

Relative Effects of Parenting Practices on Child Development in the Context of Family Processes

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Abstract

Prior family studies predominantly treated parenting behavior as corresponding to family socialization, which is in fact a multifaceted concept. In the present study, two family socialization constructs, family processes and parenting practices, were simultaneously investigated for their relative effects on adolescent children's development of internalizing and externalizing problems. Data for analysis were collected from a sample of 223 Chinese parent-child dyads (mother=179, boys= 124; child mean age= 16.7, $SD= 2.16$) and hierarchical linear regression models were employed to examine the relationships. Results showed that both positive family processes and effective parenting practices were predictive of less internalizing and externalizing problems in children, but the former was more pronounced than the latter. More importantly the robust predictive effects of parenting resumed after inclusion of the interaction term of parenting by family processes, which lends support to the conditionality of parenting in conflation of the moderating effect of family processes, indicating that parenting functions more potent in the home environment characteristic of low positive family processes and shows convergence in the family context of high positive family processes. Implications of the findings for educational and human development practices and future research directions are also discussed.

Keywords: Family socialization, parenting practices, family processes, internalizing and externalizing problems.

Resumen

En su mayoría, los estudios familiares previos han abordado el comportamiento de crianza como algo correspondiente a la socialización familiar, lo cual es, de hecho, un concepto de múltiples facetas. En el presente estudio se investigaron de forma simultánea dos componentes de socialización familiar; así como procesos familiares y prácticas de crianza con el objetivo de identificar sus efectos relativos sobre el desarrollo de las capacidades para internalizar y externalizar los problemas en individuos adolescentes. La información necesaria para el análisis fue recolectada a partir de una muestra de 223 díadas de padres-hijos de nacionalidad China (madres = 179, hijos = 124; edad promedio de los hijos = 16.7, $DT = 2,16$); además, se emplearon modelos de regresión lineal jerárquica para examinar las relaciones. Los resultados mostraron que tanto los procesos familiares positivos, como las prácticas efectivas de crianza predecían una menor internalización y externalización de problemas en los hijos, siendo la anterior más pronunciada que la última. Aún más importante es el hecho de que los efectos predictivos de mayor solidez se reanudaron después de la inclusión del término de interacción de la crianza a través de procesos familiares, lo cual respalda la condicionalidad de la crianza al combinarla con los efectos moderadores de los procesos familiares, indicando que las funciones de crianza son más potentes en ambientes familiares con procesos familiares de bajo positivismo y muestra convergencia en el contexto familiar de procesos familiares altamente positivos. Las implicaciones de estos descubrimientos para las prácticas de desarrollo humano y educativo, y para las futuras directrices de investigación aún están siendo discutidas.

Palabras clave: Socialización familiar, prácticas de crianza, procesos familiares, internalización y externalización de problemas.

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Introduction

Family has been well reckoned as one of the most influential social institutions affecting children's various dimensions of growth and well-being. Informal family socialization in the early life stages of children has been highlighted by Bronfenbrenner (1990) as a "powerful prerequisite of the child's subsequent social success in other domains of life, including school, work, and family (p. 28)." In fact, over the past couple of decades, it is well established that if children who are raised in adverse home context are most likely to suffer from unfavorable developmental outcomes, while the reverse is true for children to have better psychosocial and behavioral accomplishments if they are brought up in a favorable family socialization environment (Burt, Simons, & Simons, 2006; Fischer, Forthun, Pidcock, & Dowd, 2007; Fuentes, García, Gracia, & Alarcón, 2015; Simons, Simons, Chen, Brody, & Lin, 2007; Yeung, 2015; Yeung & Chan, 2016).

However, when studying effects of family socialization on child development, most prior studies predominantly focused on the role of parenting behavior, assuming that it is tantamount to the whole concept of family socialization (Burt et al., 2006; Garcia-Moral, Sanchez-Queija, & Gomez-Veiga, 2016; Korelitz & Garber, 2016; Yeung, 2016). This is inadequate as latest research indicates that the concept of family socialization should be broader than that of parenting behavior, which includes family processes as a socialization agent in the home environment in influence of child development (Berger & McLanahan, 2015; Crandall, Ghazarian, Day, & Riley, 2016; Fischer et al., 2007; Prioste, Narciso, Goncalves, & Pereira, 2015; Yeung & Chan, 2010). The concept of family processes refers to the general home climates in terms of relational qualities, communications, behavioral interactions, and mutual support patterns among family members (Brody, Kim, Murry, & Brown, 2005; Cobham, McDermott, Haslam, & Sanders, 2016; Yeung & Chan, 2014). Therefore, when examining the effects of family socialization, researchers should take both parenting behavior and family processes into account for their contribution to child development simultaneously.

