18 ± 1.31	3.20 ± 1.16
My parents talked to me about the family history. (I talk to my kids about the family history.)	1.67 ± 0.94	2.28 ± 1.27	2.59 ± 1.08	1.91 ± 1.14	2.31 ± 1.18	2.74 ± 1.09
My parents were responsive to my feelings and needs. (I am responsive to my kids' feeling and needs).	1.52 ± 0.87	2.23 ± 1.28	3.22 ± 1.00	1.79 ± 1.17	2.20 ± 1.27	3.42 ± 1.04
My parents encouraged me to talk about my feelings and problems. (I encourage my kids to talk about their feelings and problems.)	1.30 ± 0.65	1.64 ± 1.10	2.65 ± 1.24	1.48 ± 0.98	1.79 ± 1.15	2.99 ± 1.25
My parents complimented me. (I compliment my kids.)	1.41 ± 0.84	1.76 ± 1.14	2.90 ± 1.36	1.69 ± 1.13	1.93 ± 1.23	3.04 ± 1.33
<i>Authoritarian</i>	$\alpha = .81$	$\alpha = .80$	$\alpha = .76$	$\alpha = .83$	$\alpha = .85$	$\alpha = .74$
My parents shouted when he/she disapproved of my behaviour. (I shout when I disapprove of my kids' behaviour.)	1.90 ± 1.16	1.93 ± 1.16	1.82 ± 0.94	1.66 ± 1.00	2.07 ± 1.19	2.10 ± 1.07
My parents spanked me when I didn't like what he/she did or said. (I spank my kids when they don't like what I do or say.)	1.66 ± 1.01	1.71 ± 1.05	1.60 ± 0.87	1.43 ± 0.87	1.73 ± 1.09	1.68 ± 0.87
My parents openly criticised me when my behaviour did not meet his/her expectations (I openly criticise my kids when their behaviour does not meet my expectations.)	1.38 ± 0.90	1.50 ± 1.02	1.31 ± 0.69	1.22 ± 0.68	1.42 ± 0.92	1.35 ± 0.79
<i>Permissive</i>	$\alpha = .53$	$\alpha = .74$	$\alpha = .60$	$\alpha = .34$	$\alpha = .48$	$\alpha = .61$
My parents gave in to me when I caused a commotion. (I give in to my kids when they cause a commotion.)	1.16 ± 0.49	1.33 ± 0.75	1.65 ± 0.99	1.22 ± 0.58	1.30 ± 0.65	1.62 ± 0.96
My parents spoilt me. (I spoil my kids.)	1.10 ± 0.35	1.22 ± 0.60	1.56 ± 0.92	1.39 ± 0.90	1.38 ± 0.84	1.93 ± 1.21
My parents ignored my bad behaviour. (I ignore my kids' bad behavior.)	1.38 ± 0.73	1.47 ± 0.91	1.67 ± 1.08	1.22 ± 0.59	1.41 ± 0.83	1.53 ± 0.98
Looking back, I am happy with my parents.	3.30 ± 1.35	4.15 ± 1.00	-	3.78 ± 1.18	3.98 ± 1.06	-

We subsequently reviewed and labelled the three extracted factors. Two factors seemed to coincide well with our hypothesised constructs: the three items each in Factors 2 and 3 suggested that they represented Authoritarian and Permissive parenting styles, respectively. Factor 1, consisting of six items, seemed to collectively comprise of both Positive and Authoritative items; as such, we labelled this the Positive-Authoritative parenting style.

Preliminary analyses

Overall, we found that all three parenting styles (factors) were correlated to some degree across the three agents. We found that individuals were equally likely to adopt the style that their parents had in raising them. For example, a personal-positive style were significantly influenced by both positive-authoritative mothers, $r_{ho} = .48, p < .001$, and fathers, $r_{ho} = .30, p < .001$; an authoritarian style by authoritarian parents, $r_{hos} = .27-.30, ps < .001$; and a permissive style by permissive parents, $r_{hos} = .47-.58, ps < .001$.

