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Attitudes toward material possessions among Chinese children

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Attitudes toward material possessions among Chinese children

Research Paper

Abstract

Purpose — This study seeks to quantify how children in urban China perceive someone described as owning many or few expensive toys. It aims to measure the types of possessions and personal characteristics they attributed to such individuals. This is an extension of previous research on perceived links between possessions and personal characteristics.

Design/methodology/approach — A total of 268 Chinese children aged 9 to 14 were surveyed using a self-administered questionnaire. Participants saw photos of a child described as having few or many expensive toys. They then imagined the possessions and personal characteristics of such a child. They also reported which child they would prefer to be.

Findings — A child with a lot of toys was perceived as more likely to have branded toys and new media toys. Such a child was more likely to be imagined as spending irresponsibly, selfish and envious of others. A child without many toys was considered more likely to have books and sports-related toys. Participants were more likely to perceive this child as hardworking, with good academic results, smart, and with lots of friends. A total of 40 percent of the participants said they would prefer to be the child without many toys.

Research limitations/implications — The participants mostly came from lower middle class families, and they may be particularly inclined to project good qualities on people without many possessions.

Practical implications — Marketers and advertisers should be sensitive to the perceived link between possessions and negative personal characteristics of the owner. Advertisers of premium products and brands for children should stress the functional superiority of the products.

Originality/value — These results quantify and verify the results of a previous qualitative enquiry. They provide guidelines for marketers attempting to reach children in China in a culturally sensitive manner.

Keywords: Children – materialism – consumer psychology – perceptions
Attitudes toward material possessions among Chinese children

Introduction

Materialism is defined as the degree to which a person believes that the acquisition and possession of material objects are important to happiness in life or are indicators of success (Richins and Dawson, 1992). Young people often use material possessions as an expression of the extended self (Belk, 1988), and the adoption of materialistic values affects the balance between the private and public choices that they make throughout life (Goldberg et al., 2003). While some may view materialism as a positive value, others suggest that it is undesirable and induced in part by advertising (John, 1999). In our opinion, materialism is a negative value because it works against interpersonal relationships and it is negatively associated with happiness and subjective perceptions of well being (Kasser, 2002). High levels of materialism have been found to create tension between the individual’s orientation toward material possessions and a collective orientation toward family and religious values (Burroughs and Rindfleisch, 2002).

The values of consumers and marketers are defined by their cultures (De Mooij, 2004). Many scholars argue that consumption values in China are different from those in Western societies because of Chinese culture’s long-standing concern for family and human relations (Zhao, 1997). Traditional Chinese culture values thrift, filial piety, group orientation, social harmony, good manners, “face”, and academic achievement (Chan and McNeal, 2003; Yau, 1988). Hu (1944) has analyzed the Chinese concept of face into lien (or moral face) that represents one’s moral character, and mianzi (or social face) that describes status and success. Valuing mianzi will encourage owning symbolic goods which improve personal visibility within the social hierarchy (Wong and Ahuvia, 1998). The collective emphasis of Chinese culture encourages the use of material possessions to establish long-term social relations with significant persons. Contemporary Chinese cultural values are also shaped by communist education (Pan et al., 1994; Zhao, 1997). Communism values personal sacrifice and
contribution to the state and mankind (Chan, 2006a). In recent years, China has been characterized by a tension between the traditional and the modern, between idealistic and pragmatic values, and a struggle between an authoritarian state and a market economy (Lu, 2002). Because of the one child per family policy, parents have high expectations of their children. Parents who were themselves born in times of severe material shortage want to compensate by providing a material-rich future to their children (Zhao, 1996).

With a vast population, a one-child policy, and the emergence of modern consumption values, China has become an important consumer market for global marketers that target children. An in-depth understanding of the children’s consumption values is essential for designing culturally sensitive marketing messages. At issue then, is how Chinese children see the value of material possessions. The research question is: What is the perceived difference between someone who owns many possessions and someone who does not?

In the Western context, scholars have found that adolescents tend to perceive wealthy people to be intelligent and hard-working, while poor people tend to be perceived as lazy and lacking in skills (Dittmar, 1992). However, recent studies of Chinese children and young people have demonstrated different results. These studies have consistently found that other children who own lots of toys or branded goods were perceived as being wasteful and as achieving poor academic results (Chan, 2004a; 2006b; 2006c). Because of the small samples in these three studies, the findings need to be verified.