A general review of recent studies reveals that both parenting practices and family processes exert impacts children's psychological and behavioral outcomes. For instance, research indicated that effective parenting was positively related to children's psychosocial adjustment (Fuentes et al., 2015; Schwartz & Finley, 2006), cognitive and social competence (Pancer, Pratt, Hunsberger, & Alisat, 2007;), psychological health and self-esteem (Rodrigues, Veiga, Fuentes, & García, 2013), and was also reversely associated with less emotional distress and depression (Goosby, 2007; Kim et al., 2003), problem behaviors and delinquency (Goosby, 2007; Gracia, Fuentes, García, & Lila, 2012), as well as drug dealing and substance misuse (Anderson, Sabatelli, & Kosutic, 2007; Little & Steinberg, 2006). In addition, prior studies reported that if a family manifests positive family processes, namely cohesive family relationship, positive communications and interactions, and mutual support among members, children in this family can have multiple better developmental outcomes (Brody et al., 2005; Little & Steinberg, 2006; Prioste et al., 2015; Mack, Peck, & Leiber, 2015; Yeung, 2015; Yeung & Chan, 2016). In fact, Yeung and Chan (2014) recently found that positive family processes were independent of the effects of parenting practices in prediction of children's development of psychosocial maturity and future orientation, as well as reduction in both internalizing and externalizing problems. Nevertheless, they did not examine the possible influence of parenting practices on children's developmental outcomes that would be moderated by family processes, hence leaving unknown about the relative effects of both parenting and family processes in relation to child development.

The main purpose of the current study was to investigate the relative effects of effective parenting and positive family processes as well as their interactive effects on adolescent children's internalizing and externalizing problems in Chinese families. To investigate the above mentioned relationships is consonant with the theoretical perspectives family transmission model (Pettersen & Albers, 2001) and the observational learning theory (Snyder, Bank, & Burraston, 2005) in explanation of the relationship between family socialization and child development, in which children may develop their dispositional properties and behavioral propensities through observing, learning, and receiving the emotional, attitudinal and behavioral manifestations of adult family members in home either explicitly by parenting practices or tacitly by family processes or conjointly by the both, especially from their parents. On the other hand, according to the stress-buffering thesis (Cohen & Wills, 1985), the function of parenting practices would be more pronounced in the socialization context of low positive family processes that is characteristic of more chaotic home environment, poorer relationship quality, and inefficient communications and interactions (Berger & McLanahan, 2015; Crandall et al., 2016; Fischer et al., 2007; Yeung & Chan, 2010). In other words, family processes are expected to moderate the effects of parenting on children's developmental outcomes.

The present study

In this study, both effective parenting and positive family processes were investigated to examine their relative effects on children's internalizing and externalizing problems. This is relevant as prior family studies generally supported that effective parenting practices and positive family processes were both predictive of various better child outcomes, including internalizing and externalizing symptoms (Berger & McLanahan, 2015; Little & Steinberg, 2006; Piko & Balazs, 2012; Valiente, Lemery-Chalfant, & Reiser, 2007; Yeung & Chan, 2014, 2016). Although these two family socialization constructs were rarely examined together for their relative effects on child development, we expected that they are both predictive of children's internalizing and externalizing symptoms as they represent two different dimensions of family socialization. Hence, the relevant hypotheses are: (H1) It is predicted effective parenting practices would be contributory to less internalizing and externalizing symptoms in adolescent children; (H2) It is predicted that positive family processes would be contributory of both less internalizing and externalizing symptoms in adolescent children; (H3) It is predicted that both effective parenting practices and family processes would be concomitantly contributory to less internalizing and externalizing symptoms in adolescent children when accounting for each other.

Moreover, as informed by the stress-buffering thesis (Cohen & Wills, 1985) and prior pertinent research (Berger & McLanahan, 2015; Brody et al., 2005; Mack et al., 2015; Yeung, 2015), family processes would moderate the influence of parenting on child development. Thereby, the following hypothesis is made: (H4) It is predicted that family processes would moderate the effects of parenting practices on children's internalizing and externalizing symptoms, in which effective parenting would have more pronounced effects in the home environment characteristic of low positive family processes and less pronounced effects in the home environment characteristic of high positive family processes.

In addition, the present study would incorporate certain important socio-demographic variables for the analysis, which include family socio-demographic status (family SES), children's age and gender. Research showed that as compared to their better-off counterparts children in families with lower SES might demonstrate more internalizing and externalizing

symptoms (Berger & McLanahan, 2016; Johnson, Jang, Larson, & De Li, 2001). Furthermore, empirical investigations found that children's psychological and behavioral problems are linked with their age; onset in early adolescence, peak at middle adolescence, but decline in late adolescence (Piko & Balazs, 2012; Simons, Simons, & Conger 2004). For child gender, relevant research demonstrated that male adolescents tended to have more externalizing problems, while females were more susceptible to psychological difficulties (Mack et al., 2015; Yeung, 2016).