As expected, as seen in Table 3, we found significant gender differences. Men (versus women) felt that their fathers more frequently employed authoritarian style, 151.57 versus 129.93, $Z = -2.12, p = 0.034$. Women were more satisfied with their fathers' parenting than men were, 141.49 versus 114.23, $Z = -2.54, p = 0.011$. There were no other significant differences. As such, for the subsequent analyses, we examined each gender separately.

Relationship between the transmission of parenting styles and gender

Table 4 details the correlations between parental and personal parenting styles. Across both genders, as seen in Table 4, we found a similar pattern consistent with the overall sample correlations: parental parenting style was highly correlated with personal parenting style. Interestingly, for men, a personal positive-authoritative style was influenced not only by positive-authoritative parenting, but also by an authoritarian father, $r_{ho} = .30, p = .018$, and permissive mother, $r_{ho} = .30, p = .01$. An authoritarian parenting style was influenced not only by their authoritarian parents, but also a positive-authoritarian mother, $r_{ho} = .36, p = .003$. Finally, men's permissive parenting was influenced by their parents' permissive parenting but also by an authoritarian father, $r_{ho} = .32, p = .01$.

Table 4
Correlations between Personal and Parents' Parenting Styles

Parental/Personal Parenting Style	Men			Women		
	Positive-Authoritative	Authoritarian	Permissive	Positive-Authoritative	Authoritarian	Permissive
Positive-Authoritative						
Father	.31*	<i>n.s.</i>	<i>n.s.</i>	.28***	.14*	<i>n.s.</i>
Mother	.54***	.36**	<i>n.s.</i>	.47***	.14*	.20**
Authoritarian						
Father	.30*	.37**	.32*	.27***	.30***	<i>n.s.</i>
Mother	<i>n.s.</i>	.39**	<i>n.s.</i>	.34***	.23**	.24**
Permissive						
Father	<i>n.s.</i>	<i>n.s.</i>	.44***	.20**	<i>n.s.</i>	.48***
Mother	.31**	<i>n.s.</i>	.39**	.29***	<i>n.s.</i>	.64***

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

This was not exactly the case for women. All parental styles seemed to influence women's adoption of a personal positive-authoritative style. Their authoritarian style, on the other hand, were influenced by their parents' authoritarian as well as positive-authoritative styles, $r_{hos} = .14$, $ps = .04$. Finally, their permissive parenting was influenced both by their parents' permissive style but also authoritarian, $r_{ho} = .24$, $p = .001$, and positive-authoritative mothering, $r_{ho} = .20$, $p = .003$.

Relationship between the transmission of parenting styles and parental satisfaction

We next examined the influence of parental satisfaction on the transmission of parenting styles for each gender. Table 5 details the correlations between the PaPPS and parental satisfaction. The results revealed that men were satisfied with both their parents if their parents had more frequently engaged in positive-authoritative parenting, $r_{hos} = .33-.38$, $ps = .002-.006$, and were additionally satisfied with their mothers if they were permissive, $r_{ho} = .32$, $p = .008$. Women seemed to be also satisfied with their parents' positive-authoritative parenting, $r_{hos} = .22-.39$, $ps \leq .001$, but seemed satisfied, instead, with their father if they had experienced permissive parenting, $r_{ho} = .24$, $p = .001$. Women also seemed to be highly satisfied with their mothers if they had experienced authoritarian mothering, $r_{ho} = -.33$, $p < .001$.

Table 5
Correlations of Personal and Parents' Parenting Styles with Satisfaction of Parents' Parenting and Years of Formal Education

Parenting Style	Men			Women		
	Paternal Parenting Satisfaction	Maternal Parenting Satisfaction	Years of Schooling	Paternal Parenting Satisfaction	Maternal Parenting Satisfaction	Years of Schooling
Positive-Authoritative						
Father	.38**	–	<i>n.s.</i>	.39***	–	<i>n.s.</i>
Mother	–	.33**	.28*	–	.22**	<i>n.s.</i>
Individual	<i>n.s.</i>	.29*	.33**	<i>n.s.</i>	<i>n.s.</i>	.19*
Authoritarian						
Father	<i>n.s.</i>	–	<i>n.s.</i>	.27***	–	<i>n.s.</i>
Mother	–	<i>n.s.</i>	<i>n.s.</i>	–	–.33***	<i>n.s.</i>
Individual	<i>n.s.</i>	<i>n.s.</i>	<i>n.s.</i>	–.16*	–.15*	<i>n.s.</i>
Permissive						
Father	<i>n.s.</i>	–	<i>n.s.</i>	.24**	<i>n.s.</i>	<i>n.s.</i>
Mother	<i>n.s.</i>	.32**	<i>n.s.</i>	<i>n.s.</i>	<i>n.s.</i>	<i>n.s.</i>
Individual	–	<i>n.s.</i>	<i>n.s.</i>	<i>n.s.</i>	<i>n.s.</i>	<i>n.s.</i>