The current study was designed to fill this gap and to enhance our understanding of how Chinese children perceive people with or without material possessions.

Literature review

According to John’s (1999) consumer socialization model, the perceived value of possessions changes through a child’s developmental stages. During the perceptual stage (ages 3-7), children have a general orientation toward the immediate and readily observable perceptual features of their world. The value of possessions is based on surface features, such as
being larger or having more of some feature. During the analytical stage (ages 7-11), children master some consumer knowledge and skills, and product categories or prices are conceptualized in terms of functional or underlying dimensions. Children begin to value possessions based on their social meaning and significance. As children enter the reflective stage (ages 11-16), they develop comprehensive knowledge about marketplace concepts such as branding and pricing. They understand fully the value of possessions in terms of their social meaning, social significance, and scarcity. John’s (1999) model also describes the changes in brand knowledge through the developmental stages. During the perceptual stage, children can recognize brand names and beginning to associate them with product categories. During the analytical stage, children demonstrate significantly increased brand awareness, especially for child-relevant product categories. As children enter the reflective stage, they develop brand awareness for adult-oriented as well child-relevant product categories and a sophisticated understanding of brands’ consumption symbolism.

Children’s changing understanding of the value of possessions with age was illustrated in Baker and Gentry’s (1996) study of hobby collecting among first and fifth graders. Both groups enjoyed collecting items, but gave different reasons. The younger children said they appreciated collecting because it made them feel they owned more than others. The older children regarded collecting as a way of making themselves unique and feeling good about themselves. The younger children often compared their possessions to those of others in terms of quantity, while the fifth graders compared in terms of specialty. In other words, older children are more likely to use possessions to develop self-identity than younger children.

How people, including children, value possessions and how possessions rank in personal preference are related with the concept of materialism. Scholars have come up with various definitions and measurement scales for materialism. Most of these scales have been used with adults, but some were specifically designed for children. Ward and Wackman (1971) defined materialism as an “orientation emphasizing possessions and money for personal happiness and
social progress” (p. 426). They measured it by summing responses (strongly disagree to strongly agree) to six items such as, “It is really true that money can buy happiness.” In Kapferer’s (1986) study of children and their parents, materialism was measured in terms of agreement with the single statement, “People are much happier if they can buy a lot of things”. Belk (1984) defined materialism as the importance a consumer attaches to worldly possessions, and whether such possessions assume a central place in the consumer’s life. Belk’s (1985) measure of materialism combined three personality traits: envy, non-generosity, and possessiveness. Richins’ (1987) measure of materialism for adults consisted of seven items such as, “It is important to have really nice things” and, “The things I own give me a great deal of pleasure”. Richins and Dawson (1992) constructed a Material Values Scale with three dimensions: the belief that possessions define success, the extent to which possessions are at the centre of one’s life, and the belief that happiness depends on the possession of goods. Goldberg and his colleagues constructed a Youth Materialism Scale which quantified materialism using ten items such as “The more money you have, the happier you are” (Goldberg et al., 2003). All of these measurement scales for materialism share a common theme: they measure attitudes towards possessions; the link between possessions, happiness and success; or perceptions of people who own or do not own many possessions.

Dittmar and Pepper have proposed that one central component of materialism is that material goods are considered as “symbols of identity whose meanings are socially constituted” (Dittmar and Pepper, 1994, p.235). Belk (1988) provided a variety of evidence to support the premise that “our possessions are a major contributor to and reflection of our identities” (p.139). Certainly, research has shown that people use material goods as an instrument to assess social identity, including social class, status, personality, and social relationships (Belk et al., 1982; Dittmar, 1989, 1991). Dittmar (1992) proposed that people from individualistic cultures attribute wealth and poverty to common sense causal explanations. That means affluent people tend to be considered as intelligent, hard-working and skilful, while poor people may be seen as
lazy, unmotivated and lacking in skill. Dittmar (1992) called this “dominant representation”. Empirical evidence was found to support a role for dominant representation in a study of adolescents’ inferences of personality traits which used short videos and vignettes of persons with or without possessions (Dittmar, 1992; Dittmar and Pepper, 1994).

