Examining a Conceptual Model of Maternal and Paternal Warmth, Emotion Regulation and Social Competence among Preadolescent Children in Malaysia

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Abstract

Although parental warmth has been shown to be related to children's social competence, the mediating role of preadolescent children's emotion regulation in this context has been less explored, particularly in Asian cultures. Thus, this study examined the role of emotion regulation as a mediator in the relationship between parental warmth (i.e., paternal and maternal warmth) and social competence among preadolescent children in Malaysia. Preadolescent children (N = 720; *M*age = 10.95; *SD* = 0.59; 58.8% female) completed self-administered questionnaires. Results of correlation analysis showed that higher levels of paternal and maternal warmth were associated with greater emotion regulation in preadolescent children and a

greater level of social competence. However, analysis of structural equation modeling revealed that emotion regulation significantly mediated only the relationship between maternal warmth and social competence. These findings underscored the importance of maternal warmth in promoting Malaysian preadolescent children's social competence as well as their emotion regulation as a mediating pathway. This study also highlights the direct effect of paternal warmth on preadolescents' social competence. Theoretical and practical implications of this study are discussed.

Keywords: Parenting; maternal warmth; paternal warmth; emotion regulation; social competence

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Social competence is the ability to integrate social and emotional skills and knowledge into everyday interactions necessary to develop supportive and constructive relationships with others (Odom et al., 2008). Social competence has been conceptualized differently at different developmental stages. Between the ages of 10 and 12, preadolescence is considered a period of social competence development that includes assertiveness, self-confidence, and cooperation (Lengua et al., 2007; Springer & Phillips, 1997). Assertive children can genuinely and openly express themselves without being defensive (Lubis, 2020). Children with greater self-confidence may take initiative to establish social relationships and can handle interpersonal relationships confidently, and cooperative children tend to follow rules and get along better with others. Combined, these three skills enable children to understand and appreciate the feelings and perspectives of others (Campbell et al., 2016).

Children with higher social competence have been found to have higher levels of psychological adjustment, including more positive self-esteem, better adjustment to school, and better physical health and academic performance (Swanson et al., 2011). In contrast, children with low social competence are at increased risk for social-emotional difficulties (Sallquist et al., 2009), conduct problems (Langeveld et al., 2012), depressive symptoms (Zhang et al., 2014), suicidal ideation (Lee et al., 2010) and psychological problems that may lead to impairments in later life (Burt et al., 2008).

Malaysia is a multiethnic country that comprised of three major ethnic groups which are Malay, Chinese and Indian (Department of Statistics Malaysia, 2021a). Its diverse culture is also represented in the education system with the setting-up of Malay, Chinese and Tamil vernacular schools. The education system aims to nurture common values and norms in the vernacular schools whereby to nurture national identity and social integration, Malay language as the national language is a compulsory subject in all vernacular schools supported by the standardized national syllabi (Ministry of Education Malaysia, 2022). Despite the differences in languages, cultures, values and religion, the idea of multiculturalism had embedded in the three major ethno-cultural groups and this is visible in schools, neighborhoods and other social spaces in the country (Nordin et al., 2013). Hence, the integrated school environment and national syllabi provide a similar socialization experience and developmental trajectory for Malaysian children, despite studying in vernacular schools.

The shared values such as family values across three ethnic groups in Malaysia is promoted by multiculturalism. Prior studies found that there are both differences and similarities in parenting among the three ethnic groups in Malaysia (Lansford, 2022; Hossain, 2014). However, collectivistic culture is still omnipresent where family harmony and social relationship is integrated into Malaysian's family system and affect their core values. This has influenced the family practices of Malaysian parents that emphasize child obedience, parental directness, and family interdependence (Shwalb & Hossain, 2017). This is supported by findings from a recent local study that revealed Malaysians put strong significance on family values to provide care and maintain emotional connection among family members (Sumari et al., 2020). Thus, to increase the generalizability and obtain a representative sample for multiethnic culture, it is necessary to conduct a study recruiting samples from three major ethnic groups in order to investigate the role of parental warmth on child development among Malaysian families.

Some studies have revealed that Malaysian parents tend to adopt an authoritarian parenting style characterized by more control and less warmth (Ang et al., 2016; Tan, 2012). However, a few recent studies in the Asian context suggested that authoritarian parenting brings up more academically successful and high achieving children using a strict discipline and reasoning practice (Ang & Sin, 2021). This may be interpreted that these children feel loved and cared for which explicitly reflect Asian norms of parental warmth (Ang et al., 2016; Ang & Sin, 2021). Previously published studies on the effect of parenting styles are not consistent, especially for Asian families (Ang & Sin, 2021; Park et al., 2021). This could be explained by the nature of parenting style which is a typology that is multidimensional, and a combination of these dimensions create representative parenting patterns. Thus, the parenting style such as authoritarian parenting style may not accurately interpret Malaysian parenting as compared to the single dimension of parenting practice. Due to that, parental warmth, a single parenting dimension to describe positive parenting practice was employed to examine its relation to socio-emotional development of children in this study. Warmth and affection are important to a child's development from birth and show them that they are valued, a capable person who brings joy to others. Children build a sense of worth when parents respond positively and appropriately (Chiah & Baharudin, 2012). This warm interaction encourages a child to explore their social world more confidently. These findings highlight the important role of parental warmth in children's socialization and development in the rapidly changing contemporary Malaysian culture.