Method

Participants

The data for analyses in this study were collected from 223 Chinese parent-child dyads. The parent participants were the biological mothers or fathers of the child respondents. The child participants were aged between 14 and 21 years old, namely, in their middle and late adolescence as well as young adulthood. The reason for selecting this age range is that children may demonstrate more pronounced behavioral and psychological symptoms from their middle adolescence to early adulthood (Gracia et al., 2012; Simons et al., 2004; Yeung, 2015), which are deemed pertinent to current study for investigating the relationships between parenting practices and family processes as well as their interactive influences on child outcomes.

Measures

Parenting practices

Effective parenting practices were measured by the 10-item *authoritative parenting* subscale of the *Parental Authority Questionnaire (PAQ)* (Buri, 1991). This authoritative parenting measure has been used separately from the original 30-item PAQ in recent studies to measure those parenting behaviors that are considered competent and beneficial (Ang, 2006; Heaven & Ciarrochi, 2006). Past research showed good factorial structure and reliability of the measure (Ang, 2006; Heaven & Ciarrochi, 2006; Yeung & Chan, 2014; Yeung, 2016). An example item includes "My mother tells us how we should act and explains to us the reasons why". The original version of the measure is set only for children. However, recent literature attested that the employment of multi-informant/ multi-source assessment of family functioning could obtain a more comprehensive and accurate picture of the family and can hence avoid the problem of shared method variance (Burt et al., 2006; Simons et al., 2004). In fact, modification of some original measures to accommodate the specific needs of a study has been employed in prior research (Burt et al., 2006; Simons et al., 2007). The modified item example for parents is "I tell my children how they should act and explain to them the reasons why". The responses to the measure were based on a 5-point scale ranging from 1 = strongly disagree to 5 = strongly agree, and both the parent- and child-response scores were adopted to form a composite measure of parenting practices. In this study, the coefficient alphas for the parent-response and child-response scores were both $\alpha = .89$, and the correlation between parents' and children's responses was $r = .245, p < .01$, showing good reliability and validity.

Family processes

Positive family processes indicate that a family unit is characteristic of strength and capabilities in maintaining cohesiveness, constructive interaction, efficient communication, and

mutual support as well as high commitment among family members (Anderson et al., 2007; Valiente et al., 2007; Yeung, 2015). In this study, the 26-item *Family Functioning Style Scale* was used to tap on positive family processes (Trivette & Dunst, 1990). Past research demonstrated good reliability and validity of the measure (Yeung, 2015; Yeung & Chan, 2014). Example items include “we take pride in even the smallest accomplishments of family members” and “we share our concerns and feelings in useful ways”. Again multi-informant approach was adopted to assess family processes in this study. The responses to the measure were also based on a 5-point scale ranging from 1= strongly disagree to 5= strongly agree, and the parent-response and child-response scores were averaged to form a composite measure of family processes. The coefficient alphas for both parents’ and children’s scores were both $\alpha = .95$, and the correlation between parents’ and children’s responses was $r = .278$, $p < .01$, which verify very good reliability and validity.

Children’s internalizing symptoms

In this study, children’s psychological problems were measured by the 21-item version of the *Depression Anxiety Stress Scale (DASS-21)* (Lovibond & Lovibond, 1995). The DASS-21 is the miniature of the 42-item version of the DASS (DASS-42). Recent research showed the DASS-21, is superior to the full-length DASS version in terms of factorial structure, validity and reliability (Lam, 2014; Yeung & Chan, 2016). The averaged composite score of the DASS-21 was used and higher scores indicate higher general psychological and mental distress. The internal consistency of the DASS-21 in this study was $\alpha = .94$, deemed excellent.

Children’s externalizing symptoms

In view of cultural differences, it is considered undue to directly use measures of behavioral problems from the West for adolescents in Hong Kong directly. Random selection of these measures may result in inaccuracy of assessment because externalizing symptoms of local adolescent may be different from those in the West. For example, marijuana and hard-drug use, graffiti painting, and gun carrying are not prevalent in local youngsters (Lau & Kan, 2010; Ngai & Cheung, 2005). In addition, some items, like “changing price tags on merchandise in a retail store”, are thought to be obsolescent currently, because almost all commercial commodities in local retail shops are priced by bar codes rather than price tags. For this, an *Externalizing Problem Symptoms Scale (EPSS)* were constructed for the current study with extensively reference to relevant studies (Deng & Roosa, 2007; Ngai & Cheung, 2005). The construction of EPSS was conducted by a research team of two scholars with expertise in youth studies and a research assistant with competent language proficiency. The research team first listed out a number of question items that are pertinent to delinquent behaviors of local adolescents and then selected 15 items that were considered as most typical of externalizing symptoms among local adolescents. Recent studies showed good composite reliability and validity of the scale (Yeung, 2016; Yeung & Chan, 2014). Example items include “In the past 12 months, how many times did you deliberately hurt yourself?” and “In the past 12 months, how many times did you steal things from places other than home?” The measure is rated on a 7-point Likert-type scale; higher scores imply more problem behaviors. The Cronbach alpha coefficient for EPSS was .77, showing adequate internal consistency.