Chan (2003) examined 246 Chinese children aged six to thirteen in Hong Kong using a materialism scale developed for children (Heerey et al., 2002). Materialism was measured by fourteen items that prompted children to reveal whether or not they desired more money and more toys, whether they felt happier if they had more toys, and whether they often compared their possessions those of their friends. The results indicated that children in Hong Kong endorse some materialistic values. Their average materialism score was 3.1 on a five-point scale. The children agreed most strongly with “It’s better to have more allowance” and “I want to have things that other kids like”. They agreed least with “I would be upset if my best friends had the toy I most wanted” and “My friends like me because I have cool toys” (Chan, 2003).

A quota sample of 256 Beijing children with nearly equal numbers of boys and girls aged six to thirteen was surveyed using the same scale. The results indicate that mainland Chinese children do not strongly endorse materialistic values (Chan, 2005). The average materialism score was 2.4 on the same five-point scale, significantly lower than the mid-point of 3.0. The mainland children least agreed with “I like my friends because they have a lot of good stuff” and “I like to compare myself with my friends to see who got the most unique stuff”. Mainland Chinese children’s materialism scores were, on average, significantly lower than those of Hong Kong Chinese children. Contrary to John’s (1999) model of consumer socialization, young children aged six to seven in both studies showed some understanding of valuing possessions based on their social significance.

In a qualitative study, Chan (2004a) asked fifteen Chinese children in Beijing to draw what came to their mind about a child with a lot of toys and a child without many toys. Participants were also asked whether these children had friends and whether they felt good
about themselves. It was found that children, even at a very young age, were able to express the value of possessions based on their emotional attachment, the item’s social meaning, and inferences about future success and self-esteem. The link between material possessions and social significance was direct for the youngest children, but became more complex for older respondents. Older children believed strongly that having a lot of toys would have a negative impact on scholarly pursuits. Children with a lot of toys were more likely to be perceived as selfish, envious of others, and arrogant.

A similar drawing study among forty-two Chinese children aged 6 to 12 was conducted in Hong Kong (Chan, 2006b). Analysis of the drawings and interviews indicated that there were significant differences in children’s perceptions of someone with a lot of toys and someone without many toys in terms of observable qualities and personality traits. The participants perceived a child described as having a lot of toys as being more likely to own branded goods, electric toys and computer and video games. A child without many toys was perceived as more likely to own books. Younger children were more likely to relate material possessions with happiness, friendship, and feeling good about oneself. Older children were more likely to relate material possessions with wastefulness.

A qualitative study among Chinese teenagers aged 13 to 19 in Hong Kong demonstrated differences in young people’s perceptions of someone with or without a lot of branded goods in terms of the type of possessions they would own, their leisure activities, observable qualities and personality traits (Chan, 2006c). The participants were more likely to relate possession of branded goods with happiness, friendship and self-esteem. A person described as having a lot of branded goods, however, was perceived as likely to be arrogant, wasteful, vain and superficial. A person without a lot of branded goods was perceived as easygoing, friendly and down-to-earth.

Chan (2006a) studied the consumption values promulgated in moral education textbooks used in mainland Chinese schools. The texts emphasized that all material goods were the result
of human labor, and wasting goods was portrayed as reprehensible. The consumption values
reflected a mixture of communist and traditional Chinese values about saving for the future.

The results of prior work in this field thus suggest that children understand the concept of
possessions and value them from a young age. Adolescents may use information about a
person’s possessions as a basis for inferring his or her socioeconomic status and personal
qualities. There are indications that similar inferences may also develop among children. The
empirical evidence indicates that the perceived link between material possessions and
personality traits differs in Western and Chinese contexts. The current study was designed to
investigate to what extent Chinese children use information about a person’s possessions as
indicators of that person’s happiness, academic success and social relations.

Hypotheses

According to Chan’s (2006b) study, Chinese children perceive a child described as having
many toys as more likely to own branded goods, electric toys and new media (computer and
video games). A child without many toys was perceived as more likely to own books. This
suggests the following hypothesis:

H1. Children perceive a child with many toys differently from a child with few toys in
terms of the type of toys they are imagined to possess.