Previous research has shown that preadolescence is a crucial period for psychosocial adjustment, as preadolescents require support and companionship from both their parents and peers (Lianos, 2015). Even though children's reliance on friendships increases as they grow older, they

still need a warm connection with their parents (Ang, 2016). According to the psychosocial stages of development (Erikson, 1963), preadolescents need to develop a sense of competence with encouragement and care from parents. Parental warmth, characterized by love, support, and bonding between parents and children, has been shown to be particularly important in helping children develop social competence (Jeon & Nepp, 2019). Consistent findings have been reported in studies from different countries and cultures, including the United States, Mexico, China, and Korea, that social competence was higher in children whose parents were warm and caring (Chen et al., 2000; Chung et al., 2008; Kim et al., 2010; Lengua et al., 2007; Taylor et al., 2015; Zheng & McMahon, 2019). Emotionally warm parents raise an emotionally stable and sociable child. It can be explained that warm parents tend to be caring, loving, and involved in parent-child interactions (Skinner et al., 2005). This encourages children to accept and internalize parental values, which are crucial for building social relationships. It is hypothesized that children with warm parents will receive appropriate social and emotional cues from parents and generalize positive parent-child interactions to other social relationships, which in turn may increase their social competence. A few past studies have shown the relationship between parental warmth and social competence, but Lianos's (2015) study found that a third variable needs to be tested to explain the relationship between parental warmth and social competence.

Although the relationship between parental warmth and children's social competence is well established (Kim et al., 2010), the mechanism linking parental warmth and children's social competence is less explored. One important mechanism through which parental warmth may influence children's social competence is children's emotion regulation (ER; McDowell et al., 2002; Walton & Flouri, 2010). To our knowledge, the indirect effect of parental warmth on preadolescent children's social competence via their emotion regulation has not yet been investigated in Malaysia. Previous published studies are limited to samples from US-based Asian communities (Liew et al., 2011; Liew et al., 2014). Past studies by Liew et al. (2011, 2014) supported the proposed mediation process that child regulatory skill mediated the relation of parenting practices (i.e., parental expressivity, responsiveness and support) and social adaptive skill of children. Therefore, the present study aimed to examine the relationship between parental warmth and social competence of preadolescent children and to further explore the mediating role of children's emotion regulation in Malaysia. Below, we present a theoretical underpinning and literature review to explain the feasibility of the proposed mediation model.

Theoretical underpinning and literature review

The study of the relationships between parental warmth, ER, and social competence draws upon the Tripartite Model of Family-Peer Relationships (Parke et al., 1994). According to this model, the emotional climate of a family is determined by the parent's parenting style, attachment relationship, and level of expressiveness. Certain parenting practices related to emotion management and expression affect ER. Children learn about ER through observation, social referencing, and modeling from parents. Warm parents can promote children's social competence by engaging in affective interactions with children (Eisenberg et al., 1998). Positive interactions with parents serve as a working model for children to exhibit socially appropriate emotions and behaviors. Moreover, warm parents function as socializers who support and coach children in regulating negative emotions (Sarıtaş et al., 2013), and also as role models of positive social behavior that children can emulate in their engagement with warm behaviors during social interactions (Scrimgeour et al., 2013). Emotionally regulated children are therefore more likely to be able to control their emotions, which makes them socially competent (Carlson & Wang, 2007). A review of the tripartite model of Familial Influence by Morris et al. (2007) also discussed that children's emotion regulation is influenced by the parenting process, with parents who are warm and responsive noticing children's emotions and providing them with emotion coaching, thus contributing to the development of their children's emotion regulation. Some longitudinal studies have supported the tripartite model of Family-Peer Relationship and have shown that parental warmth is a significant predictor of children's social competence and peer preference (Kam et al., 2011; Parke et al., 1994).

Generally, ER is defined as an individual's ability to regulate his or her emotions by controlling expressive behavior (Thompson, 1994). ER also refers to an individual's efforts to regulate emotional arousal and deal with negative emotions, depending on the individual's goal, social norm, and situational demands (Gratz & Roemer, 2004). Put differently, ER involves the child's awareness of socially and culturally appropriate rules of display when expressing emotions and behavior (Carlson & Wang, 2007).

Nonetheless, ER is not an innate ability. Parents play an important role in promoting and demonstrating constructive ER in children, as ER involves an intrinsic regulatory process and also relies on extrinsic factors such as parent-child interaction (Gullone et al., 2010; Thompson, 1994). It is important for parents to teach their children how to self-regulate their emotions. A body of research pointed to the importance of parental warmth in the development of emotion regulation in children (Eisenberg et al., 1998). Parenting is an emotion-related socialization process in which the expression of emotions is transferred from parents to children. Children who are treated in a responsive, warm, and accepting manner are more likely to develop good emotion regulation skills (Ang & Sin, 2021). Responsive parents are known to comfort children and relieve stress. In addition, children can learn from emotional contagion by unconsciously mimicking their parents' emotions and responding similarly. Parents who notice, accept, empathize with, and validate a child's negative feelings can positively influence the child (Ang et al., 2016). In this way, children can be encouraged to verbalize their feelings and approach problems more positively (Gullone et al., 2010; Thompson, 1994). Children can then learn how to react appropriately in different situations. As a result, children with responsive parents usually have a broader range of emotional regulation skills.