Socio-demographic variables

Family socioeconomic status (Family SES) was measured by aggregating the monthly family income per capita and the average of father's and mother's education attainment. Family income per capita and the average of parents' education attainment were then standardized and summed to generate a composite measure of family SES, which was an accepted practice in previous research (Johnson et al., 2001; Simons et al., 2004). Child age was counted as the exact years of the child participants, and child sex is a dummy variable, where 0 = male, 1 = female. Past research has highlighted these socio-demographic variables as crucial background characteristics influencing children psychological and behavioral outcomes (Fuentes et al., 2015; Gracia et al., 2012; Yeung 2016; Yeung & Chan, 2014).

Procedure

The participating parent-child dyads were a community sample and recruited with the help of forty three local churches situating in distinct localities in Hong Kong¹. For increasing the participants' diversity, open recruitment was held, in which information regarding the purpose and contents of the current study were publicized to invite potential families. For families having more than one adolescent child within the target age range, the one who had just passed his/her birthday was selected. However, if there were more than one target child in the household eligible for the study, a twin for example, the elder one would be selected (Bryman, 2008). This systematic and random selection procedure could make the sample participants more diverse. Participation in the study was voluntary, and the parent-child participants received no incentive at all. The present study was approved by the research ethical review procedure at the Hong Kong Polytechnic University.

If an eligible family showed interest in taking part in the study, a questionnaire package containing both the parent-version and child-version questionnaires would be then sent to the family. The questionnaires were enclosed in a sealed A4-size envelope with two A5-size envelopes coded with the same identifier numbers. The parent and child participant in the same family was instructed by two introductory letters respectively to insert their completed questionnaires into the respective A-5 envelopes and then submit to the relevant researchers privately through the participating churches. Initially, there were 284 parent-child dyads who agreed to participate in the study and finally only 223 parent-child dyads returned their consents and filled the questionnaires, with a response rate of 78.52%. Among 223 parent-child dyads, 80.7% of the caregivers were mothers. Regarding the demographic characteristics of the child participants, 124 (55.6%) were males. The mean age of these adolescent Children was 16.7 years old ($SD = 2.16$). For their educational status, 22.8% were at junior secondary education (51 children), and 35.9% were at senior secondary education (80 children). In addition, 18.4% were sixth formers and 14.3% received post-secondary education (41 and 32 children respectively).

¹ In Hong Kong, geographical area is divided into three main regions, namely Hong Kong Island, Kowloon and the New Territories. As due to the total voluntary basis of participation and consideration of enhancing representativeness of the sample, we had tried best to invite local churches (data collection units) locating in different geographical regions to participate in the study. Consequently, there were 16 data collection units locating in Hong Kong Island, 13 units in Kowloon, and 14 units in the New Territories, a total of 43 data collection units, that agreed to help recruitment potential parent-child dyads. As a result, 87 and 65 parent-child dyads came from Hong Kong Island and Kowloon respectively, and the remaining 71 pairs were from New Territories.

The remaining received undergraduate education or above (8.5%). As such, complete data from these 223 parent–child dyads were used for analyses in the study.

Data analysis

In this study, correlation analysis was first employed to determine whether the study variables were related with each other in a significant and correct direction, and null hypothesis t-test for the obtained correlation coefficients was followed to rule out the possibility of the significant correlated relationships between the study variables that was due to sampling error or false correlations. After that, multiple hierarchical regression was used to test the hypotheses of the study, in which the predictors of *effective parenting* and *positive family processes* as well as their interaction term were entered in the regression models orderly in order to see their effects on adolescent children's internalizing and externalizing symptoms. Before conducting multiple regression procedures, the predictors of *effective parenting* and *positive family processes* were mean-centered and then combined to construct the interaction term for avoiding collinearity (Fahrmeir et al., 2013). The reporting of regression results was based on standardized coefficients and graphical display of the moderation of *positive family processes* in the relationships between *effective parenting* and children's outcomes was conducted by dividing parent-child dyads into high and low *effective parenting* groups at the mean level of the parenting variable.

