

Supplementary S1

Factor Analysis

Confirmatory factor analyses were performed to investigate the presumed factorial structure of the main study variables, and Cronbach's alphas were also calculated. Model fit was assessed with various fit indices. Combined cutoff values of .08 for the standardized root mean square residual (SRMR) and the standardized root mean square residual (RMSEA) indicate a good model fit (Daire Hooper et al., 2008). Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI) values of .95 or above indicate good fit while values close to .90 indicate acceptable fit (Klien, 2005). To attain a better model fit, we further check the modification indices. The results are presented in **Table S1**. All confirmatory factor analyses met the model fit criteria, and Cronbach's alphas indicated acceptable reliabilities. The process of modification indices check is shown below.

Parental Dependency Scale

In both maternal and paternal questionnaires, results from CFA showed that three items ("It is important that people like me"; "I would rather give in and keep the peach than hold my ground and win an argument"; "I am happiest when someone else takes the lead.") were removed because of their low factor loadings (< 0.40). The modification indexes in both maternal and paternal scales suggested that the residual terms should be allowed to correlate between the items "When I argue with someone, I worry that the relationship might be permanently damaged" and the item "I sometimes agree with

things I do not really believe so other people will like me.” The modification was considered theoretically reasonable because these two items involved interpersonal relationships. After these modifications, the model of maternal dependency (see Table S1) showed a good fit, $\chi^2(df = 13) = 35.26$, $p < .001$, CFI = .963, TLI = .948, RMSEA = .06, SRMR = .03. The model of paternal dependency showed a good fit, $\chi^2(df = 12) = 34.71$, $p < .001$, CFI = .962, TLI = .948, RMSEA = .07, SRMR = .04. Although the chi-square was significant, presumably due to the large sample size.

Dependency-oriented Parenting Scale

The modification indexes in both maternal and paternal scales suggested that the residual terms should be allowed to correlate between the items “If my child does not need me to help him/her solve the problem, I will feel disappointed.” and “When my child gradually become independent and no longer depend on me like before, I will feel disappointed.” The modification was considered theoretically reasonable because these two items involved parental attitudes toward a child’s autonomous needs. The model of maternal dependency-oriented parenting (see Table S1) showed a good fit, $\chi^2(df = 4) = 6.17$, $p = .192$, CFI = .996, TLI = .995, RMSEA = .04, SRMR = .02. The model of paternal dependency-oriented parenting showed a good fit, $\chi^2(df = 4) = 11.03$, $p < .05$, CFI = .996, TLI = .985, RMSEA = .04, SRMR = .02.

Child’s Dependency Scale

The children’s dependency questionnaire (CDQ, seven items) measures children’s dependency on their parents. The scale is comprised of two subscales: emotional

dependency and physical dependency. This measure was developed based on the caregiver dependency scale (CDS) and the Parent-Child interaction Questionnaire (PCIQ) (Wood, 2006; Wood et al., 2007) and a review of children's dependency behavior in East Asian societies. It is based on the frequencies rather than vague descriptions of children's dependency behavior. Initially, a literature review on children's dependency on their parents and caregivers (e.g., Doi, 1989; Lin & Dai, 2013; Rothbart et al., 2000; Sroufe et al., 1983) was conducted. It was found that children's physical dependency on their caregivers is common in East Asian countries, characterized by a desire to be taken care of (e.g., co-sleep with parents; Rothbart et al., 2000). Also, according to research conducted in China, children usually wish to exhibit infantile and clingy behaviors to express their emotional dependency on their parents, which parents commonly accept (e.g., clingy behavior: Lin & Dai, 2013; acting like a baby (Sajiao): Yueh, 2013; 2016). Furthermore, some themes of the CDS (e.g., clinging to me; asking to be picked up) and PCIQ (e.g., "I gave my child a piggyback ride or picked him/her up") were extrapolated in the process of item development. The model of children's dependency on mother (Table S1) showed a good fit, $\chi^2(df = 9) = 17.10, p < .05$, CFI = .973, TLI = .972, RMSEA = .05, SRMR = .04. The model of children's dependency on father showed a good fit, $\chi^2(df = 9) = 24.33, p < .01$, CFI = .982, TLI = .973, RMSEA = .07, SRMR = .03.

We also conducted exploratory factor analyses (EFA). A principal component analysis with a varimax rotation was conducted for mother's and father's report of child's

dependency, respectively. As showed in Table S2, two factors were extracted in the EFA of both mother's and father's report of child's dependency scale. For mother's report of child's dependency scale, the two factors in our sample explained 65.44% of the total variance. For father's report of child's dependency scale, the two factors in our sample explained 69.77% of the total variance. Items with factor loadings greater than .30 on the two factors are shown in Table 5. The first four items were extracted to the first component, which could be coded as "physical dependency." The last three items were extracted to the second component. The EFA results revealed that physical dependency and emotional dependency were two distinctive factors.

Supplementary S2

Mean differences between maternal and paternal study variables.