Previous research has established that children in preadolescence develop the ability to apply emotion regulation strategies to adaptively cope with emotional stimuli and social situations (Eisenberg et al., 2010). A review of ER by Sabatier et al. (2017) stated that preadolescent children who

develop the ER ability are able to understand socially preferred emotional expression and regulate their emotions to achieve greater peer acceptance. Several studies have shown that emotion regulation is associated with better social competence and social relationships (Spritz et al., 2010; Trentacosta & Shaw, 2009). ER enables children to understand their own emotional experiences, evaluate social circumstances, manage their emotions, and respond in a socially acceptable manner. In turn, it is a widely held belief that ER can help preadolescent children achieve their social goals, which may be positively related to the development of emotional and social skills.

Parental socialization practices appear to be closely linked to children's emotional and social competence (Eisenberg et al., 1998). However, it is possible to overgeneralize the contribution of parents to child development on the basis of the gender of parents. Mothers who are the traditional caregivers, are perceived to spend more time with children and have a greater impact on children's developmental outcomes than fathers. Over the decades, the increasing labor force participation of women in Malaysia (Department of Statistics Malaysia, 2021b) has challenged the traditional notion of family roles about the breadwinning father and the caregiving mother. The emerging trend in parenting could change the division of care responsibilities within the family.

The literature review revealed that mothers are more sensitive to their children's emotions and contribute to their emotional well-being, while fathers expect their preadolescent children to be more independent and promote social competence (Attili et al., 2010; Eisenberg et al., 2001; Fosco & Grych, 2013; Kim et al., 2010; Nishikawa et al., 2010). Past studies have also noted the difference between maternal and paternal parenting on children's emotions. In a comparison test between maternal and paternal warmth on children's emotional adjustment and social achievement, it was found that only maternal warmth was associated with emotional adjustment, while paternal warmth predicted later social achievement (Chen et al., 2000). A past study by Walton and Flouri (2010) with adolescents aged 11 to 18 also found that perceived maternal warmth was associated with better emotion regulation, while paternal practices may be the potential factor explaining adolescents' outcomes. Fosco and Grych (2013), using a multi-informant method, found that maternal warmth and a positive family climate can contribute to emotion regulation in children.

A longitudinal study (Taylor et al., 2015) found that paternal warmth promoted preadolescent children's social competence over time, while maternal warmth did not predict significant changes in children's social competence. However, Taylor et al. (2015) found that maternal monitoring can contribute to the positive changes in children's social competence. Numerous studies suggest that additional work is needed to further explain the role of paternal and maternal warmth on socio-emotional development of preadolescents (Taylor et al., 2015; Walton & Flouri, 2010). In recent decades, previous studies have also mentioned that the study of family correlates of children's socio-emotional development may be less conclusive when excluding either maternal or paternal roles (Chen et al., 2000; Fosco & Grych, 2013). It is believed that parents who can provide encouragement and support will contribute a positive impact to child development. Based on the above literature, we hypothesized that parental warmth would be associated with increased social competence in preadolescent children. We also expected that higher levels of parental warmth would be associated with better emotion regulation, which in turn would correlate with greater social competence among preadolescent children in Malaysia.

Methods

Participants

Seven hundred and twenty students from 28 public schools volunteered to participate in this study. Participants were 41.2% boys and 58.8% girls between the ages of 10 and 12 (M = 10.95, SD = .59). Participants reported belonging to one of the major racial groups in Malaysia: 48.9% Malay, 28.7% Chinese, 22.4% Indian. All participants were from two-parent families. Fathers were significantly older (M = 43.91, SD = 5.66) than mothers (M = 40.47, SD = 4.91). Almost half of the mothers (45.6%) and almost all of the fathers (90.3%) were employed at the time of the study. Parents' education levels ranged from sixth grade to college degree: mothers: 20% 6th grade, 37.6% high school, 42.4% postsecondary and college; fathers: 24.4% 6th grade, 33.2% high school, 42.4% postsecondary and college.

Procedures

Our study procedures were reviewed and approved by the University's Institutional Review Board to protect the rights and welfare of participants. Permission was obtained from the Ministry of Education (MOE), Ministry of State for Education and headmaster or headmistresses from each school. Children from grades 4 to 6 were randomly selected to participate. All schools were from different regions and represented different socio-economic backgrounds. Multistage Probability Proportionate-to-Size Cluster sampling procedure was used to select the sample at the regional, state, school and grade level. Using the number of students provided by the Ministry of Education, the number of clusters for urban and rural areas was calculated. Next, the number of Malay, Chinese and Tamil medium schools for urban and rural areas was calculated using the percentage distribution of student members in each type of school. Following the calculation, the number of Malay, Chinese and Tamil medium schools for each state within the selected regions of Malaysia was determined. This was to ensure that the sample was representative of the population. Research assistants were trained to ensure that the data were collected in the same way in all schools and classrooms.