In Chan’s (2006b) study, some participants related material possessions with happiness,
and friendship, while some related material possessions with wastefulness. This suggests the
following hypothesis:

H2. Children perceive a child described as having many toys differently from a child
without many toys in terms of their imagined personal characteristics.

Methods

Sample

Two hundred and sixty-eight Chinese children aged 9 to 14 attending grade four to six in
an urban school in the city of Guangzhou participated in the study. The school was situated in a
lower to middle class residential area. Guangzhou is a southern Chinese city in Guangdong province. Per capita GDP in Guangdong was among the three highest provinces in China.

**Questionnaire design and procedure**

Approval was obtained from the school to enrol the students in the study. The study was conducted during class time with one of the authors as a facilitator. A questionnaire was developed based on Dittmar and Pepper’s (1994) and Chan’s (2004a) work. Instead of presenting participants with vignettes about children, the questionnaire featured a photograph of a child (either a boy or a girl) with the caption “This child has a lot of expensive toys” (child A hereafter). Participants were asked to select types of possessions the child would own, and the personal characteristics of the child.

Eight possessions and 12 personal characteristics were provided. Participants could check as many answers as they found appropriate. The possession choices included six unbranded items (books, a badminton bat, a skipping rope, a box of marbles, a computer, and a remote controlled car) and two branded items (a Gameboy video game console, and Lego building blocks). Nine of the personality trait choices, including happy and hardworking, were taken from Dittmar and Pepper’s (1994) study. “Willing to serve classmates”, “willing to learn from Lei Feng”, and “spends money irresponsibly” were added for this study. Lei Feng is a legendary role model used extensively in schools in mainland China to promote self-sacrifice for the nation.

The questionnaire continued with a photograph of a second child (again a boy or a girl) with the caption “This child does not have a lot of expensive toys” (child B hereafter). The same two questions were asked. Participants were then asked who he or she wanted to be: the one with a lot of expensive toys, the one without a lot of toys, either one, or neither one. The study attempts to measure children’s perception. However, by showing the participants photos with the description of having or not having a lot of expensive toys, it measures participants’ inference from the photos, based on their imagination, rather than perception.
Demographic and other information (sex, age, grade, amount of allowance per week) were collected. Half of the sample received a questionnaire with a boy’s photo, and the other half received a questionnaire with a photo of a girl. The two versions of the questionnaire were randomly distributed in the class. The data were collected in June 2005.

**Results**

A total of 55 percent of the participants were boys, and 45 percent were girls. The average age of the participants was 11.4 years (SD=1.1 years). Despite China’s one child policy, 36 percent of the participants reported that they were the only child in the family, and the remaining 64 percent reported that they had siblings. A total of 24 percent of the participants received an allowance, and the median weekly allowance was ten yuan (equivalent to about US$1.2).

**Perceived possessions**

Table 1 summarizes the participants’ perceptions of child A and child B in terms of possessions. The results of paired-sample t-tests showed that the possessions attributed to child A and child B differed significantly except for the marbles. The t-values ranged from -8.2 to 16.4. Seven of the eight t-values were significant at 0.01 level. Child A was most frequently perceived to own computer (87%), a Gameboy (68%), a remote control car (58%) and Lego blocks (51%). In contrast, participants did not expect that child B would own these toys (perceived ownership ranging from 10 to 30%). Child B was more frequently expected to own a book (75%), rope (64%), a badminton bat (55%) and marbles (40%). Overall, child A was perceived as owning branded goods as well as electronic goods. Child B was perceived as owning books and sports-related toys. The participants’ expectations differed for seven of the eight selected possessions. As a result, H1 was supported.

**Perceived personal characteristics**

Table 2 summarizes the positive and negative personal characteristics attributed to child
A and child B. Paired-sample t-tests showed that child A and child B were imagined significantly differently in terms of their personal characteristics, except for “happy”. Child A was less likely to be described with positive personal characteristics. Of the nine positive personal characteristics, “happy” was the only one with over fifty percent attribution. In contrast, child B was more likely to be described with positive personal characteristics. Five of the nine positive characteristics had more than fifty percent attribution to child B, including hard-working, good academic results, smart, has a lot of friends and cares about others. Neither child A nor child B was often described with negative personal characteristics. All three negative traits had attributions lower than fifty percent. However, child A was more likely to be described as spending money irresponsibly, selfish, and envious of others. Participants’ visions of a child with many toys differed in eleven out of twelve of the selected personal characteristics from their vision of a child without many toys. As a result, H2 was supported.