Results

Table 1 shows that the correlations of the study variables. As we can see, *family SES* positively associated with both *effective parenting* and *positive family processes*, $r_s = .198$ and $.237$, $p_s \leq .01$. This implies better-off families had better home socialization environment and parenting behaviors. Moreover, older child participants showed fewer *internalizing symptoms* at a marginally significant level, $r = -.117$, $p = .081$. Male children significantly had more *externalizing symptoms*, as compared to their female counterparts, $r = -.236$, $p \leq .01$. Moreover, *positive family processes* was positively and significantly related to more *effective parenting* in a substantial way, $r = .719$, $p \leq .01$, which accounts for 51.6% of explained variance; and it also significantly correlated with less *internalizing* and *externalizing symptoms*, $r_s = -.337$ and $-.251$, $p_s \leq .01$, accounting for 11.35% and 6.3% of explained variances respectively. For *effective parenting*, it significantly and negatively correlated with both *internalizing* and *externalizing symptoms* as well, $r_s = -.237$ and $-.236$, $p_s \leq .01$, sharing for 5.61% and 5.56% of explained variance respectively. The two outcome variables, children's *internalizing* and *externalizing symptoms*, were positively and significantly related to each other, $r = .262$, $p \leq .01$.

Table 1
Correlation and descriptive statistics of the study variables

	1	2	3	4	5	6	7
1. Family SES	--						
2. Child age	-.147*						
3. Child gender	-.082	-.010					
4. Family processes	.237**	.036	.029.				
5. Parenting practices	.198**	-.050	.122 ⁺	.719**			
6. Internalizing symptoms	-.084	-.117 ⁺	.082	-.336**	-.237**		
7. Externalizing symptoms	-.006	.053	-.230**	-.251**	-.236**	.262**	

⁺ $p < .1$, * $p \leq .05$, ** $p \leq .01$.

In addition, the null hypothesis t-test for correlation coefficients² was used to testify whether the correlational values between family processes and parenting practices with the two outcome variables, *internalizing* and *externalizing symptoms*, happen by chance. The result shows that the correlation coefficients between family processes and both *internalizing* and *externalizing symptoms* are significantly different from zero, with $t(221) = -5.123$ and -3.794 , $ps < .01$; and the correlation coefficients of parenting practices with the two outcomes are also significantly different from zero, $t(221) = -3.580$ and -3.564 , $p < .01$, confirming that the significant associations are neither due to sampling error nor reflected by false correlations.

Followed by, a series of hierarchical linear regression models were conducted to investigate the effects of *effective parenting* and *positive family processes* on children's *internalizing* and *externalizing symptoms*. Table 2 shows results for children's *internalizing symptoms*. Model 1 incorporated those important socio-demographic variables, in which only child age significantly predicted children's *internalizing symptoms* in negative direction, $\beta = -.131$, $p \leq .05$. This means that child participants' psychological problems were more pronounced at middle adolescence and descended in their late adolescence and young adulthood. In model 2, *effective parenting* was included as predictor, which was significantly predictive of less children's *internalizing symptoms*, $\beta = -.248$, $p \leq .01$, adding 5.8% of explained variance to the model, $\Delta F(df1, df2) = 13.830 (1, 218)$, $p < .01$. In model 3, the predictor of *positive family processes* was added, which was significantly and substantially predictive of less *internalizing symptoms* in children, $\beta = -.222$, $p \leq .01$, contributing to additional 3.5% of explained variance, $\Delta F(df1, df2) = 8.628 (1, 217)$, $p < .05$. However, the effect of parenting practices on the child outcome was diluted to marginal significance, $\beta = -.133$, $p = .084$. Model 4 included the interaction term between parenting practices and family processes to predict children's *internalizing symptoms*. Before creating the interaction term, the scores of parenting practices were first mean-centered while the dummy variable of family processes was kept intact for avoidance of the problem of multicollinearity (Aiken & West, 1991). The interaction term was significantly and positively predictive of children's *internalizing symptoms*, $\beta = .215$, $p \leq .05$, which means the effect of *effective parenting* was more pronounced and effective on the family

² The equation for doing this test is $t(n-2) = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$, in which under the null hypothesis the population correlation may equals zero, the quantity would have a t distribution with n-2 degrees of freedom, where n is the number of paired scores. The t value obtained from the equation is determined whether it exceeds the critical values for t distribution.