To administer the questionnaire in the vernacular schools, the English versions of all questionnaires were translated into Malay, Mandarin, and Tamil

by three independent professional bilingual translators using the back translation method. These versions were then back-translated by another native Malay, Mandarin, and Tamil speaker. The content of the final translated versions was reviewed in three focus groups to ensure that they were similar to the original English versions (Vogt et al., 2004). Finally, we conducted a pilot study with 30 to 35 students from three vernacular schools that use Mandarin, Malay, and Tamil language as the medium of instruction to examine the applicability of the translated measures. All students indicated that the questions were understandable and that they had no difficulty understanding them.

Students were first given an envelope with research briefing and parental consent form (in both English and Malay/Chinese/Tamil language) at school, they were requested to show them to their parents. In these letters, parents were asked to sign and return the consent form if they would allow their children to participate in this study. On the day of data collection, the research assistants, who were trained in survey data collection and speak Mother Tongue fluently (such as, Malay, Chinese, or Tamil language), briefed the students about the study, using developmentally appropriate language to ensure that the children understood the process of the study. For example, research assistants who can understand and speak Mandarin would be given a list of Chinese medium schools to follow up. In addition, we offered students the option of either participating in the study or engaging in a non-research related activity during data collection. Self-report questionnaires were completed in their classrooms in a group setting with teachers present. During the questionnaire administration, the questions were read to the students and the research assistants were available to answer questions. Participants took approximately 30 min to complete the questionnaire. For their participation, each student received a small gift.

Measures

Parental warmth

The Parents as Social Context Questionnaire (PASCQ; Skinner et al., 2005) is a 24-item child-report questionnaire that measures the quality of parental style in six specific domains (4 items each), including warmth, rejection, structure, chaos, autonomy support, and coercion. Due to the focus of the present study, only the warmth subscale was used. Participants completed the 4-item warmth subscale for both mother and father. Sample items include "Father/mother lets me know he/she loves me," "Father/mother enjoys being with me." For each item, participants indicated how true they found the statements about their parents on a 4-point Likert scale ranging from 1 (*not at all true*) to 4 (*very true*). The total score is the sum of the responses of the four items, with higher scores indicating higher levels of warmth. Previous studies reported satisfactory internal consistency for this subscale (Skinner et al., 2005), and the subscale has been used with racially and ethnically diverse samples (Chew & Wang, 2013). Cronbach's alpha was .74 for maternal warmth and .73 for paternal warmth in our sample.

In this study, Cronbach's alpha coefficients for maternal warmth were .74, .86, .78, and .73 in the overall sample, and the Malay, Chinese, and Tamil versions, respectively. For the paternal warmth, Cronbach's alpha coefficients were .73, .86, .78, and .71 in the overall sample, and the Malay, Chinese, and Tamil versions, respectively.

Emotion regulation

We used five items from the Emotion Regulation subscale of the Self-Regulation Measure developed by Novak and Clayton (2001). This 5-item scale is rated on a 4-point Likert scale ranging from 1 (*never true*) to 4 (*always true*). Example items include "I have a hard time controlling my temper" and "I get upset easily." The total score is obtained by recoding and summing the responses of the five items. Higher scores indicate higher levels of emotion regulation. This scale has been validated in previous research (Shannon et al., 2016). In this study, Cronbach's alpha coefficients for the scale were .70, .78, .71, and .70 in the overall sample, and the Malay, Chinese, and Tamil versions, respectively.

Social competence

The 18-item Individual Protective Factors Index (IPFI; Springer & Phillips, 1997) measures children's perceptions of social competence on three subscales: assertiveness, confidence, and cooperation. Items are measured on a 4-point Likert scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). Example items include "I disagree with friends, I tell them" (assertiveness), "I get along well with other people" (confidence), and "Being part of a team is fun" (cooperation). The scale produces an overall social competence score (ranging from 18 to 72) based on items from all subscales. A higher score indicates a higher level of social competence. Springer and Phillips (1997) found a Cronbach's alpha of .93 for this scale. In this study, Cronbach's alpha coefficients for the scale were .76, .80, .72, and .73 in the overall sample, and the Malay, Chinese, and Tamil versions, respectively.

Data analysis

As all three language versions were reliably good, data were combined as an overall sample for subsequent analysis. The data were first analyzed using the descriptive statistics of the study variables. In addition to the descriptive statistics, the correlations between the study variables were assessed using Pearson's correlation coefficients. Furthermore, independent sample t-test was used to determine whether male and female participants are statistically different on study variables, while one-way analysis of variance (ANOVA) was used to compare three independent

groups (i.e., ethnic and age groups) on study variables.

Structural Equation Modeling (SEM) in AMOS 20 program was used to calculate the mediation analysis (Byrne, 2010). For this purpose, a two-step procedure was used. First, the psychometric properties of the measured variables were checked using a measurement model. If the measurement model was accepted, the structural model was tested by maximum likelihood estimation. For the social competence latent variable, we used item parceling. Item parceling is a widely used technique that has been shown to reduce measurement error, increase power, and provide an accurate estimate of the latent traits (Matsunaga, 2008). The social competence scale items were divided into three parcels. The items were divided based on the subscales proposed by the authors of the original scale. The item scores were averaged per parcel, and the parcels were used as indicators for social competence.