Factor analysis was applied to examine the underlying dimensions of the participants’ attributions of personal characteristics. A principal component factor analysis with a varimax rotation was employed to identify the dimensions of the 12 personal characteristics for child A and child B separately. In the first round of factor analysis, “lovable” was found to be loaded differently for child A and child B. For child A, “lovable” was loaded on factor 3 (0.58), together with having a lot of friends, being happy and being smart. For child B, “lovable” was loaded on factor 1 (0.48), together with willing to serve classmates, hard-working, willing to learn from Lei Feng, caring about other people and good school work. In view of the inconsistency in factor loading, “lovable” was deleted and the remaining 11 personal characteristics were factor analyzed again. In the second round of factor analysis, three dimensions were generated. The results of the second round of factor analysis are shown in Table 3. These factors accounted for 57.5 percent and 57.2 percent respectively of the total explained variance in perception responses of child A and child B. The grouping of personal
characteristics was very similar in the two factor analysis solutions.

Both the first and third dimensions describe positive personal characteristics. The first dimension, accounting for the largest proportion of the total explained variance, is focused on the child’s personal efforts to achieve and good intentions to serve and care about other people. It was labelled “industrious and caring”. The third dimension is concerned with a child’s charisma, being happy, smart, and attractive. It was labelled “happy and sociable”. The second dimension refers to the negative traits of being selfish, envious and wasteful. It was labelled “self-centred and wasteful”.

Based on the results of the factor analysis, mean scores were calculated for the three dimensions. For example, the mean of percentages of participants selecting selfish, envious of others, and spends money irresponsibly would give the score for the self-centred and wasteful dimension. The results are summarized in Figure 1. Paired-sample t-tests were conducted to compare the mean scores for child A and child B. The mean scores for the industrious and caring dimension were 30 percent for child A and 59 percent for child B (t = -10.9, df = 267, p≤0.001). The mean scores for the self-centred and wasteful dimension were 32 percent for child A and 9 percent for child B (t = 8.9, df = 267, p≤0.001). The mean scores for the happy and sociable dimension were 50 percent for child A and 59 percent for child B (t = -3.1, df = 267, p≤0.001). So child B was more likely to be imagined as industrious and caring, happy and sociable than child A. Child A was more likely to be imagined as self-centred and wasteful. These results further support H2.

Participants were asked which child they wanted to be. A total of 40 percent of the participants reported that they wanted to be the child with few toys. A total of 12 percent wanted to be the child with a lot of expensive toys, while twenty-nine percent wanted to be either one of them and
nineteen percent wanted to be neither.

**Discussions and conclusions**

The study was designed to compare urban Chinese children’s perceptions of someone with or without a lot of material possessions. Two hypotheses developed from Chan’s (2006b) qualitative study were tested using a quantitative approach. The results supported both of the initial hypotheses. Participants attributed significantly different characteristics to hypothetical children with or without many expensive toys. A child with many toys was visualized as more likely to have branded toys and electronic toys. He or she would be happy, have a lot of friends, be smart, but spend money irresponsibly. A child without many toys was imagined as having books and sports goods. He or she would be happy, hard-working, smart, care about others and have good academic results and lots of friends.

The strong perceived link between material possessions and poor academic achievement found in this study is consistent with the findings of a previous qualitative study of children in mainland China (Chan, 2004a). Possessions, specifically toys, are perceived as barriers to achieving academic excellence. The perception may come from parents. At a focus group interview of parents of children aged 9 to 12, interviewees expressed the worry that toys and play items would distract children from concentrating on their studies. Parents thought that children should place learning as their top priority (Chan, 2004b).

Similar to previous qualitative studies (Chan, 2004a; Chan, 2006b), the results show that children were able to express the value of possessions based on emotional attachment (happiness), social meaning (ability to attract friends), and personality association (smart, willing to serve others, or selfish). This provides further evidence to support John’s (1999) model of consumer socialization, which says that children in the analytical stage (ages 7-11) will begin to develop an understanding of the social meaning and significance of material possessions.