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

Across both genders, it seemed like their mothers, and the satisfaction with their mothers' parenting, had more of an impact on personal parenting styles. Specifically, for men, satisfaction with positive-authoritative mothering was related to their own positive-authoritative parenting, $r_{ho} = .29, p = .019$. For women, it seemed that dissatisfaction with authoritarian mothering was related to their using less of authoritarian parenting, $r_{ho} = -.15, p = .026$.

Because parental satisfaction only consistently correlated with positive-authoritative mothering for men and authoritarian mothering for women, mediation analyses for the transmission of parenting were only conducted for these two styles, as it requires all variables of interest to be related at a bivariate level (Baron & Kenny, 1986). In the regression model that examined the effect of the mediator over and above the independent variable (Baron & Kenny, 1986), our analyses suggested that satisfaction with parenting was not the mechanism through which (1) positive-authoritative parenting was transmitted from mother to son, $\beta = .07, p = .48; F(2,64) = 15.88, p < .001$; and (2) authoritarian parenting was transmitted from mother to daughter, $\beta = -.04, p = .58; F(2,209) = 11.71, p < .001$.

Relationship between the transmission of parenting styles and years of formal education

Finally, we examined the effect of the years of formal education of the individual on the transmission of parenting. Table 5 also details the correlations between the PaPPS and years of formal schooling. As seen in Table 5, for men, it seemed that positive-authoritative mothering was related to years of schooling, $r_{ho} = .28, p = .032$; there was no relationship between parental parenting styles on years of schooling for women. Men with more years of schooling adopted a positive-authoritarian style, $r_{ho} = .33, p = .008$; this was the same case for women, $r_{ho} = .19, p = .012$.

Because years of schooling seemed to only be consistently related to positive-authoritative mothering for men, mediation analyses (as above) were only conducted for this set of variables. Unfortunately, there seemed to be no mediation of years of formal education on the transmission of positive-authoritative parenting from mother to son, $\beta = .14, p = .196; F(2,58) = 17.91, p < .001$. Table 6 provides an overview of the significant results from this study.

Table 6
Overview of Significant Results

Influence on Personal PS	Men	Women
Parental Parenting	<ul style="list-style-type: none"> • PA influenced by PA parenting and AN fathering. • AN influenced by AN parenting and PA mothering. • PE influenced by PE parenting and AN fathering. 	<ul style="list-style-type: none"> • PA influenced by all PS. • AN influenced by parenting who were AN and PA. • PE influenced by PE parenting, and AN and PA mothering.
Parental Satisfaction	<ul style="list-style-type: none"> • Satisfied with PA parents and PE mothering. • Satisfaction with PA mothering was related to personal PA, but no mediation of satisfaction with mothers' parenting on the transmission of PA. 	<ul style="list-style-type: none"> • Satisfied with PA parents and PE fathering. • Dissatisfied with AN mothering. • Dissatisfaction with AN mothering was related to the less frequency use of personal AN, but no mediation of dissatisfaction with mothers' parenting on the (lack of) transmission of AN.
Years of Schooling	<ul style="list-style-type: none"> • PA mothering was correlated with more years of schooling, but no mediation of years of schooling on the transmission of PA PS. 	

Note: PS = Parenting Style. PA = Positive-Authoritative PS. AN = Authoritarian PS. PE = Permissive PS

This study is the first to introduce a tool that simultaneously assesses both personal and parents' parenting style (PaPPS) and provides a preliminary examination of the psychometric properties of the scale that make it suitable for future use. To the best of our knowledge, this study is also the first to examine the intergenerational transmission of parenting, and its mechanisms, in an Asian population.

