Protest and protect

Chinese urban mothers' perception of smartphone (tablet) in their everyday lives' communication and interaction with young children

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A phenomenological study reveals Chinese mothers' perception and interpretation of smartphone (tablet) in their everyday communications and interactions with their young children. In total, 23 in-depth interviews were used to collect data. Data of the current study indicated that Chinese mothers' perception of smartphone (tablet) in their everyday lives' communication and interaction with young children is both grounded and reflective of their parenting philosophy and family communication style. Data of the current study indicated that today's Chinese mothers have a mixed feeling toward the role of smartphone and tablet plays in their parenting practices. According to those participants, the smartphone and tablet both help and hurt their communications and interactions with their children. There are both direct and indirect benefits of using smartphone for parenting. Similarly, the smartphone (tablet) also hurts Chinese mothers' communications and interactions with their children directly and indirectly.

Keywords: parenting, mobile, communication, Chinese mother, smartphone, family communication

In recent years, the number of Chinese smartphone users has increased dramatically. According to IPSOS Research (2011), as of 2011, there were almost 1 billion Chinese smartphone users. Those users are engaging in multiple activities on their smartphones, such as browsing websites, listening to music, sending and receiving emails, searching information through search engines, and taking pictures (IPSOS, 2011). The most recent report of Chinese Internet users released by the CNNIC (2015) revealed that the number of Chinese mobile Internet users has reached 557 million and more than half of them are smartphone Internet users.

With the high penetration rate of smartphone, Chinese mothers are intentionally or unintentionally involving the smartphone in their everyday parenting practice. However, in the literature, previous research of mobile communication and parenting mainly focuses on the traditional mobile phone and the parenting issues of teenagers in the context of western countries (for example Weisskirch, 2009; Palen & Hughes, 2007; Madianou & Miller, 2011). No study to date has been conducted to examine how the smartphone might change and transform the communication and interaction between Chinese mothers and young children, and thus mediate and shape the relationship between them in the modern Chinese families. Previous research indicated the mobile phone has exerted influences on different aspects of modern families such as family relations, dynamics, communication, and parenting practices. In particular, the mobile phone has been found to both empower mothers' parenting practices and reinforce women's traditional social roles (Rakow & Navarro, 1993; Palen & Hughes, 2007; Uy-Tioco, 2012; Madianou & Miller, 2011). While previous studies explored a variety of topics, all those investigations were based on the first generation of mobile phone, and the majority of the studies focused on teenagers. Therefore, the findings revealed from the previous studies may not be applicable to today's different technological (for example smartphone), social (for example mother with young children), and cultural contexts (for example China). The current study is designed to fill the research gaps and explore mobile communication and parenting in the context of China. Specifically, the research examines how Chinese mothers perceive and interpret the roles of smartphone or tablet play in the communication and interaction with their young children on a daily base with respect to their parenting principles and philosophies and their family communication styles. The theoretical implications of the current study lie in that 1) findings of the current study may generate theoretical insights into the literature of mobile communication and parenting; 2) contribute to the literature on mobile devices and family communication; and, 3) extend previous research of the above two domains into an international context. In the meantime, the current study may also bring some practical implications. First of all, findings of the current study may help Chinese women to obtain a better understanding of mobile media parenting thus empowering them to use mobile devices in their parenting practices more effectively and positively. Secondly, by revealing Chinese mothers' mobile device usage in their daily parenting practices, the current study may provide a different window to display Chinese women's current social status thus offering a useful reference for Chinese government or related agencies to develop policies and regulations to better protect Chinese women, particular Chinese mothers' rights and enhance the equality of Chinese women in the present Chinese society. Finally, findings of the current study may also shed light on Chinese young children's usage of mobile

devices thus offering reference for Chinese government and related agencies to develop policies and regulations to protect Chinese children's physical and psychological health.

The paper is organized as following: first, a brief description of today's Chinese women and a summary of previous studies on mobile communication and parenting are offered; second, several useful theoretical perspectives are explained; third, the method that guided the data collection is explained; and, finally, the findings of the study are discussed.

Literature review

Today's Chinese Women

In the past three decades, Chinese women's situation has been great improved (Attane, 2012; Wu, 2016). According to a recent report (Wu, 2016), as of 2014, China has 667 million women, which accounted for about a half (48.5%) of the total Chinese population. Chinese women's education condition has been significantly improved in the past thirty years. In 2014, nearly a half of the Chinese girls received preschool, elementary school, junior high and senior high school education; more a half of Chinese women received college and university education; and, Chinese females accounted for 49.2% of people with master and doctoral degrees. Chinese women's health condition has also been changed in a positive direction. Currently, the average life span of Chinese women has reached 78 years, and the mortality rate of pregnant women has reduced to 0.2%. With their better education and health conditions, Chinese women have played a more and more important role in Chinese economic development. In 2004, female employers accounted for 44.8% of the Chinese employment across the country; more than 20 million females were working in technology related companies; and, more than a half of the employees working in the Internet industry were women.