Several fit indices recommended by Hu and Bentler (1999) were used to determine model fit, including the chi-square/degree-of-freedom ratio (CMIN/DF values < 3 indicated good fit, and CMIN/DF < 5 indicated acceptable fit), the comparative fit index (CFI values > .90 indicated good fit), the Tucker-Lewis index (TLI values > .90 indicated good fit), the root-mean-square error of approximation (RMSEA values < .06 indicated good fit, and RMSEA < .08 indicated acceptable fit) and its 90% confidence intervals, and the standardized root-mean-square residual (SRMR values < .06 indicated good fit, and SRMR< .08 indicated acceptable fit). The bootstrapping procedure was also applied to construct confidence intervals (CIs) around parameter estimates of indirect effects (Preacher & Hayes, 2008). Significant mediation is indicated when the upper and lower limits of the 95% CIs do not include zero.

Results

Preliminary analyses

The distribution of the variables was checked using the skewness and kurtosis values before performing all analyses. A variable is considered normal if the skewness is less than 2 and the kurtosis is less than 3 (Cameron, 2004). The analysis revealed that there was no critical problem with normal distribution for any variable (range of skewness = −1.40 to −.42; range of kurtosis = −.25 to 1.82). The Pearson's correlations for all variables are also presented in Table 1. As predicted, all variables were significantly and positively correlated with each other. However, maternal and paternal warmth were found to have a strong positive correlation (r = .85). Although it has been argued that multicollinearity is certain at a correlation coefficient of .90 or higher (Dohoo et al., 1997), we acknowledged the possibility of multicollinearity due to the inclusion of highly correlated independent variables. As a result, we calculated the VIF statistics to confirm the presence of multicollinearity. The VIF value was 3.6, which was less than 5, indicating that there was no collinearity (Lin, 2008). Furthermore, a review of current literature revealed mixed findings on the effects of maternal and paternal warmth on child outcomes. The disparities in findings could be attributed to cultural differences in warmth expression and the distinction between maternal and paternal warmth (Rothenberg et al., 2020; Yaffe, 2020). In view of these, we decided to pursue SEM with all variables discussed. Additionally, no significant differences in maternal warmth, parental warmth, emotion regulation, and social competence were found between males and females, across the three ethnic groups, or children aged 10, 11, and 12.

Table 1. Descriptive statistics, correlations, and differences.

Variables	1	2	3	4	t[a]	F[b]	F[c]
1. Maternal warmth	–	–	–	–	−1.69	1.24	0.47
2. Paternal warmth	.85***	–	–	–	−1.17	1.44	1.80
3. Emotion regulation	.23***	.22***		–	−0.16	0.10	0.93
4. Social competence	.38***	.41***	.26***	–	−1.84	0.76	0.16
Mean	13.98	13.82	14.77	58.63			
Standard Deviation	2.20	2.27	3.26	6.27			
Skewness	−1.40	−1.33	−0.42	−0.45			
Kurtosis	1.82	1.77	−0.25	0.46			

Note. $^{**}p < .01$; $^{***}p < .001$; a = independent sample t-test for gender difference; b = one-way ANOVA for ethnic difference; c = one-way ANOVA for age difference.

Measurement model

We computed a measurement model to test the psychometric properties of the measures used. The measurement model included four latent variables (maternal warmth, paternal warmth, emotion regulation, and social competence) and 16 observed indicators. Maternal warmth and paternal

warmth were defined by four indicators. Emotion regulation was defined by five indicators. Social competence was defined by the composite score of three subscales: assertiveness, confidence, and competence. Results indicated a good fit of the model: χ^2 (94) = 221.599, p < .001, χ^2/DF = 2.357, CFI = .974, TLI = .967; GFI = .964, RMSEA = .043 (.036, .051), SRMR = .0418. Factor loadings ranged from .437 to .773, all of which were statistically significant. This indicates that each latent variable was well represented by its observed indicators. The items and their corresponding factor loadings are listed in Table 2.

Table 2. Factor loadings.

Indicators	Unstandardized factor loading	Error	Standardized factor loading
MW1	1.000	–	.613
MW2	1.169***	.080	.736
MW3	1.371***	.091	.773
MW4	1.109***	.093	.498
PW1	1.000	–	.577
PW2	1.207***	.084	.768
PW3	1.298***	.091	.761
PW4	1.091***	.093	.510
ER1	1.000	–	.515
ER2	.936***	.117	.481
ER3	.992***	.122	.498
ER4	1.221***	.142	.558
ER5	.950***	.125	.437
Assertiveness	1.000	–	.648
Confidence	1.065	.095	.626
Cooperation	.932	.083	.627