Personal and Parents' Parenting Style Scale

Our analyses of the PaPPS found that although we had initially conceived four subscales based on Baumrind's three parenting styles (authoritative, authoritarian, and permissive) and an additional contemporary style (positive parenting), in this particular population, the authoritative and positive styles are almost similar. This is perhaps due to the non-exclusive nature of both parenting styles: aspects of what we explored as positive could also be construed as authoritative (encouragement and parent-child interaction) and vice versa. Therefore, at least in this sample, we consider them as one style. Nonetheless, the PaPPS proved to be an adequate measure in examining the transmission of parenting styles (based on the frequency of parenting behaviours) in a sample of Asian parents.

Context of parenting

A large majority from our study can be explained in terms of historical and sociological changes that occurred in Singapore from the 1930s–1950s, as well as the provenance of the individuals in the study (which consisted of both first and second-generation immigrants (i.e., baby boomers) from China or surrounding geographical regions. Participants were very likely to have received 'traditional Chinese' parenting, which can be described as generally very strict (non-permissive) parenting (see Quah, 2004 for an overview of Chinese parenting).

Further, because of the strongly defined gender norms prevalent at the time, fathers were likely confined to the work sphere and not as present as mothers in the home sphere; men were more likely given the opportunity to study and pursue educational achievement, whereas women were more likely confined to bettering themselves in homemaking activities (Quah, 1998, 1999). Therefore, consistent with an understanding of historical context, men, more than women, felt that their fathers were authoritarian; and women, more than men, were satisfied with their fathers' parenting. Individuals were also more satisfied with their mothers' parenting than their fathers', and, as such, mothering has much more of an impact than did fathering.

Intergenerational transmission of parenting styles in Asian men and women

The results of this study show that, in general, parents' parenting style influenced that of their children's; i.e., participants generally parented the way in which they were parented. For both genders, it seems that parental positive-authoritative parenting influenced personal authoritarian styles. Although this may appear somewhat counter-intuitive, given the context in which participants parented their children (i.e., a post-war competitive environment of baby boomers), it seems reasonable to suggest that the prevalent style was determined to be most effective at that point in time was that of an authoritarian in order to ascertain that one's children succeeded in Singapore (as suggested by Duriez et al., 2008).

There were, however, gender differences: for men, authoritarian fathering seemed to influence personal parenting styles that were not authoritarian. Although we found that men were not dissatisfied with authoritarian fathering, they seem to adopt more positive-authoritative and permissive styles because of it. This seems intuitive, given that authoritarian fathering is conceptualised as strict parenting with high demands and low responsiveness, but somewhat in contrast with another study of a Western population that has shown positive parenting was influenced by positive fathering and less authoritarian mothering (Hofferth et al., 2012). For women, the relationships were less distinct: parental

authoritarian and positive-authoritative mothering seemed to influence personal permissive parenting styles, which suggests that perhaps having demanding mothers influenced their decision to do the opposite, also supported by the results showing that women were dissatisfied with authoritarian mothering.

This study found that individuals were most satisfied with positive-authoritative parenting. In addition, men were satisfied with their mothers', and women with their fathers', parenting if this parent had adopted a permissive style. We also found that, for men, positive-authoritative mothering influenced educational attainment, but this was not the relationship for women, who were perhaps not given enough autonomy in that era to pursue educational achievements. These, interestingly, further highlight the gender difference in the experience and display of parenting styles by both parents, but have been shown in other studies on general Asian parenting such as by Chao & Tseng in 2002 (as cited in Bornstein, 2005). To this end, our hypothesis regarding the transmission of parenting styles and differential effects by gender is proved.

Mechanism of transmission

Unfortunately, although we have hypothesised the mediation with parents' parenting and educational attainment on the intergenerational transmission of parenting styles, we found that this was not the case: neither variable seemed to act as mediators. This is unexpected, given that previous studies have suggested as much (Chen et al., 2008; Neppl et al., 2009). One explanation might be that our study preliminarily suggests that the satisfaction with parenting does not necessarily facilitate the transmission of parenting (cf. Chen et al., 2008), perhaps because of individuals' retrospective assessments of achievements in life, regardless of parental parenting style, due to Asian values of filial piety and respect for elders.