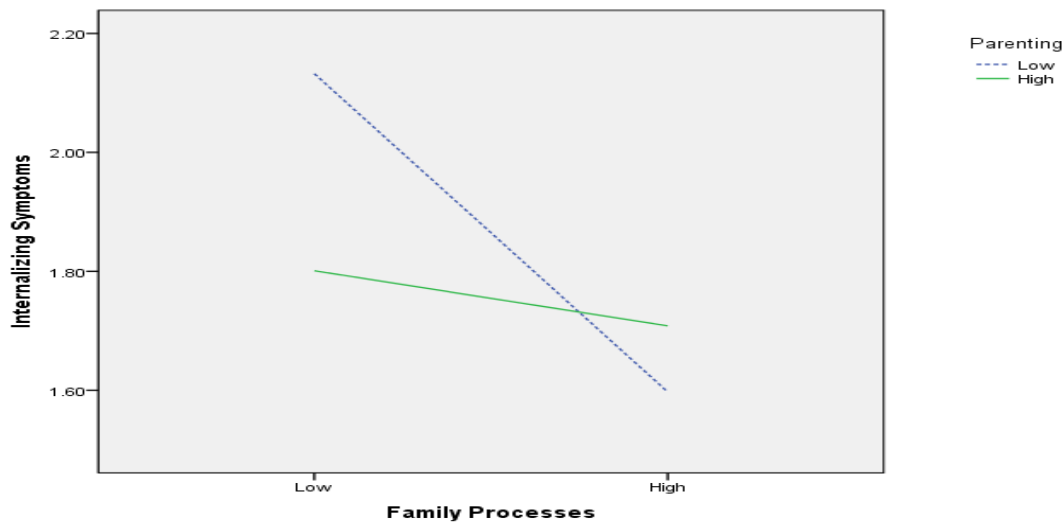
context with low family processes. In addition, both the respective effects of parenting practices and family processes resumed to be significantly predictive of children’s *internalizing symptoms*, $\beta_s = -.289$ and $-.228$, $ps \leq .01$.

Table 2
Hierarchical regression model for internalizing symptoms in adolescent children

	Model 1		Model 2		Model 3		Model 4	
	β	<i>t</i>	<i>B</i>	<i>t</i>	β	<i>t</i>	β	<i>t</i>
Child age	-.131*	-1.940	-.135*	-2.07	-.116 ⁺	-1.787	-.120 ⁺	-1.877
Child sex	.073	1.092	.107	1.646	.100	1.545	.102	1.596
Family SES	-.097	-1.434	-.046	-.68	-.027	-.401	-.027	-.410
Parenting practices			-.248**	-3.72	-.133 ⁺	-1.734	-.289**	-2.834
Family processes					-.222**	-2.937	-.228**	-3.044
Parenting x family Processes							.215*	2.289
R ²	.029		.087		.122		.143	
F (df1, df2)	2.211(3, 219) ⁺		5.213(4, 218)**		6.042(5, 217)**		6.006(6, 216)**	

⁺ $p < .1$, * $p \leq .05$, ** $p \leq .01$.

Figure 1 portrays the moderating relationship between parenting practices and children’s *internalizing problems* in the context of low and high *positive family processes*. As we can see children in families with low *effective parenting* and poor family processes had the highest level of *internalizing symptoms*, whereas their peer counterparts with low *effective parenting* but high in *positive family processes* showed a remarkably drop in psychological problems, which is reflected by a steep regression slope. In contrast, children with high effective parenting generally showed less psychological symptoms, which is reflected by a flatter regression slope in the model. More notable is that the effects of high and low effective parenting converged and had less difference in the context of high *positive family processes*.



Note. Low and high levels of parenting practices and family processes are divided by their mean scores where scores at the mean level or below connote low level and above the mean is counted as high level.

Figure 1. Interaction regression relationship of children’s internalizing symptoms on parenting practices by family processes.

Table 3 explicates the regression results of children's *externalizing symptoms*. In model 1, child gender had a significantly negative effect on the outcome, $\beta = -.204$, $p \leq .01$, connoting that male adolescent children had more behavioral problems (male = 0, female = 1). The predictor of parenting practices was added to the regression model subsequently (model 2), which demonstrated a significantly negative effect on children's behavioral problems, $\beta = -.192$, $p \leq .01$, and the predictive power of gender was undermined but still remained significant. This model significantly contributed to an additional 3.5% of explained variance, $\Delta F(df1, df2) = 8.176$ (1, 218), $p < .01$. In model 3, family processes was added as a predictor, which had a substantial negative effect on children's *externalizing symptoms*, $\beta = -.235$, $p \leq .01$. However, the effect of parenting became insignificant after the inclusion of positive family processes, $\beta = -.07$, $p > .05$. This model added an addition of 3.9% of explained variance, $\Delta F(df1, df2) = 9.569$ (1, 217), $p < .01$. Model 4 is the final model for children's *externalizing symptoms* and an interaction term of parenting by family processes was included. The interaction term was significantly predictive of children's behavioral problems, $\beta = .202$, $p \leq .05$. In this model, parenting practices again emerged as a significant predictor of the child outcome, $\beta = -.217$, $p \leq .05$, and family processes remained as a robust significant predictor of children's *externalizing symptoms*, $\beta = -.240$, $p \leq .01$. This final model contributed a total of 13.5% explained variance, $F(df1, df2) = 5.624$ (6, 216), $p < .01$.