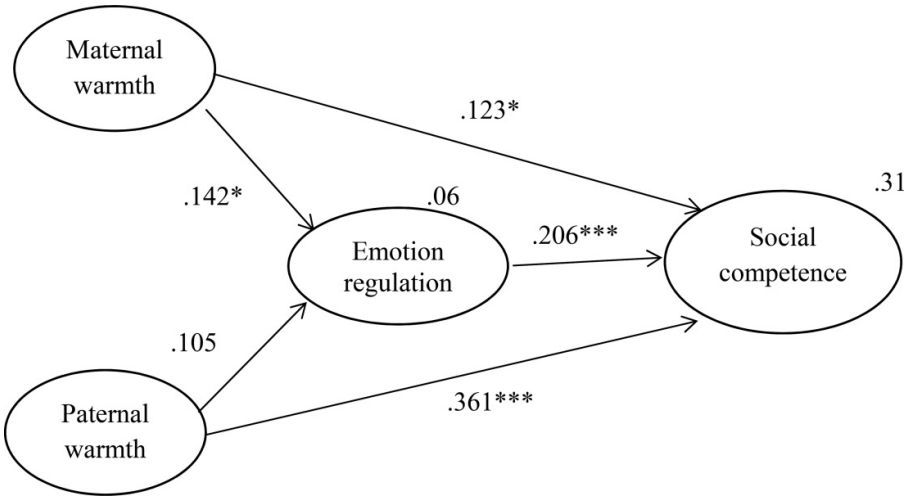
Note. MW = maternal warmth; PW = paternal warmth; ER = emotion regulation.

Structural models of mediation

First, a direct path coefficient from the predictors (maternal warmth and paternal warmth) to the criterion (social competence) was tested. The model provided a good model fit to the data: χ^2 (37) = 101.937, p < .001, χ^2/DF = 2.755, CFI = .985, TLI = .978, GFI = .976, RMSEA = .049 (.038, .061), SRMR = .044. The direct effects of maternal warmth (β = .155, b = .114, SE = .059, p < .05) and paternal warmth (β = .384, b = .275, SE = .059, p < .001) on social competence were significant. The predictors explained 27% of the variance in social competence.

Next, the mediation model was calculated to examine the indirect relationship between parental warmth and social competence via emotion regulation as shown in Figure 1. The test of the mediation model yielded a good fit to the data, indicated by the following indices: χ^2 (94) = 221.599, p < .001, χ^2/DF = 2.357, CFI = .974, TLI = .967; GFI = .964, RMSEA = .043 (90% CI: .036–.051), SRMR = .0418. Emotion regulation was predicted by maternal warmth (β = .142, b = .210, SE = .103, p <.05) and was itself predictive of social competence (β = .206, b = .107, SE = .022, p < .001). As for the paternal warmth, the path from paternal warmth to emotion regulation was not significant (β = .105, b = .152, SE = .100, p > .05), but the path from paternal warmth to social competence remained strong (β = .361, b = .269, SE = .060, p < .001).

Figure 1. Mediation model.*Note.* Path coefficients are standardized. Path coefficient in parenthesis represents direct effect size after controlling for emotion regulation. ***$p < .001$, *$p < .05$.



The mediating role of emotion regulation was further strengthened by using the bootstrap estimation procedure with a bootstrap sample of 2000 (Preacher & Hayes, 2008). The findings of this study showed that maternal warmth exerted a significant indirect effect on social competence via emotion regulation with a 95% CI (see Table 3). Thus, emotion regulation partially mediated the relationship between maternal warmth and social competence. Overall, predictors explained 31% of the variance in social competence.

Table 3. Parameters and 95% CI for the path of the mediation model.

IV	DV	95% CI (Lower–Upper)
Maternal warmth →	Social competence	(0.002 to .074)
Paternal warmth →	Social competence	(−.007 to .059)

Discussion

The present study aimed to examine the relationship between parental warmth and social competence of preadolescent children and to further explore the mediating role of children's emotion regulation. Correlation results showed that maternal and paternal warmth were positively associated with social competence of preadolescent children in Malaysia. These positive associations likely reflect the fact that warm and responsive parents tend to care for, love, and engage more in positive interactions with their children and engage in age-appropriate caregiving to fulfill children's need for positive social functioning (Lengua et al., 2007; Zhou et al., 2002). These findings also revealed the importance of both maternal and paternal warmth and its association with social competence of Malaysian preadolescent children. This may reflect the shift in parental emphasis from traditional values of academic excellence to social competence in contemporary Malaysian culture (Tan, 2012; Salehuddin & Winskel, 2016). Both maternal and paternal warmth that emphasize love and care to children are equally important to promote social functioning of children in Malaysia.

Consistent with previous research, our correlational results showed that both maternal and paternal warmth were positively correlated with emotion regulation in children. Children with warm parents who receive care from their parents and experience emotion-related socialization are more likely to internalize parental values and may be impacted by their parents' emotional expressions in order to regulate their emotional arousal and exhibit appropriate behaviors (Eiden et al., 2009). Warm parent-child interaction can serve to strengthen children's regulatory capacity by demonstrating constructive ER and helping children to control negative emotions and manage arousal in socially appropriate ways (Sarıtaş et al., 2013). Previous studies have also shown that children's emotional development in middle childhood is influenced by how their parents display their emotions and emotion regulation skills (Gullone et al., 2010). It is believed that parenting with emotion-related coaching may facilitate children's learning of culturally and socially appropriate rules when expressing their emotions and behavior and further promote internalization of emotional regulation process. Parental warmth from both fathers and mothers also provides a consistent positive coaching and warm response to children; thus, mitigating children's emotional adjustment problems. Specifically, maternal and paternal warmth can internalize the child's ER capacity that leads to children's awareness of their emotional expression and arousal, and may enable preadolescent children to respond appropriately and be more socially

competent. Eisenberg et al. (1998)'s heuristic model also supports the contribution of parental emotion-related socialization behavior on a child's emotion and social functioning. Liew et al. (2011; 2014) found that parental warmth and support in response to children's stress led to a greater level of emotion regulation and better social adaptive competence.