Another might be because educational attainment, as conceptualised in another study (Neppl et al., 2009), primarily involved in contemporary samples that were not constricted to the unforgiving gender norms of the 1920s–1960s, which maintained definitions of the 'working man' and the 'homemaking woman' (Quah, 1999) and, as such, may have found effects on educational attainment where we did not. Further, because of the focus of Asian parenting on fostering educational achievement in children regardless of parenting style (Chao & Tseng, 2002), the results were not as significant as they would be elsewhere (cf. Neppl et al., 2009). There are, of course, other confounds and limitations to this study that may have contributed to the lack of significance; these are explained hereafter.

LIMITATIONS AND FUTURE DIRECTIONS

There are a few limitations to this study that should have been addressed. First there are undoubtedly many confounds that determine the nature of parenting and, in fact, the presence/absence of parenting. For instance, some studies have also found that the dynamic socioeconomic status of families and parent-dyads results in differential treatment, and, thus, parenting, to children (Yi, Chang & Chang, 2004); this was not explored in this study but may also be an inherent confound in such studies taking a cross-sectional examination of dynamic relationships such as these. Further, in an attempt to cast a wide net for parents who have 'completed' parenting, we included participants who were both pre- and post-war (WWII; Japanese occupation in Singapore) babies; our future analyses will consider this and compare parents born in the pre- and post-war years (although our present study examines individuals who parented in the post-war era).

Second, all of the works in this study relied not only on participants' self-reports, which in themselves pose an issue (i.e., recall bias, which we tried to minimise), but also required a retrospective examination of how participants felt they were treated as children and how they treated their children. Although our study could suggest a causal relationship (i.e., perception of parents' parenting and

perception of individuals' parenting), it is important to note that retrospective reports are potentially prone to memory errors of omission and commission (Belsky et al., 2009), and should thus be interpreted with caution. To address this issue, we are presently looking into assessing G2, the children of the individuals in this study, in order to ascertain the veracity of their parenting reports and investigate the impact of their perceived parenting on their children's perception of being parented. It may be argued that the most accurate assessment of parenting is via observational *in vivo* settings, but a retrospective review may provide a more holistic assessment of parenting.

Third, it is also important to examine the next generation of individuals given the social transformation of families in the 21st century. More of G2 and G3 are receiving better educational opportunities, and are pursuing opportunities abroad. Further, with the improvement in eldercare, there may perhaps also be an influence of *grandparenting* as parents of this 'sandwiched generation' are leaving the upbringing of their children to their grandparents or foreign domestic workers (as is the case in Singapore) as they work to support both their parents and children. Future research should also therefore seek to address the changing sociocultural environment and consider the context-dependent factors that may assist in explaining their results instead of opting for broad generalisations that do no justice to the dynamic, complex nature of the issue.

Fourth, the permissive subscale of the PaPPS had low internal consistency; this should be addressed in future studies exploring the validity and reliability of this assessment tool in their own populations. In fact, some have argued that, in Asian populations, what is perceived to be universal styles are not entirely universal because of the differences in meaning and perception. For instance, authoritarianism in the Asian context can be argued to be strongly fuelled by a sense of love and training instead of a totalitarian regime that is imagined of in Western societies (Ang & Goh, 2006). Other researchers elsewhere have extensively reviewed this, but much of the work has focused primarily on immigrant populations of the US, instead of indigenous Asian populations.

Finally, given that our mediation models did not reach significance; future studies should not only replicate our results but also move toward examining other mediators of the intergenerational transmission of parenting (cf. Kitamura et al., 2009). These include, but are not limited to, sociodemographic factors like household income per capita and number of children, personality factors that predispose an individual to a particular parenting style, and the quality of the parent-child bond through other associated parental measures such as child attachment. In addition, examining such issues will help better understand the transmission of parenting in Asia and assist in policy work for caring for an ageing population.