While Chinese women's social economic conditions have been greatly improved, their status still remains inferior to that of men, particularly in public life (Annane, 2012). For example, whereas Chinese women are working in different occupations as their male counterparts, they are suffering a growing sense of insecurity in the field of employment. In addition, Chinese women's social roles within family and society still firmly gendered (Annane, 2012). For example, Chinese married women are still playing a leading role in taking care of their families and raising children, and dependent on their husbands financially and making decisions. Finally, discrimination against women, in particular in childhood, has not been changed in today's Chinese society (Annane, 2012). Chinese families to a large degree still prefer boys to girls due to the long lasting Chinese patriarchal tradition. As a result, the most violent gendered discrimination occurs in early childhood which post threats to Chinese girls' survival. In summary, today's Chinese women are living in a paradoxical position in the contemporary Chinese society. On the one hand, their basic living conditions have been significantly advanced; on the other hand, however, they're still experiencing the inequality in many aspects when comparing with Chinese men. New technology, in particular mobile devices may empower Chinese women and help to alleviate the existing inequality in today's Chinese society through changing family communication and everyday parenting practices.

Mobile communication and family

The emerging technology is changing and affecting every aspect of the daily lives of family (Dalsgaard et al., 2006). Specifically, the mobile phone is viewed as both bless and curse to a family. According to Ling and Donner (2009), mobile use changes family dynamics. For example, the mobile phone increases the potential of mobility thus enabling remote mothering and emanation of teenagers. At the same time, the mobile phone also blurs the line between work and family and mixes the public and private spheres. Similarly, Castells et al. (2007) pointed out that the most important function of the mobile phone is to provide micro-coordination, that is, the availability of a mobile phone allows increased levels of efficiency in everyday activities. However, the mobile phone also plays a role in weakening the traditional forms of parental authority and deepening the problems of families by invading privacy. While the mobile phone has impacted different aspects of family in different ways, it has been documented that this mobile technology has a significant influence on family communication (Devitt & Poker, 2009), and played an important role to change and construct a new typology of family communication (Aleti, Brennan, & Parker, 2015).

Mobile phone and family communication

The impact of the mobile phone on modern family communication is moderated by individual, social, and cultural factors (Palen & Hughes, 2007; Clark, 2013; Bell, 2006; Weisskirch, 2009). Devitt and Poker (2009) interviewed 60 families and found that both the parents and young people viewed mobile phones as an essential feature of modern life for convenience, safety, and managing family life and social lives. Weisskirch (2009) surveyed 196 parent-child dyads and revealed that the frequency of parental calls via mobile phones was associated with trustiness, parental knowledge, and family relationships.

Clark (2013) offered a comprehensive overview of the usage of digital and mobile media in modern families. Specifically, she identified different family communication patterns for middle class and less advantaged families: while the upper-middle-class families embrace an empowering and expressive ethic of family communication, the less advantaged families embrace an ethic of respectful connectedness in their style of family communication. In other words, the social class makes a difference in how families and individuals approach and incorporate mobile media into their lives. Finally, the mobile phone's impact on family communication is imbedded in and shaped by the broad cultural context.

In order to uncover the broader cross-cultural understandings of mobile phone, Bell (2006) conducted an ethnographical study and found that in Asia, the mobile phones are performing multiple cultural functions.. For example, Bell revealed that mobile phones help to maintain both family and societal hierarchies in Asian countries. She claimed that rather than facilitating a standardized and universal communication pattern under the influence of globalization, mobile phones actually amplify and reinforce local cultural particulars and differences. Clark and Synyi (2012) examined the role of mobile media within family intimacies among the recent refugee and immigrant families in the USA, and found that the young people used the mobile phones to preserve traditions and relationships with their home culture. In addition to influence family communication, mobile phones have also found to affect other family issues such as parenting (Rakow & Navarro, 1993; Palen & Hughes, 2007; Cecilia, 2007; Madianou & Miller, 2011).

Mobile phone and parenting

As one of the earliest studies, Rakow and Navarro (1993) found that women use the mobile phone to accomplish their mothering responsibilities across time and space and bring their private world of domestic responsibility into their public world of work. Focusing on transnational mothering, Cecilia (2007) revealed that the cell phone and test messaging, on the one hand, empower the migrant mothers in maintaining their familial roles. Although they are not physically presenting, they are able to effectively manage various parenting issues within their families thanks to the cell phone. On the other hand, however, the cell phone and text messaging also reinforce existing social systems that limit those migrate mothers' choices. Since the cellphone enables those migrant mothers to perform their mothering responsibilities remotely, they are still perceived and playing leading role in the parenting practices. Therefore, they can only choose job opportunities that offer them more free time and flexibility in order to take care of their families.

In a similar study, Madianou and Miller (2011) examined the impact of mobile communication on transnational family relationships and found that the advent of mobile phones has significantly improved the ability of mothers to parent at a distance. However, rather than embracing the mobile phone as an effective way of communication, the left-behind children of those migrant mothers have a negative attitude toward the transnational communication. From a sociological perspective, Palen and Hughes (2007) explored the parents' use of mobile phones with regard to parenting. Findings suggested that parents use mobile phones to help extend the idea of "home." In particular, the mobile phones enhance parental scope, reach, and obligation by expending attention to home matters out into the wider world. In other words, thanks to the mobile phone, parents could extend many in-home activities, issues, and responsibilities to the outside world without physically present thus building a sense of virtual home without temporal and geographical constraints.