Results

We examined the differences between maternal and paternal ratings of parental dependency, dependency-oriented parenting, and the child's physical and emotional dependency on parents using paired samples t-tests. There were significant differences between fathers and mothers regarding parental dependency ($t = 5.184$, $df = 385$, $p < 0.001$), with paternal ratings ($M = 16.96$, $SD = 5.34$) being significantly lower than maternal ratings ($M = 18.54$, $SD = 4.92$). There are also significant inter-parental differences regarding dependency-oriented parenting ($t = -3.81$, $df = 333$, $p < 0.001$), with fathers scoring higher ($M = 13.09$, $SD = 4.82$) than mothers ($M = 12.05$, $SD = 4.80$). There were inter-parental differences regarding children's physical dependency on parents ($t = 12.90$, $df = 338$, $p < 0.001$), with fathers reporting ($M = 9.63$, $SD = 3.25$) lower than mothers ($M = 12.38$, $SD = 2.64$). Finally, there were inter-parental differences regarding the child's emotional dependency ($t = 5.91$, $df = 340$, $p < 0.001$), with maternal ratings ($M = 8.99$, $SD = 1.99$) being significantly higher than paternal ratings ($M = 8.07$, $SD = 2.20$).

Discussion

It has indeed been argued that the mother (females) is more strongly dependent and oriented toward relationships and belongingness, whereas the father (males) is more strongly oriented toward independence and self-assertion (Blatt & Shichman, 1983).

We found significant mean-level differences between father and mother reports of

dependency, showing that mothers' dependency and children's dependency on them were significantly higher than fathers' reports. The results of mean level differences were aligned with previous research findings (Bornstein, 1995; Bornstein et al., 2003). For example, Bornstein's study of validation of the Relation Profile Test found that women showed a higher score of overdependency than men, whereas men showed a higher score of detachment than women. Also, Surrey (1991) has illustrated that the essential psychological development for women can be seen as an increasing ability to emphasize others and engage in relationships rather than as an increasing separation from others, which is usually the hallmark of a man's maturity. Therefore, given the social emphasis on dependence in girls' socialization, it is reasonable to understand the results based on the current sample: mother participant displays a high level of dependency and perceive a higher level of dependency from their children. Interestingly, we found that fathers' reports of dependency-oriented parenting were significantly higher than mothers' reports, which might be counterintuitive at first glance. The mean difference of dependency-oriented parenting may derive from the expectation effects. If a behavior is more favored within a specific group, people may report higher scores for these behaviors. In Chinese culture, father figures are expected to be highly involved in various parenting and be responsible for children's development. It is possible that Chinese fathers may report a higher level of dependency-oriented parenting to satisfy social expectations. Therefore, fathers may overstate their parenting style rather than their actual behaviors. Since it was the first study to assess the parental gender difference in dependency-oriented parenting, more evidence is needed in future studies.

Supplementary Table S1.

Model fit indices and reliability of the confirmatory factor analyses

| | Items | Reliability (Alpha) | Factor-loading Range | CFI | TLI | RMSEA | SRMR | Chi-square |
|---|-------|------------------------|-------------------------|------|------|-------|------|-------------------------------|
| T1 Maternal dependency | 7 | .75 | .46 - .82 | .963 | .948 | .06 | .03 | 35.26 (df = 13; $p < .001$) |
| T1 Paternal dependency | 7 | .80 | .51 - .78 | .962 | .948 | .07 | .04 | 34.71 (df = 12; $p < .05$) |
| T1 Mother's Dependency-oriented Parenting | 5 | .85 | .56 - .89 | .996 | .995 | .04 | .02 | 6.17 (df = 4; $p = .192$) |
| T1 Father's Dependency-oriented Parenting | 5 | .86 | .58 - .88 | .996 | .985 | .07 | .02 | 11.03 (df = 4; $p < .05$) |
| T2 Children's Dependency on mothers | 7 | .81 | .50 - .88 | .973 | .972 | .05 | .04 | 17.10 (df = 9, $p < .05$) |
| T2 Physical Dependency on mother | 4 | .70 | .50 - .77 | | | | | |
| T2 Emotional Dependency on mother | 3 | .86 | .75 - .88 | | | | | |
| T2 Children's Dependency on father | 7 | .85 | .66 - .86 | .982 | .973 | .07 | .03 | 24.33 (df = 9, $p < 0.01$) |
| T2 Physical Dependency on father | 4 | .81 | .66 - .82 | | | | | |
| T2 Emotional Dependency on father | 3 | .87 | .78 - .84 | | | | | |
| T1 Child's Temperament- Surgency | 10 | .63 | .39 - .69 | .943 | .915 | .06 | .05 | 53.00 (df = 23, $p < 0.01$) |
| T1 Child's Temperament- Negative Affect | 8 | .76 | .37 - .65 | .952 | .936 | .06 | .05 | 49.17 (df = 19, $p < 0.01$) |
| T1 Child's Temperament- Effort Control | 11 | .77 | .33 - .62 | .956 | .938 | .07 | .05 | 153.00 (df = 42, $p < 0.01$) |

Supplementary Table S2

Exploratory Factor Analysis of Child's Dependency Scale

| | Child's Dependency on mother | | Child's Dependency on father | |
|--|------------------------------|-----|------------------------------|-----|
| | 1 | 2 | 1 | 2 |
| PD1-Asking to co-sleep | | .50 | | .73 |
| PD2-Asking to be fed | | .71 | | .70 |
| PD3-Asking to help him/her when taking a bath/shower | | .80 | | .85 |
| PD4-Asking to be dressed up | | .79 | | .80 |
| ED1-Clinging to me | .86 | | .82 | |
| ED2-Being cuddly and acting like a baby | .85 | | .86 | |
| ED3-Badgering me to do things together | .85 | | .83 | |

Notes 1: PD= Physical Dependency; ED = Emotional Dependency

Notes 2: Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

Notes 3: On the table, the coefficients are suppressed when their absolute value is below .30.