Two of the eight products suggested were branded items (the Gameboy and the Lego
blocks). The participants demonstrated significant differences in their perceptions of those who owned these branded goods and those who did not. In other words, they formed impressions based on the possession of brands. This also supports John’s (1999) model, which predicts that children in the analytical stage have high brand awareness for child-relevant products and services. Participants imagined that these branded goods would be more likely to be owned or used by children with a lot of expensive toys. It suggests that children at the analytical stage are beginning to understand the consumption symbolism associated with brands. This use by 9 to 14 year-olds of the symbolic meaning of brands is consistent with the development of self-brand connections among children and adolescents found in Chaplin and John’s (2005) study.

The personality traits attributed by Chinese children to those owning or lacking expensive toys were very different from those assigned by adolescents in the UK. Dittmar and Pepper (1994) have shown that British adolescents perceive an affluent person as more intelligent, successful and hard-working than someone less well-off, but the Chinese children perceived the affluent child as less intelligent, having fewer friends, being less hard-working, less caring, less frugal and less willingness to serve others than a less well-off child. In other words, Chinese children associated possessions with wastefulness and poor social relationships. The link between possessions and wastefulness may stem from the strong emphasis on thrift and frugality taught at schools (Chan, 2006b). In three out of eight lessons about consumption values in textbooks on moral education, children were told to value frugality even if their family could afford higher living standards. Frugality was portrayed as a way of paying respect to the people who produce the goods. Chinese parents also indicate a preference for their children to live within their means and refrain from buying luxury goods (Chan, 2004b). The observed association between lack of possessions and positive personal characteristics suggests that poverty is romanticized. The results illustrate that the perception of possessions is culturally based.
As the participants associated possessions with wastefulness, poor social relations, and poor academic performance, it was quite natural that they were not aspiring to having many toys. This was supported by the low percentage (12 percent) of participants who expressed the wish to be the child with a lot of expensive toys. Strong normative beliefs about the virtues of frugality and the evil of wastefulness apparently deter aspirations to own material possessions. Marketers and advertisers should be sensitive to the apparent link between possessions and the negative personal characteristics of their owners. Advertisers of premium products and brands for children should stress their functional or design superiority rather than their symbolic meaning as possessions. Toy marketers should emphasize opportunities to build creativity, social relations or intelligence through using their toys. Marketing messages should emphasize enjoying toys with peers.

In summary, then, urban Chinese children hold perceptions of someone with or without a lot of toys that are different from those of Western children in terms of the types of other possessions and the personal characteristics the possession of toys implies. A child with a lot of toys was perceived to be more likely to have branded toys and new media toys. The participants were more likely to imagine such a child as spending irresponsibly, selfish and envious of others. A child without many toys was visualized as more likely to have books and sports-related toys. Participants were more likely to imagine such a child to be hard working, with good academic results, smart, and with lots of friends. A total of 40 percent of the participants said they wanted to be a child without a lot of expensive toys. Marketers of children’s products and services should be aware of the negative associations attached to ample possessions.

The applicability of these results may be limited by the fact that the participants mostly came from lower middle class families. It is unclear whether similar results would be obtained from children with a wealthy background, but it is safe to speculate that children from impoverished backgrounds might react very differently. Future research should extend the scope of the study to include children from different social and economic backgrounds and younger
ages. It should also be pointed out that asking the participants to select from a list toys which might be the possessions of a child with few or many toys could yield information about what the participants associated with the ownership of expensive toys, or it could have simply asked the respondents which toys they considered expensive. This was a weakness in the research design. The results would also have been better controlled if the presentation order of Child A and Child B had been better balanced. This would minimize any bias due to ordering of the stimulus.
<table>
<thead>
<tr>
<th>Type of toy</th>
<th>Child A</th>
<th>Child B</th>
<th>t-statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>computer</td>
<td>87</td>
<td>29</td>
<td>16.4***</td>
</tr>
<tr>
<td>Gameboy</td>
<td>68</td>
<td>12</td>
<td>16.2***</td>
</tr>
<tr>
<td>remote controlled car</td>
<td>58</td>
<td>10</td>
<td>13.9***</td>
</tr>
<tr>
<td>Lego blocks</td>
<td>51</td>
<td>16</td>
<td>8.8***</td>
</tr>
<tr>
<td>books</td>
<td>46</td>
<td>75</td>
<td>-8.2***</td>
</tr>
<tr>
<td>badminton bat</td>
<td>44</td>
<td>55</td>
<td>-2.7**</td>
</tr>
<tr>
<td>marbles</td>
<td>37</td>
<td>40</td>
<td>-0.7</td>
</tr>
<tr>
<td>rope</td>
<td>29</td>
<td>64</td>
<td>-9.2***</td>
</tr>
</tbody>
</table>