From the previous research, it is clear that mobile phones have penetrated to families across the globe and exerted influences on different aspects of modern families such as family relations, dynamics, communication, and parenting practices. While previous studies explored a variety of topics, all those investigations were based on the first generation of mobile phone, and the majority of the studies focused on teenagers. However, as the smartphone, the mobile device that combines features of traditional mobile phones, personal computers, and the web (Madianou, 2014), became ubiquitous in modern families (Crowe & Middleton, 2012), this new type of media not only represents a new technology and provides a communicative platform, but also possibly alters users' own practices, habits, and modes of accessing media with regard to family communication (Aleti, Brennan, & Parker, 2015). Therefore, it would be interesting to examine how the new generation of mobile phone is shaping and transforming their family communication and parenting practices. As well, previous research suggests that children's ages affect parents' usage of mobile communication (Palen & Hughes, 2007). Parents with very young children used their mobile phones quite differently than those with school age children, which was different again from those with older, more independent teenage children. Since the parents with very young children were under studied, the current study concentrates on Chinese mothers with children under school age. Based on the previous literature and the focus of the current study, an overarching research question was proposed:

R1: How do Chinese mothers perceive and interpret the roles of smartphone or tablet play in the communication and interaction with their young children?

Theoretical perspectives: apparatgeist, mediatization, and polymedia

Several theories provide useful perspectives to understand the role of mobile communication in modern families. The apparatgeist theory proposes that mobile communication should be understood by both the personal technologies and the meaning-making that surrounds the communication device itself (Katz, 2006). The term of "apparatgest" is the combination of "apparatus" or mechanism, with "Geist" or spirit. Based on this theory, the way that people use mobile technologies should be explained in terms of "tool-using behavior and the relationship among technology, body, and social role, as well as the rhetoric and meaningmaking that occur via social interactions among users and non-users" (p. 9). In other words, the apparatgeist theory emphasizes both the mobile technology itself and the meaning-making and interpretation of the particular technology. Since previous research focuses mostly on the structure and function of mobile communication, the apparatgeist theory calls for more attention to symbolic and affectively sides of mobiles.

The mediatization theory was proposed by Clark (2013). Specifically, the theory argues that in order to understand the role of media (including mobile media) in social change, it is necessary to examine the communication practice and the ethic that informs and guides that practice. The concept of "mediatization" describes the process by which "collective uses of communication media extend developments of media products, contribute to new forms of action and interaction in the social world, and give shape to how we think of humanity and our place in the world" (Clark, 2013, p. 211). According to the mediatization theory, in addition to the understanding of how media contribute to social change, more attention should be focusing on how media are contributing to social change that has happened or is happening and how media might be facilitating cultural productions such as family communication norms, which, in turn, contributes to, extends, and intensifies such existing trends.

Another interesting theory is polymedia theory. The polymedia theory provides a theoretical perspective to understand digital media in interpersonal communication. Specifically, the polymedia refers to "an emerging environment of communicative opportunities that functions as an 'integrated structure' within which each individual medium is defined in relational terms in the context of all other media" (Madianon & Miller, 2011, p. 70). The polymedia theory emphasizes the social relations of technology rather than the technological development of increased convergence. In other words, polymedia is not simply the environment but how users exploit affordances in order to manage their emotions and relationships. According to Madiason and Miller (2011), polymedia has three preconditions: access and availability, affordability, and media literacy, and two dimensions:

remediation, and affordances and emotional management. Based on the polymedia theory, when explaining digital media, researchers should try to understand the mutual shaping of social process and the media.

Methodology

The target population of the study is Chinese mothers with young children (under age of 6) who are currently smartphone or/and tablet users. Purposive sampling and snowball sampling guided recruitment of participants. The criterion for sufficient sampling is saturation, that is, the point at which no new concepts and themes emerge (Corbin & Strauss, 2008). In total, 23 Chinese mothers from Beijing, Shanghai, Wuhan, Guiyang, Xiamen, and Qingdao participated in this research. Participants' ages ranged from 27 to 39 years and their children's age ranged from 1 to 6. All participants had different educational backgrounds from high school graduates to doctoral degrees and engaged in a variety of occupations. All participants owned a smartphone and/or a tablet, and had one to five years' experience of smartphone or tablet usage (see Table 1).