IMPLICATIONS AND CONCLUSION

This study is the first to provide a basis for understanding the intergenerational transmission of parenting styles, as well as, very broadly, the transmission of classical parenting styles among Chinese individuals. The study spans three generations, and historically significant events in Singapore and Asia: it involves migrants in search of a better life in a new country who parented children during the WWII era. Intergenerational continuity is strong, and although the study supports the various initiatives at the national level by governmental bodies promoting 'effective' (positive) parenting, it suggests greater attention to the sociocultural context in which parenting occurs. Many international programmes, such as the Triple P Programme (Sanders, 1999), are available and useful in developing well-adjusted children; we, in Asia, however, need to attend to the mediating factors unique to our culture, environment and ethos of the community. Further, this study also provides the basis for a comparison against current smaller and non-traditional family units that involve single parents and same-gender parenting, as well as grandparenting, and parenting by other individuals (foreign domestic

workers and nannies). It is in the hopes that in understanding parenting we can better bring up future generations of individuals.

Acknowledgement

The authors would like to thank all participants and members of research team at the Training and Research Academy (TaRA) for their invaluable assistance in this study.

References

- Ang, R. P., & Goh, D. H. (2006). Authoritarian parenting style in Asian societies: A cluster-analytic investigation. *Contemporary Family Therapy, 28*(1), 131–151. <https://doi.org/10.1007/s10591-006-9699-y>
- Bailey, J. A., Hill, K. G., Oesterle, S., & Hawkins, J. D. (2009). Parenting practices and problem behavior across three generations: monitoring, harsh discipline, and drug use in the intergenerational transmission of externalizing behavior. *Developmental Psychology, 45*(5), 1214–1226. <https://doi.org/10.1037/a0016129>
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173–1182. <https://doi.org/10.1037//0022-3514.51.6.1173>
- Baumrind, D. (1967). Child care practices anteceding three patterns of preschool behavior. *Genetic Psychology Monographs, 75*(1), 43–88.
- Baumrind, D. (1971). Current patterns of parental authority. *Developmental Psychology, 4*(1, Pt. 2), 1–103. <https://doi.org/10.1037/h0030372>
- Baumrind, D. (1978). Parental disciplinary patterns and social competence in children. *Youth & Society, 9*(3), 239–267.
- Bayer, C. L., & Cegala, D. J. (1992). Trait verbal aggressiveness and argumentativeness: Relations with parenting style. *Western Journal of Communication, 56*(3), 301–310. <https://doi.org/10.1080/10570319209374418>
- Belsky, J., Crnic, K., & Woodworth, S. (1995). Personality and parenting: Exploring the mediating role of transient mood and daily hassles. *Journal of Personality, 63*(4), 905–929. <https://doi.org/10.1111/j.1467-6494.1995.tb00320.x>
- Belsky, J., Conger, R., & Capaldi, D. M. (2009). The intergenerational transmission of parenting: introduction to the special section. *Developmental Psychology, 45*(5), 1201–1204. <https://doi.org/10.1037/a0016245>
- Berg-Nielsen, T. S., Vikan, A., & Dahl, A. A. (2002). Parenting related to child and parental psychopathology: A descriptive review of the literature. *Clinical Child Psychology and Psychiatry, 7*(4), 529–552. <https://doi.org/10.1177/1359104502007004006>
- Bornstein, M. H. (Ed.). (2005). *Handbook of parenting: Volume 4 social conditions and applied parenting*. Mahwah, NJ: Psychology Press. <https://doi.org/10.4324/9781410612168>