The current study also showed that preadolescent children who reported higher ER also exhibited higher social competence. A plausible explanation for this could be that children with stronger ER can perceive and assess situational demands and be able to better express socially appropriate emotions and behavior (Spritz et al., 2010; Trentacosta & Shaw, 2009). Thus, emotionally regulated preadolescent children may be more able to demonstrate better social and emotional skills when they are distressed or in an aversive social event.

The present study also examined the relationship between parental warmth and child social competence and whether this relationship is mediated by child emotion regulation. We found that children's emotion regulation partially mediated the positive relationship between maternal warmth and children's social competence. Consistent with the previous study (Sarıtaş et al., 2013), the result suggests that warm and responsive mothers may act as socializers and good role models for preadolescent children to learn appropriate reactions and ER strategies in managing their daily social interactions. Positive experiences with warm mothers can enhance emotion regulation ability and stability of Malaysian preadolescents so that they can exhibit more cooperative behavior and social trust in establishing and maintaining positive interpersonal relationships. When confronting aversive emotional arousal or situational demands, emotionally regulated preadolescent children are more likely to express socially acceptable emotions and better manage their negative emotions, thus they are likely to show higher levels of social competence and be confident while interacting with others.

When paternal warmth is treated as an endogenous variable, emotion regulation is not a significant mediator of the relationship between paternal warmth and social competence. The results showed that paternal warmth only had a direct effect on preadolescents' social competence. According to Fosco and Grych (2013), paternal warmth was associated with children's emotion regulation in the baseline model but the path did not become significant after other family dimensions were added; however, higher levels of paternal warmth contributed to a greater level of social competence in preadolescents. Prior studies have also noted the importance of mothering in children's emotional and social development (Fosco & Grych, 2013; Kam et al., 2011), while paternal warmth played a prominent role in children's social competence (Chen et al., 2000; Taylor et al., 2015). This result may be explained by the fact that warm mothers have a stronger emotional bond with their preadolescent children and play an important role in children's internal states, such as emotional states, as well as external functioning, such as social competence. While, fathers expect a higher level of independence from their preadolescent child than mothers (Hoff et al., 2002; Kim et al., 2010), may have less influence on children's emotion regulation, but encourage and emphasize more on their social skill development. Thus, in this study, warm fathers who are nurturing were found to directly contribute to higher levels of social competence. That is, emotion regulation is socialized by warm mothers, while warm mothers and fathers can help preadolescents achieve higher levels of social competence.

Our findings suggest that in a society that promotes collectivism and social cohesion. Warm Malaysian fathers and mothers who value harmony in social groups may be more cooperative in their interactions with their preadolescent children and promote understanding of others' feelings and perspectives in social situations, leading children to learn and develop competent social skills in their engagement with others. Furthermore, warm mothers, who remain the main caregivers in Malaysian families, may serve as role models and help children to control their emotions and behave appropriately in social events, which in turn may lead to higher levels of social competence in preadolescent children.

The findings of this study affirm the direct and indirect influence of parenting on child's emotion and social functioning. Maternal warmth breeds direct influence as in behavioral modeling and emotional support to their children, whereas indirect influence can be theorized as in improving children's self-regulations of their behaviors and emotions. The mediating effect of ER is supported by the tripartite model of Family-Peer Relationships (Parke et al., 1994), which states that parents, as socializing agents, can contribute to positive social developmental outcomes by nurturing children's ER. Previous studies have found that warm parents who are sensitive to children's needs can improve children's ER strategies and thus develop a greater level of social competence (Carlson & Wang, 2007; Eisenberg et al., 1998). Consistent with the Tripartite Model of Familial Influence (Morris et al., 2007), the findings support the significance of the parental coaching process in the development of ER and social competence among preadolescents. In addition, this study has provided a deeper insight into the differential effects of maternal and paternal warmth in predicting emotion regulation and social competence of preadolescent children. By including both paternal and maternal warmth in the model, this study can provide a better overview of how emotion regulation and social competence are socialized in the Malaysian family. This study revealed that both maternal and paternal warmth can directly contribute to higher levels of social competence, while only maternal warmth predicted preadolescents' social competence via emotion regulation. Warm mothers are more sensitive to their children's emotions and attentive to their emotion-regulation needs, provide them with opportunities to learn social cues and act as role models and social referents in social and peer interactions. These maternal parenting mechanisms can cultivate better control of negative emotions and coaching preadolescents to apply a higher level of ER strategies. Through the process of social learning and positive interactions from warm mothers, emotionally regulated preadolescents are able to control and appropriately express their emotions so that they tend to achieve social goals and exhibit higher levels of social competence. To be a socially competent individual, a preadolescent child must be able to regulate his or her emotions with their own volition and exhibit socially appropriate behavior (Trommsdorff & Cole, 2011). Thus, warm parenting and ER can enhance their social understanding and help them meet social norms.