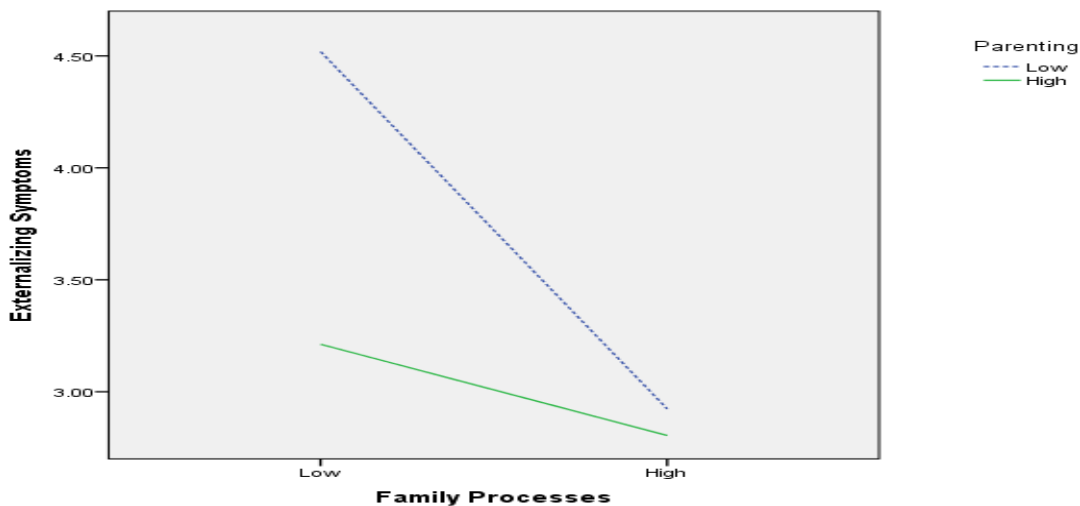
Table 3

Hierarchical regression model for externalizing symptoms in adolescent children

	Model 1		Model 2		Model 3		Model 4	
	β	t	β	t	B	t	β	T
Child age	.037	.558	.034	.513	.054	.840	.050	.777
Child sex	-.204**	-3.080	-.178**	-2.696	-.186**	2.871	-.184**	-2.860
Family SES	-.011	-.163	.029	.425	.049	.734	.048	.735
Parenting practices			-.192**	-2.859	-.070	-.909	-.217*	-2.118
Family processes					-.235**	3.093	-.240**	-3.192
Parenting x family Processes							.202*	2.145
R ²	.043		.078		.117		.135	
F (df1, df2)	3.293(3,219)*		4.595(4, 218)**		5.734(5, 217)**		5.624(6, 216)**	

⁺ $p < .1$, * $p \leq .05$, ** $p \leq .01$.

Figure 2 illustrates the interaction result for children's *externalizing symptoms*. As noted the regression slope of children with poor parenting turned out to be much steeper, implying that children with low *effective parenting* and low positive family processes had the highest *externalizing problem symptoms*. In contrast, their child counterparts with poor parenting but high positive family processes demonstrated a substantial drop in problem behaviors, even to the level commensurate with children raised by high *effective parenting* and high positive family processes. More notable, like their interactive effect on children's *internalizing problems*, both high and low parenting practices had similar effects on children's *externalizing problems* when a home context was characteristic of high positive family processes.



Note. Low and high levels of parenting practices and family processes are divided by their mean scores where scores at the mean level or below connote low level and above the mean is counted as high level.

Figure 2. Interaction regression relationship of children's externalizing symptoms on parenting practices by family processes.

Discussion

To our best knowledge, this study is a pioneer one to investigate the effects of different family socialization constructs on children's internalizing and externalizing problems in a Chinese context. Apparently, parenting practices and family processes are two distinguished but related family socialization factors, which are worthy of attention in terms of their respective and combined impact on child outcomes.

In this study, it is found that both parenting practices and family processes had significant effects on children's internalizing and externalizing symptoms, but varied in magnitudes and order. For children's internalizing symptoms, effective parenting had an explicit significant effect on alleviating children's psychological and mental difficulties. However, when positive family processes was added to the regression model, the protective effect of parenting was substantially shrunk to be marginally significant. These results confirmed that family processes and parenting influenced children's internalizing symptoms respectively. For the interaction term of parenting practices and family processes, it was significantly predictive of children's internalizing symptoms and the protective effects of family processes and parenting were reinforced to be significant after the inclusion of the interaction term. This denotes that the predictive power of these two family socialization factors was influenced by the conflation of the interaction effect (Chao, 2000; Fahrmeir, Kneib, Lang, & Marx, 2013).