- Buri, J. R. (1991). Parental authority questionnaire. *Journal of Personality Assessment*, 57(1), 110–119. https://doi.org/10.1207/s15327752jpa5701_13
- Chao, R. K. (1994). Beyond parental control and authoritarian parenting style: Understanding Chinese parenting through the cultural notion of training. *Child Development*, 65(4), 1111–1119. <https://doi.org/10.1111/j.1467-8624.1994.tb00806.x>
- Chao, R. K. (2001). Extending research on the consequences of parenting style for Chinese Americans and European Americans. *Child Development*, 72(6), 1832–1843. <https://doi.org/10.1111/1467-8624.00381>
- Chen, Z. Y., Liu, R. X., & Kaplan, H. B. (2008). Mediating mechanisms for the intergenerational transmission of constructive parenting: A prospective longitudinal study. *Journal of Family Issues*, 29(12), 1574–1599. <https://doi.org/10.1177/0192513x08318968>
- Conger, R. D., Belsky, J., & Capaldi, D. M. (2009). The intergenerational transmission of parenting: closing comments for the special section. *Developmental Psychology*, 45(5), 1276–1283. <https://doi.org/10.1037/a0016911>
- DeGregorio, L. J. (2013). Intergenerational transmission of abuse: Implications for parenting interventions from a neuropsychological perspective. *Traumatology*, 19(2), 158–166. <https://doi.org/10.1177/1534765612457219>
- Duriez, B., Soenens, B., & Vansteenkiste, M. (2008). The intergenerational transmission of authoritarianism: The mediating role of parental goal promotion. *Journal of Research in Personality*, 42(3), 622–642. <https://doi.org/10.1016/j.jrp.2007.08.007>
- Ford, J. K., MacCallum, R. C., & Tait, M. (1986). The application of exploratory factor analysis in applied psychology: A critical review and analysis. *Personnel Psychology*, 39(2), 291–314. <https://doi.org/10.1111/j.1744-6570.1986.tb00583.x>
- Feng, L., Chong, M. S., Lim, W. S., & Ng, T. P. (2012). The Modified Mini-Mental State Examination test: normative data for Singapore Chinese older adults and its performance in detecting early cognitive impairment. *Singapore Medical Journal*, 53(7), 458–462.
- Ferguson, E., & Cox, T. (1993). Exploratory factor analysis: A users' guide. *International Journal of Selection and Assessment*, 1(2), 84–94. <https://doi.org/10.1111/j.1468-2389.1993.tb00092.x>
- Garcia, F., & Gracia, E. (2009). Is always authoritative the optimum parenting style? Evidence from Spanish families. *Adolescence*, 44(173), 101–131. <https://doi.org/10.1002/jcop.21512>
- Hofferth, S. L., Pleck, J. H., & Vesely, C. K. (2012). The transmission of parenting from fathers to sons. *Parenting*, 12(4), 282–305. <https://doi.org/10.1080/15295192.2012.709153>
- Hops, H., Davis, B., Leve, C., & Sheeber, L. (2003). Cross-generational transmission of aggressive parent behavior: A prospective, mediational examination. *Journal of Abnormal Child Psychology*, 31(2), 161–169. <https://doi.org/10.1023/a:1022522224295>

- Hsu, C. C., & Sandford, B. A. (2007). The Delphi technique: making sense of consensus. *Practical Assessment, Research & Evaluation, 12*(10), 1–8. <https://doi.org/10.4018/978-1-4666-0074-4.ch011>
- Keller, H., Borke, J., Yovsi, R., Lohaus, A., & Jensen, H. (2005). Cultural orientations and historical changes as predictors of parenting behaviour. *International Journal of Behavioral Development, 29*(3), 229–237. <https://doi.org/10.1080/01650250544000017>
- Kendler, K. S., Sham, P. C., & MacLean, C. J. (1997). The determinants of parenting: an epidemiological, multi-informant, retrospective study. *Psychological Medicine, 27*(03), 549–563. <https://doi.org/10.1017/s0033291797004704>
- Kitamura, T., Shikai, N., Uji, M., Hiramura, H., Tanaka, N., & Shono, M. (2009). Intergenerational transmission of parenting style and personality: direct influence or mediation?. *Journal of Child and Family Studies, 18*(5), 541–556. <https://doi.org/10.1007/s10826-009-9256-z>
- Little, R. J. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association, 83*(404), 1198–1202. <https://doi.org/10.2307/2290157>
- Neppl, T. K., Conger, R. D., Scaramella, L. V., & Ontai, L. L. (2009). Intergenerational continuity in parenting behavior: mediating pathways and child effects. *Developmental Psychology, 45*(5), 1241–1256. <https://doi.org/10.1037/a0014850>
- Olivari, M. G., Tagliabue, S., & Confalonieri, E. (2013). Parenting Style and Dimensions Questionnaire: A review of reliability and validity. *Marriage & Family Review, 49*(6), 465–490. <https://doi.org/10.1080/01494929.2013.770812>
- Peterson, B. E., Smirles, K. A., & Wentworth, P. A. (1997). Generativity and authoritarianism: Implications for personality, political involvement, and parenting. *Journal of Personality and Social Psychology, 72*(5), 1202–1216. <https://doi.org/10.1037//0022-3514.72.5.1202>
- Quah, S. R. (1998). *Family in Singapore: Sociological Perspectives*. Singapore: Times Academic Press
- Quah, S. R. (1999). *Study on the Singapore Family*. Singapore: Singapore Ministry of Community Development and Sports.
- Quah, S. R. (2004). Ethnicity and parenting styles among Singapore families. *Marriage & Family Review, 35*(3-4), 63–83. https://doi.org/10.1300/j002v35n03_05
- Reitman, D., Rhode, P. C., Hupp, S. D., & Altobello, C. (2002). Development and validation of the parental authority questionnaire–revised. *Journal of Psychopathology and Behavioral Assessment, 24*(2), 119–127. <https://doi.org/10.1023/a:1015344909518>
- Robinson, C. C., Mandleco, B., Olsen, S. F., & Hart, C. H. (2001). The parenting styles and dimensions questionnaire (PSDQ). *Handbook of family measurement techniques: Vol. 3. Instruments and index*. (pp. 319–321). Thousand Oaks, CA: SAGE.
- Rughiniş, C., & Toader, R. (2010). Education and Scientific Knowledge in European Societies. Exploring Measurement Issues in General Population Surveys. *Studia Universitatis Babeş-Bolyai-Sociologia, 1*(1), 175–202.