Limitations and future directions

There are limitations to the current study that must be acknowledged. First, this research was designed as a cross-sectional study, which limits our ability to draw inferences about causality (Creswell & Plano Clark, 2010). Therefore, the directionality of the relationship between parental warmth and social competence needs to be further confirmed through future longitudinal studies. In particular, longitudinal studies would be helpful to facilitate understanding of the quasi-mediated model in this study (Maxwell & Cole, 2007).

Second, the present study applied only child-reported data, but self-report questionnaires are often subject to social desirability bias (Podsakoff et al., 2012). Thus, a future study could apply the multi-informant method (i.e., parents' report and children's report of data) to achieve a higher level of accuracy for the proposed model and reduce the inflation of associations between variables due to the measurement of variables by a single reporter. In future research, the use of multiple data collection methods (e.g., observations of parental education and children's reports of parenting practices) and mixed with multiple sources (parent-reported parenting, teacher-reported social competence) would increase the credibility and accuracy of the data (Creswell & Plano Clark, 2010).

Conclusions

Despite the limitations noted above, this study has several notable strengths. First, it provides insight into a gap in the literature on processes that may explain the relationship between maternal warmth and children's social competence via ER. Our findings support the importance of maternal warmth in facilitating greater ER in children, which could ultimately lead to higher levels of social competence in children. Paternal warmth was significantly correlated with emotion regulation, but when maternal warmth was added to the model, this correlation was not significant. However, paternal warmth, with maternal warmth, was still a significant predictor of social competence in the model. This study also utilized structural equation modeling to examine the psychometric properties of the measured variables in Malaysian preadolescents using measurement models. The use of bootstrapping methods to examine the mediating model further increases the validity of this model in this sample for future studies (Preacher & Hayes, 2008). These findings support the appropriateness and importance of maternal and paternal warmth for the development of positive social outcomes for children in the Malaysian context.

The findings of our study also highlight the importance of considering these factors when planning parenting interventions aimed at helping preadolescent children develop more ER and social competence, leading to better mental health in the long run. Specifically, intervention programs that can promote Malaysian parents' warmth of both fathers and mothers, appear to have important implications for coaching preadolescent children to develop their ability to regulate and modify negative emotions to achieve personal and social goals. More importantly, effective emotion regulation strategies that involve children's adaptive and flexible management of emotional arousal may promote children's self-confidence, cooperativeness, and competence in meeting the demands of various social situations.

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2		Jo-Pei	Tan	
3		Chin-Siang	Ang	
4		Charissa S. L.	Cheah	
5		Siti Nor	Yaacob	
6		Mansor	Abu Talib	

Response: [*Author - Su-Wan Gan: gansuwan@gmail.com*]: Ok

2. **Query:** [AQ1] - :Please provide complete details for (Sumari et al., 2020, McDowell et al., 2002, Zhou et al., 2002, and Hoff et al., 2002) in the reference list or delete the citation from the text.

Response: [*Author - Su-Wan Gan: gansuwan@gmail.com*]: Sumari, M., Baharudin, D., Khalid, N., Ibrahim, N., & Ahmed Tharbe, I. (2020). Family functioning in a collectivist culture of Malaysia: A qualitative study. *The Family Journal: Counseling and Therapy for Couples and Families, 28*(4), 396-402. doi: 10.1177/1066480719844334

McDowell, D. J., Kim, M., Oneil, R., & Parke, R. (2002). Children's emotional regulation and social competence in middle childhood: The role of maternal and paternal interactive style. *Marriage and Family Review, 34*, 345-364. doi:10.1300/J002v34n03_07

Zhou, Q., Eisenberg, N., Losoya, S. H., Fabes, R. A., Reiser, M., Guthrie, I. K., … Shepard, S. A. (2002). The relations of parental warmth and positive expressiveness to children's empathy-related responding and social functioning: A longitudinal study. *Child Development, 73,* 893-915. doi: 10.1111/1467-8624.00446.

Hoff, E., Laursen, B., & Tardif, T. (2002). Socioeconomic status and parenting. In M. H. Bornstein (Ed.), *Handbook of parenting: Biology and ecology of parenting* (pp. 231–252). Lawrence Erlbaum Associates Publishers.

3. **Query:** [AQ2] - :The year of publication has been changed as per Crossref details both in the list and in the text for this reference. Please check.

Response: [*Author - Su-Wan Gan: gansuwan@gmail.com*]: Ok

4. **Query:** [AQ3] - :The year of publication has been changed as per Crossref details both in the list and in the text for this reference. Please check.

Response: [*Author - Su-Wan Gan: gansuwan@gmail.com*]: Ok

5. **Query:** [AQ4] - :Please provide the volume number and page range.

Response: [*Author - Su-Wan Gan: gansuwan@gmail.com*]: Yaffe, Y. (2020). Systematic review of the differences between mothers and fathers in parenting styles and practices. *Current Psychology,* 1–14. https://doi.org/10.1007/s12144-020-01014-6