Table 1. Profile of participants

No.	Name	Age	Education	Job	Years of Marriage	Age of Child	Years of smartphone usage	Location
1	Emma	37	MA	Associate Professor	9	6	3	Beijing
2	Linda	32	BA	Stay at home mom	3	2	6	Guiyang
3	Samantha	36	MA	Lecture	8	6	1	Wuhan
4	Flora	37	PhD	Assistant Professor	11	4	3	Qingdao
5	Wendy	32	BA	Elementary School Teacher	10	6	4	Wuhan
6	Hanna	27	High school	Salesperson	5	4	2	Wuhan
7	Jessica	29	AA	Staff	7	6	2	Wuhan
8	Jane	32	AA	Graphic Designer	6	4	1	Wuhan
9	Chelsea	32	BA	Stay at home mom	5	3	6	Wuhan

Table 1. (continued)

No.	Name	Age	Education	Job	Years of Marriage	Age of Child	Years of smartphone usage	Location
10	Mandy	33	Ph.D.	Lecture	7	4	2	Beijing
11	Kelly	36	Ph.D.	Lecture	11	6	2	Beijing
12	Carol	36	MA	PR practitioner	10	2	5	Beijing
13	Penny	34	MA	Administration	9	6	4	Wuhan
14	Michele	39	Ph.D.	Government Staff	10	3	3	Beijing
15	Alex	28	BA	Stay at home mom	3	1	3	Beijing
16	Jasmine	34	BA	Graphic designer	5	3	3	Shanghai
17	Lily	38	BA	Stay at home mom	13	6	2	Shanghai
18	Sharon	27	Associate of Arts	Staff	4	3	3	Beijing
19	Ginger	32	BA	Self-employed	7	4	2	Qingdao
20	Taylor	32	High school	Stay at home mom	7	5	2	Qingdao
21	Elaine	36	BA	Teacher	9	5	4	Guiyang
22	Linda	34	High school	Clerk	5	3	3	Xiamen
23	Jenny	38	BA	Stay at home mom	13	6	2	Xiamen

The theoretical perspective guiding the study is interpretative phenomenology analysis (IPA). According to Smith, Flowers and Larkin (2009), IPA is a qualitative research approach committed to the examination of "how people make sense of their major life experience" (p. 1). The theoretical foundations of IPA include phenomenology, hermeneutics, and ideography. Phenomenology as a philosophical tradition was founded by Husserl at the beginning of the 20th century and further developed as existential philosophy by Heidegger, and in a dialectical direction by Merleau-Ponty and Sartre (Kvale, 1983; Moran, 2000; Sokolowski, 2000). Phenomenologists seek to describe phenomena in the broadest sense, as whatever appears in the manner in which it appears, that is, as it manifests itself to the consciousness of the experiencer (Moran, 2000). In other words, phenomenology is the study of human experience and the structures of consciousness as experienced from the first-person point of view (Sokolowski, 2000). Hermeneutics is the theory of interpretation. IPA researchers is engaged in a double hermeneutic because the researcher is trying to make sense of the participants trying to make sense of what is happening to them (Smith, Flowers, and Larkin 2009). Ideography is concerned with the particular. Specifically, IPA's commitment of the particular means: first focusing on details and the depth of analysis; and, second, understanding how particular experiential phenomena have been understood from the perspective of particular people in a particular context (Smith, Flowers, and Larkin 2009).

The in-depth interview is the most commonly used method in phenomenological investigation (Moustakas, 1994; Thompson, et al., 1990). It is a powerful qualitative method of phenomenological investigation because it "gives us the opportunity to step into the mind of another person, to see and experience the world as they do themselves" (McCracken, 1988, p. 9). It only sets broad parameters for the discussion, leaving participants free to tell their own stories. From a phenomenological view, human beings gain access to realities through their consciousness. A loosely structured, discursive conversation is a good way to access participants' conscious experiences and allow their realities to emerge. Based on the research purpose and previous literature (Rakow & Navarro, 1993; Palen & Hughes, 2007; Cecilia, 2007; Madianou & Miller, 2011; Aleti, Brennan, & Parker, 2015), an interview guide was developed, which covered three major research domains. The first section of the interview guide focused on participants' perception of mother's social role including questions such as "How do you describe yourself as a mother?" "What are the roles and responsibilities for a mother?" "Do you have any parenting principles or philosophies?" The second section of the interview guide concentrated on participants' perception of mother and children relationships including questions such as "Tell me about your relationship with your children." "How do you communicate and interact with your children?" The last section of the interview guide centered on participants perception of smartphone/mobile devices' role in parenting including questions such as "Tell me about the how you use smartphone and/or mobile devices in your everyday parenting practices." "What are the benefits and/or disadvantages of using smartphone and/or mobile devices in your everyday parenting practices?" Since qualitative research is an emergent design (Maxwell, 2013), during the interview process, the interviewers constantly changed and adjusted the interview questions based on participants' responses.

Three researchers traveled to different places to conduct in-depth interviews. In total, twenty four face-to-face in-depth interviews were conducted among Chinese mothers. Each interview lasted approximately one hour. To provide an accurate record of participants' comments, the interviews were audio recorded and professionally transcribed. Data analysis of study followed the principle of phenomenological reduction (Moustakas, 1994). The first step of phenomenological reduction is horizonalization, which means putting the immediate phenomena on a level plane. In order to do this, the researcher took audio recordings when she was conducting the interviews, and listened to each interview twice to ensure all units of meaning were signified. The second step of phenomenological reduction is to delimit the invariant horizons or meaning units. In this stage, the primary job of the researcher was to identify and compare repeated or similar words, phrases, and sentences appearing in each transcript. Generally, 20 to 30 meaning units were generated in every transcript. The next step that the researcher took was to cluster the invariant constituents into themes. During this phase, the researcher focused on the internal relationships and structures of the meaning units and grouped them into appropriate themes. During the data analysis process, three researchers first independently coded and analyzed data, and then discussed and compared findings together to enhance the credibility of the interpretations.