Regarding children's externalizing problem behaviors, the predictive power of parenting practices was noticeably weaker than its effect on children's internalizing symptoms, albeit a negative effect that still significant remained. Furthermore, the protective effect of parenting on children's externalizing problems became insignificant after inclusion of family processes (Model 3 in Table 3), in which the latter appeared to be a robust significant deterrent of children's behavioral problems. The insignificance of parenting effect after the inclusion of family processes evidences the importance of general home climates for children's behavioral

development, especially in their middle and late adolescence. However, the reason for why the effect of parenting on children's internalizing problems was significantly retained after including family processes as a predictor in the model (Model 3 at Table 2), which deserves our deliberation. Based on the family transmission model (Petterson & Albers, 2001), parents' psychological problems and mental difficulties may adversely affect the psychosocial development and adjustment of their children, for which both family processes and parenting practices are important for the development of children's internalizing problems (Prioste et al., 2015; Simons et al., 2007).

Moreover, the interaction term of parenting practices and family processes in predicting externalizing symptoms in children was significant, which indicates that, like predicting children's internalizing problems, the effects of both parenting practices and family processes were regulated under the conflation of these two family socialization factors. In fact, both figure 1 and 2 depict the convergent effects of high positive family processes on parenting practices, in which the effects of effective parenting, regardless of high or low, are converged to similar magnitude as long as the family processes are high. However, the different effects of high and low effective parenting on the child outcomes are apparently amplified in the family context where low positive family processes are observed.

Apparently, education and human development practitioners, like school teachers, social workers, school counselors and family therapists, are generally less aware of the role of family processes in sway of the influence of parenting adopted by parents in socializing their offspring. Hence, most of them would prioritize interventions and programs targeted to enhance parenting competencies, but overlook the significance of general home relationship and communication climate. It is anticipated that for children in their late adolescence and early adulthood, the influence of overall family relational and communication environment become more salient than that parenting for their development (Chao, 2001). The thesis of observational learning gives us some insight in understanding this family socialization issue (Buist, 2010). According to this thesis, children become more independent and prone to learn from behaviors and norms observed in their proximal living environment, rather than by direct instructions and regulations from their parents. In this case, parenting turns out to be less effective as compared with family processes (Yeung, 2016; Yeung & Chan, 2014). As such, family service interventions in consideration of both the influences of parenting practices and family processes for catering the needs of different family circumstances shall be developed.

Consistent with the findings in previous research, male children tended to have more behavioral problems than their female counterparts, and this gender effect is significant across all regression models (Model 1 to 4 in Table 3). However, child gender was not a significant predictor of their internalizing symptoms, although some Western studies reported that female children would have more pronounced psychological difficulties (Burt et al., 2006; Mack et al., 2015). For child age, it was significantly and reversely predictive of children's internalizing symptoms, but not for externalizing symptoms. To be specific, older children are less disturbed by psychological problems, as compared to their younger peers.

To conclude the present study, several limitations and suggestions for future research are highlighted as follows. First, the cross-sectional design and limited sample size of the current study make causal validity and generalization of the findings impossible. A longitudinal design with a larger sample representative of the study population is preferred to generalize the temporal causal effects of family socialization on child outcomes in the future. Second, although both parenting practices and family processes as well as their interaction term were found to be

significantly predictive of children's internalizing and externalizing problems respectively, the variances explained in the final models for the two child outcomes are relatively limited (Model 4 in Table 2 and 3). Only 14.3% and 13.5 % of variance for children's internalizing and externalizing problems were accounted for the relationships of parenting practices and family processes in relation to the child outcomes in the two final regression models, which connote that there was still much unexplained variances due to other family socialization and family-related factors. In the future, other facets of family socialization and possible psychosocial mediators pertinent to parents and their offspring that are thought as an immediate result of family effects, such as parental psychological health and children's self-esteem, should be incorporated to portray a more comprehensive picture of the relationships between family socialization and child development. Moreover, there are different styles of parenting that should be considered for their possible effects on child outcomes being moderated by family processes, such as authoritarian and permissive parenting practices (Chao, 1994; Gracia et al., 2012; Wang, 2014). In addition, cross-cultural comparison of the effects of family socialization on child development would be a merit of future study, as by then we can more comprehend the dynamic and complex nature of family socialization in relation to child outcomes across different cultures (Dwairy & Achoui, 2006; Lim & Lim, 2003). Finally, multiple subtle child outcomes, such as their delinquent acts and substance use behaviors for externalizing problems and depressive and anxiety symptoms for internalizing problems, should be separately investigated for understanding whether family socialization would have different effects on different types of externalizing and internalizing problems.

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