- Sanders, M. R. (1999). Triple P-Positive Parenting Program: Towards an empirically validated multilevel parenting and family support strategy for the prevention of behavior and emotional problems in children. *Clinical Child and Family Psychology Review*, 2(2), 71–90. <https://doi.org/10.1037/0893-3200.22.3.506>
- Serbin, L. A., & Stack, D. M. (1998). Introduction to the special section: Studying intergenerational continuity and the transfer of risk. *Developmental Psychology*, 34(6), 1159–1161. <https://doi.org/10.1037//0012-1649.34.6.1159>
- Sharma, S. (1996). *Applied multivariate techniques*. New York, NY: John Wiley & Sons.
- Simons, R. L., Beaman, J., Conger, R. D., & Chao, W. (1993). Childhood experience, conceptions of parenting, and attitudes of spouse as determinants of parental behavior. *Journal of Marriage and the Family*, 91–106. <https://doi.org/10.2307/352961>
- Sleddens, E. F., Gerards, S. M., Thijs, C., de Vries, N. K., & Kremers, S. P. (2011). General parenting, childhood overweight and obesity-inducing behaviors: A review. *International Journal of Pediatric Obesity*, 6(2Part2), e12-e27. <https://doi.org/10.3109/17477166.2011.566339>
- Spera, C. (2005). A review of the relationship among parenting practices, parenting styles, and adolescent school achievement. *Educational Psychology Review*, 17(2), 125–146. <https://doi.org/10.1007/s10648-005-3950-1>
- Steinberg, L. (2001). We know some things: Parent–adolescent relationships in retrospect and prospect. *Journal of Research on Adolescence*, 11(1), 1–19. <https://doi.org/10.1111/1532-7795.00001>
- Strage, A., & Brandt, T. S. (1999). Authoritative parenting and college students' academic adjustment and success. *Journal of Educational Psychology*, 91(1), 146–156. <https://doi.org/10.1037//0022-0663.91.1.146>
- Tajima, E. A., & Harachi, T. W. (2010). Parenting beliefs and physical discipline practices among Southeast Asian immigrants: Parenting in the context of cultural adaptation to the United States. *Journal of Cross-Cultural Psychology*, 41(2), 212–235. <https://doi.org/10.1177/0022022109354469>
- Van Ijzendoorn, M. H. (1992). Intergenerational transmission of parenting: A review of studies in nonclinical populations. *Developmental Review*, 12(1), 76–99. [https://doi.org/10.1016/0273-2297\(92\)90004-1](https://doi.org/10.1016/0273-2297(92)90004-1)
- Yi, C. C., Chang, C. F., & Chang, Y. H. (2004). The intergenerational transmission of family values: A comparison between teenagers and parents in Taiwan. *Journal of Comparative Family Studies*, 523–545.