Findings

Data of the current study indicated that Chinese mothers' perception of smartphone (tablet) in their everyday lives' communication and interaction with young children is both grounded and reflective of their parenting philosophies and principles and family communication styles. In other words, Chinese mothers' parenting ideas and family communication styles provide a unique context and form a crucial referential framework for those participants to perceive and interpret the role of smartphone (tablet) plays in their daily communication and interaction with their children. Conversely, those Chinese mothers' perception of smartphone (tablet) communication also mirrors their parenting philosophies and family communication styles.

Challenging orthodox - Chinese mothers' parenting philosophy and family communication style

Different from the traditional view which describes Chinese parenting as "controlling" and "authoritarian" (Chao, 1994) and claims that Chinese mothers emphasize on "achievement" and "academic success" (Chua, 2011), data from the current study revealed that today's Chinese mothers actually took a totally different approach on parenting. Specifically, those mothers believe parents should respect their children; parents should give their children more freedom to explore the world by themselves and to develop and choose hobbies on their personal interests; they oppose on putting academic education burden on young children; they consider health and happiness are the most important goals for them to raise their children, and, as mothers, the most important thing is to give unconditional love to their children thus helping them to establish a sense of security.

I feel it is important (for parents) to follow his thoughts, try to respect his ideas, and gain trust from him. I don't think we should use the parents' authorities to force him to do anything. We should try to respect him as much as we can.

(Samantha, 36, Wuhan)

My parenting idea is that I will not spoil my child under the name of love, and I will provide him the maximum freedom to explore. As long as (the activity) does not threat his life or harm his body, I would let him do anything he likes to do.

(Linda, 32, Guiyang)

I know a lot young children go to some training classes. I haven't had such kind of plan. I want him to have a relaxing life. When he grows a little older, if he wants to attend such classes, I would let him to make decision what he wants to do not just follow others or what I want him to do.

(Alex, 28, Wuhan)

I hope my child to grow healthier, happier, and ego-centered. ... I hope he can grow naturally, carefree, and happy. (Kelly, 36, Beijing)

Based on their parenting philosophy, those Chinese mothers advocate "equality" in their everyday communication and interaction practices with their children. To be specific, those participants think parents should make themselves "become young children" or even younger than their children, and try to view the world from their children's perspectives. In this way, parents are able to communicate and interact with their children at the equal level. As a result, parents can think their children's thoughts, feel their feelings, speak their words, and share happiness and sadness with them.

I feel that I will make myself become younger, as young as my daughter, and then I am able to put my feet on her shoes and think how she may view a particular thing. I believe I truly understand my daughter. ... If we are at home, we always play together: we play sandbox, jumping rope, art crafts, and so forth. ... If we are at the outside, we are friends who are taking care of each other. For example, when I go shopping, she will give me suggestions. ... The key is to make myself become younger and be her best friend. (Jessica, 27, Wuhan)

In most cases, I try to be his friend. I try to look at problems from his perspective or lower myself to the same level as his. ... For example, sometimes he was laughing when he was watching a cartoon and you didn't get it. Then you asked him why it was funny. He would explain to you. You probably still don't feel funny. However, you should try to share the happiness with him and laugh with him. Later, you will find yourself can better understand him. One day when he tells you funny stuff happened in his preschool, you will get it and feel it funny.

(Mandy, 32, Wuhan)

However, the "equality" doesn't mean that those parents give away their responsibilities of education, surveillance, and guidance. While giving their children enough freedom and equality, they also emphasize parents' role on helping their children to form good manners and habits.

We have rules for eating. She knows what discipline means when she was very young. She has internalized rules and disciplines. So regarding the electronic devices, I also told her to discipline herself. I told her that she can watch whatever and as long as she wants to watch. However, she has to control herself. If she cannot control herself, then we need to establish rules. I remembered clearly she actually approached to me and asked me to establish rules for her because she told me she cannot control herself when watching cartoons. (Mandy, 33, Beijing)

She (Ruixue Sun) proposed a slogan in China: "Love and Freedom, Discipline and Equality." She found out that many Chinese parents don't know how to love their children. Therefore, Chinese children are lacking love. Many parents deprive their children's freedom under the name of love. So freedom should be emphasized in the context China. Under the premise of freedom, then the parents could establish some rules. In other words, the freedom doesn't mean there is no discipline and constraint. (Flora, 37, Qingdao)

"Love," "freedom," "respect," and "equality" are the ideas that those Chinese mothers are trying hard to implement in their everyday parenting practices. However, those mothers are not living in a vacuum: on the one hand, they are facing all kinds of parenting ideas including their parents, their husbands, and some popular ones in the present Chinese society; on the other hand, their working and living conditions may not be able to provide them with the most desirable environment to actually execute their parenting ideas. During the interviews, many participants mentioned struggles and conflicts of parenting ideas both from their families and outside environments, as well as other difficulties in their parenting practices.