Note: ** Significant at the p≤0.01 level; *** significant at the p≤0.001 level
### Table 2 Personal characteristics used to describe child A and child B

<table>
<thead>
<tr>
<th>Personal characteristic</th>
<th>child A</th>
<th>child B</th>
<th>t-stat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>happy</td>
<td>59</td>
<td>58</td>
<td>0.2</td>
</tr>
<tr>
<td>has a lot of friends</td>
<td>47</td>
<td>57</td>
<td>-2.5†</td>
</tr>
<tr>
<td>smart</td>
<td>45</td>
<td>62</td>
<td>-4.4***</td>
</tr>
<tr>
<td>good academic results</td>
<td>39</td>
<td>69</td>
<td>-7.5***</td>
</tr>
<tr>
<td>hard-working</td>
<td>33</td>
<td>76</td>
<td>-11.3***</td>
</tr>
<tr>
<td>cares about others</td>
<td>30</td>
<td>56</td>
<td>-6.5***</td>
</tr>
<tr>
<td>lovable</td>
<td>29</td>
<td>48</td>
<td>-5.0***</td>
</tr>
<tr>
<td>willing to serve classmates</td>
<td>25</td>
<td>47</td>
<td>-5.6***</td>
</tr>
<tr>
<td>willing to learn from Lei Feng</td>
<td>21</td>
<td>48</td>
<td>-7.6***</td>
</tr>
<tr>
<td>Negative</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>spends money irresponsibly</td>
<td>44</td>
<td>6</td>
<td>11.4***</td>
</tr>
<tr>
<td>selfish</td>
<td>27</td>
<td>7</td>
<td>6.5***</td>
</tr>
<tr>
<td>envious of others</td>
<td>25</td>
<td>13</td>
<td>3.3***</td>
</tr>
</tbody>
</table>

Note: * Significant at the p≤0.05 level; *** significant at the p≤0.001 level
Table 3 Factor analysis of personal characteristics

child A/child B

**Factor 1: Industrious and caring** (33.9%/36.1% explained variance)

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Willing to serve classmates</td>
<td>0.73/0.78</td>
</tr>
<tr>
<td>Hard-working</td>
<td>0.72/0.63</td>
</tr>
<tr>
<td>Willing to learn from Lei Feng</td>
<td>0.67/0.77</td>
</tr>
<tr>
<td>Cares about others</td>
<td>0.61/0.64</td>
</tr>
<tr>
<td>Good academic results</td>
<td>0.55/0.60</td>
</tr>
</tbody>
</table>

**Factor 2: Self-centred and wasteful** (14.5%/11.9% explained variance)

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selfish</td>
<td>0.85/0.81</td>
</tr>
<tr>
<td>Envious of others</td>
<td>0.78/0.79</td>
</tr>
<tr>
<td>Spends money irresponsibly</td>
<td>0.72/0.66</td>
</tr>
</tbody>
</table>

**Factor 3: Happy and sociable** (9.1%/9.2% explained variance)

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Happy</td>
<td>0.84/0.71</td>
</tr>
<tr>
<td>Smart</td>
<td>0.60/0.58</td>
</tr>
<tr>
<td>Has a lot of friends</td>
<td>0.60/0.76</td>
</tr>
</tbody>
</table>

*Note:* The decimal figures are factor loadings (after rotation), which indicate the strength with which a particular item is linked to the factor as a whole. The first set of factor loadings corresponds to child A while the second set relates to child B.
Figure 1 Perceived personal characteristics of child A and child B
References


Chan, K. (2004b), Focus group interviews of parents with children aged 9 to 12, Beijing, June 23.