It is crucial that family members achieve an agreement on parenting. You know, nowadays, children are very smart. He or she can tell who are the ones spoil him or her. He or she can also tell the relationships and conflicts between parents and grandparents. So he or she will know whom to go to obtain protection from when he or she gets in troubles. Therefore, I believe that in order to better educate our child, it is important that everybody in the family including grandparents to hold a consistent educational principle. If there is an inconsistency, the child will know. ... I feel that her dad is spoiling her. I am a kind of strict to her. Sometimes I will stop her dad if I feel that he is spoiling her too much. (Chelsea, 32, Wuhan)

First of all, you have to develop yourself very well. Nowadays, parents compete with parents. You have to first develop yourself very well, then you are able to provide a relatively good environment for your child. If you want to (develop

yourself), and accompany your child, you will feel that you don't have enough time and effort to do both well. As the 70s and 80s generation, we are more and more aware of the importance of companionship to children, and we are more willing to spend time with our child than our parents. We feel that accompanying our children is one of the most important things in our lives. However, we just feel that we don't have enough time and energy to do it. (Emma, 37, Beijing)

From the above quotes, it can be seen that when facing the controversies of parenting issues within their families Chinese mothers either try to communicate, negotiate to achieve an agreement among family members or firmly stick to their own ideas and principles. However, some outside pressure such as Chinese traditional test-based educational system and fierce competition job environment, and Chinese traditional view of mothers as the leading parenting role, bothered those mothers a lot. For example, many mothers mentioned that they may finally give in and follow the trends in the society in the future. A typical example of this is whether or not to enroll their children in different extracurricular activities.

I didn't enroll him into any activity. I felt that he is too young. Even though I enrolled him into any activity, he may not be able to learn anything. ... I feel that at this age, the major thing for him to do is to play. If you let him to learn something, it is okay if he is willing to do it. However, if he doesn't want to learn, he will refuse to learn it (even in the future). I feel that even he is willing to learn, he should learn those things after 6. (Jane, 32, Wuhan)

I care about her physical and psychological health. For the academic study, I feel that now I should let her play and relax. It doesn't mean that I don't care for her study. I do care. However, at the present, it is too early (for her to study hard). Childhood should be fun and be happy. ... She is so young. Why put so much study pressure on her? (Jessica, 29, Wuhan)

You know, his dad and I came from small towns. We deeply felt how the test-based system destroyed us. We don't know anything except study and test. I don't want our son like us. I don't want our son follow our path. To tell the truth, nowadays, children also have pressure. So far, I didn't enroll in any extracurricular activities but I probably cannot stick to it when my son goes to elementary school. At that time, if everyone enrolls in extracurricular activities and you don't (enroll), you may not be able to catch others. So currently my son is still in preschool, we just want him to relax. Sometimes, we are very struggling especially when we see other children are learning different activities. But at the same time, we feel that he is only 3 or 4 years old. If he starts studying now, he will study for the next 20 years. So we decided to give him more relaxing time at least now.

(Samantha, 36, Wuhan)

From the Jessica and Samantha's quotes, we can see that those mothers actually are aware of or internalized the popular test-based educational macro-environment in China. Therefore, their nontraditional parenting philosophies are their protests against the reality in the present China: they try to protect their children's care-freeness and happiness when they are still young by not giving in and following the Chinese traditional parenting principles.

Protesting and protecting – chinese mothers' perception of smartphone (tablet)'s role in parenting

Data of the current study indicated that today's Chinese mothers have a mixed feeling toward the role of smartphone and tablet plays in their parenting practices. According to those participants, the smartphone and tablet both help and hurt their communication and interaction with their children. There are both direct and indirect benefits of using smartphone for parenting. Similarly, the smartphone (tablet) also hurts Chinese mothers' communication and interactions with their children directly and indirectly.

On the one hand, the smartphone or tablet offers some benefits to facilitate and strengthen parent-children communication and interaction. The smartphone or tablet has both direct and indirect effects on parent-children communication and interaction. Firstly, the usage of smartphone or tablet benefits parent-children communication and interaction directly. For example, mothers and children use the smartphone or tablet to take photos or record short videos and later view photos or watch videos together to have some fun; mothers also use their smartphones to play music for their children to listen by themselves or enjoy the music with their children together; and, some educational games and apps on smartphone or tablet could help children to learn spelling, math, and foreign language in an engaging and fun way.

I often take photos of my child or record a short video. Sometimes, she will touch the phone to see the photos or watch videos. She knows my password. So she can open the files by herself. ... She also likes to watch some videos on my phone. For example, one of my friends sent me a very warm video. In the video, a bear was singing the song of "We wish you a Merry Christmas." She enjoyed watching it. ... She likes playing games (on smartphone) as well. But my smartphone has no games. Her daddy's phone has. So she plays games on her daddy's phone. Sometimes, they play games together. ... I also downloaded an app to learn English and she also learns English with me. Em... there is also an app of children's songs. (Ginger, 32, Qingdao)

I feel like that what we see and or what we can tell is limited. Those smart devices can visualize and gamelize everything. In this way, everything has become more vivid thus better facilitating your education. (Carol, 36, PR, Beijing)

Secondly, the usage of smartphone or tablet benefits parent-children communication and interaction indirectly. In this case, the smartphone or tablet is the media platform for Chinese mothers to connect to the internet or parents communities to seek useful parenting information, advices, and suggestions. In particular, those participants mentioned how WeChat (a smartphone based Chinese social medium) helps them to connect with other parents and locate valuable parenting information.

It (smartphone) is helpful (in parenting). Of course it is due to WeChat because the WeChat has strengthened people's communication and socialization. For example, I am following many groups on WeChat. One group is composed of parents and mothers from my daughter's preschool, and we often communicate and share some information such as parenting lectures or parent-child events and activities; I also followed some public accounts related to parenting, educational, and nurturing issues. Usually, those accounts will post some useful articles regarding personal growth. Finally, some friends (on WeChat) will share good articles within friends' circle, and some are related to parenting. So I feel it is good. (Flora, 37, Qingdao)

On the other hand, the smartphone or tablet also influences parent-children communication and interaction negatively. The detrimental effects of smartphone or tablet could be both physical and psychological. For example, one of the major concerns that the Chinese mothers raised regarding their young children's usage of smartphone or tablet is the possibility of hurting and weakening their children's visions. Some mothers also worry that the electronic signals sent out from the smartphone or tablet may harm their children's health. Another major concern expressed by those Chinese mothers is the extensive use or addiction of smartphone or tablet and the virtual reality created by the smartphone or tablet may limit their children's opportunity and time to feel and explore real things in the real world, as well as hinder their face-to-face communication and social interaction with family members and other people thus possibly cause some psychological problems such as extreme introvert character or communication barriers for their children. Because of the above negative effects, the majority of the participants choose to control their children's usage of smartphone or tablet. Comparing the smartphone to the tablet, those Chinese mothers tend to have a more negative attitude toward the tablet than the smartphone. Consequently, some mothers didn't purchase tablet to avoid those possible detrimental effects.

You know, if he is too obsessed with it (games on smartphone), it is hurting his eyes; and, the virtual reality in the games also didn't help with children's intellectual development...If he addicts to the games, he will be trapped into those virtual environments. Thus, the development of his thinking ability will also be constrained by the virtual world. However, the virtual scenes in the games are different than the real world. As a result, it will hinder him to know the real world around him. (Emma, 37, Beijing)

Many Chinese teenagers are addicted to online games. I feel that if he starts using electronic products and games from such a young age, he is more likely to be obsessed with online games when he grows up. I don't want him to know and play games at such a young age and I don't think it is necessary or good for his growth. ... Well, I have to admit that it (game) has some educational meanings, but I feel it also kills children's curiosity to explore the outside world. For example, while playing Fruit Ninja on a tablet, the child could learn different fruits such as watermelon and apple, but he doesn't know what the feelings will be when he actually touches the watermelon or what the smell of watermelon will be. ... I also feel that many parents or mothers are lazy. They use the smartphone or tablet to make their children quite. So they could have their own time. However, the more time the children play those devices, the less time they communicate with their parents. As a result, their ability of expression and language is bad. For example, one of my friends, she gives the iPad to her son all the time. At beginning, we felt the kid is quite and smart. He knows lot stuffs. However, later we found that he cannot express his ideas and opinions and communicate with others appropriately. I felt it must be related to his playing of IPad. (Linda, 32, Guiyang)

As Chinese mothers showing their protests against orthodox Chinese parenting philosophy and family communication style, their protests and protection are also reflective from their attitude toward the mobile media in parenting. Firstly, when facing the unavoidable digital and mobile communication trends, those Chinese mothers choose to resist or reduce the usage of smartphones/tablets in their parenting practices in order to protect their children's physical and psychological health. Secondly, when facing the controversy caused by smartphone/tablet usage in parenting practices among family members, they also communicate, negotiate, and try to solve the controversy in order to achieve an agreement among family members.

Yes, I will not give him (the iPad). I will control and I can control. However, when his dad gave smartphone to him, (I can't control). I emphasized several times to his dad that he can't give him the smartphone. ... I feel that the behavior that his dad gives him the smartphone is a way to deal with him or calm him down. Sometimes if his dad cannot tolerate any of our son's bothers such as crying or shouting, he will give him the smartphone and let him to play with it. If I find out,

I will stop it immediately. However, if I don't find out, I don't how long that his dad let him plays (the smartphone). (Linda, 32, Guiyang).

You know, her dad played the smartphone with her and taught her how to play (games). For example she knows how to cut the fruits. ... I don't like his dad play the games on smartphone with her. Sometimes I argued with him and warned him not playing too long. ... I try to control her usage of the smartphone. The screen of the smartphone is not big and she holds it too close. Since she is still young and her eyes are still developing, I'm afraid the smartphone will hurt her eyes. Therefore, I try to control her. However, my husband holds different views. He feels that children should know something about anything. He said that we should teach children how to play computer games. Just like turn on the computer and teach them how to play. He thinks it is fine and he believes our daughter will not be addictive to (the games). I feel his ideas are very strange. ... If I find out any sign of addiction or playing too long, I will be strongly against him.

(Jane, 32, Wuhan)

Those mothers' control or resistance of smartphone/tablet in parenting is their protest against the new technology and new lifestyle. Facing the various challenges and issued brought by new media including mobile devices, they don't give in but choose to fight hard. What they are trying to protect through the protests is their children's physical and psychological health.

Discussion

The current study explored Chinese mothers' perception and interpretation of the roles of smartphone or tablet play in their daily communication and interaction with their young children with respect to their parenting principles and philosophies and family communication styles. Findings of the study suggested that Chinese mothers' parenting philosophy and family communication style form a crucial reference framework to understand smartphone or tablet's role in Chinese mothers and children everyday communicative and interactive practices.

Consistent with previous research (Ling & Donner; 2009), findings of the current study also indicated that the mobile usage has changed family dynamics and relationships. For example, while the mobile device helped to build a closer relationship between mother and child, it also became a focal object for possible conflicts and discussions between husband and wife as well as parents and grand-parents. In particular, similar to the traditional mobile phone, the usage of smartphone improved the levels of efficiency in everyday activities (micro-coordination). For example, the smartphone enabled Chinese mothers to spend time with their children in a more engaging and fun way and obtain parenting information

in a faster and more convenient mode. Additionally, the usage of smartphone also more or less helped to weaken the traditional forms of parental authority by cultivating and facilitating a more equal and democratic family communication style (Castells et al., 2007).

Findings of the current study uncovered that today's Chinese family communication emphasizes on equal communication and relationship between parents and children. Consistent with the previous study (Devitt & Poker, 2009), the usage of smartphone has affected on Chinese family communication style. Family members' sharing and playing together through smartphone or tablet help to cultivate and foster the democracy in family relationship and the spirit of equality of communication. Conversely, the equal family communication style also makes it possible that the smartphone or tablet could be used by children.

Finally, consistent with previous research (Rakow & Navarro, 1993; Palen & Hughes, 2007; Cecilia, 2007; Madianou & Miller, 2011), findings of the current study indicated that the smartphone or tablet affect parenting practices. On the one hand, the smartphone or tablet empowers today's Chinese mothers to fulfil their familial responsibilities more effectively and efficiently; on the other hand, the usage of smartphone or tablet also reinforces the traditional mothering roles of Chinese women.

Theoretical implication

As mentioned previously, the apparatgeist theory calls for more attention to symbolic and affectively sides of mobiles. The current study supplemented the previous literature by revealing the complicated and fluidic nature of the role of mobile phone/tablet plays in contemporary urban Chinese mothers' parenting practices and daily communications. In the lifeworld of urban Chinese mothers, the smartphone or tablet is not just an electronic device; it is a medium to convey their love, care, and responsibilities for their children. In the meantime, it is also a symbol to signal their social roles, social relationships, and social status.

According to the mediatization theory, more attention should be focusing on how media are contributing to social change that has happened or is happening and how media might be facilitating cultural productions such as family communication norms, which, in turn, contributes to, extends, and intensifies such existing trends. As uncovered from the current study, different from traditional views, today's urban Chinese mothers' parenting philosophy is guided by love and freedom, and their family communication style is equality oriented. Although various social and cultural factors contributed to the changes, the interactive, sharing, easy to use, and convenient nature of mobile devices more or less has shaped and facilitated the transformations.

Finally, the polymedia theory emphasizes the social relations of technology and encourages researchers to understand the mutual shaping of social process and the media. Findings of the current study well demonstrated the mutual shaping of social process of parenting and mobile media. On the one hand, Chinese mothers' perception of smartphone (tablet) in their everyday lives' communication and interaction with young children is grounded and reflective of their parenting philosophies and family communication styles. On the other hand, their parenting philosophies and family communication styles are shaped and shaping by mobile devices.

Limitation and future research

Similar to most studies, this research is a snapshot in time of a dynamic phenomenon. A chronological tracking of the shared meanings of urban Chinese mothers' perceptions and interpretation of the roles of smartphone or tablet play in their daily communication and interaction with their children would enhance the degree of cultural depth offered by the analysis.

This study focuses on urban Chinese mothers with younger children. Although the findings reflect contextualized understandings of the relationship between smartphone and parenting among these users, the complexity and dynamics of this subculture means that the collected data cannot reveal whether the unique meanings emerge for subgroups within this subculture or other subcultures. For example, Chinese mothers with older children or from small cities may have different interpretations and emphasize different aspects of smartphone communication and parenting. Studies designed to explore the dynamics and variations among subcultures and subgroups of Chinese mothers should enrich understanding of this particular phenomenon.

Finally, this study focuses on smartphone and tablet. Today's media environment is complicated and constantly changing. According to the polymedia theory, the understanding of each individual medium is defined in relational terms in the context of all other media (Madianon & Miller, 2011). Therefore, future research may explore Chinese mothers' perception of smartphone and parenting with regard to the connections and relations with other media platform.

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