

Online responses to the ending of the one-child policy in China: implications for preconception care

Fuqin Liu^a, Jiaming Bao^b, Doris Boutain^c, Marcia Straughn^a, Olusola Adeniran^a, Heather DeGrande^a and Stevan Harrell^d

^aCollege of Nursing, Texas Woman's University, Denton, Texas, USA; ^bSchool of Nursing, Zhejiang University City College, Hangzhou, China; ^cSchool of Nursing, University of Washington, Seattle, Washington, USA; ^dDepartment of Anthropology and School of Environmental and Forest Sciences, University of Washington, Seattle, Washington, USA

ABSTRACT

Aim: A critical analysis of online public postings in response to the news about the ending of China's one-child policy was conducted. The specific study aims were to 1) identify the dominant public discourse in response to the news about the ending of the one-child policy and the beginning of the new two-child policy, and 2) explore implications for preconception care from the public discourse.

Material and methods: Data sources were 10 top-ranked, online news media sites in China, including one Hong Kong-based media site. Selected online sites announced the news about the ending of the one-child policy on 29 October 2015. Online postings associated with the first news release of each online media site before midnight of 29 October were collected and analyzed. Critical discourse analysis was used for data analysis.

Results: Three main discourse concepts were identified. The online postings referenced the concepts of cost, generation, and timing with regard to the ending of the one-child policy and the beginning of the new two-child policy. Each concept represents an aspect of the public's view of preconception care, particularly interconception care, in China.

Discussion: These findings suggest that the change in the family planning policy may not result in a huge surge in the population in a short period of time, as some may opt not to have a second child. Nonetheless, there is an urgent need to incorporate interconception care into various health initiatives, as it is a time-sensitive choice for many couples to have a second child.

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Introduction

Accumulated research evidence conducted across the world over the last decade has demonstrated the importance of preconception care, or care before pregnancy (1). Scholars also differentiate the preconception period from the interconception period. The former refers to the stage before one's first pregnancy, whereas the latter refers to the stage between pregnancies (2). Preconception care improves maternal and child health outcomes through the identification and modification of biomedical, behavioral, and social risks before pregnancy (3).

Policy shapes preconception care agendas and public discourse about preconception over time (4–7). In China, for example, policies socially redefined the preconception period as the time before and after getting a marriage certificate (6). The preconception period is no longer viewed as a biological time point alone because marriage qualifies a couple for a range of free preconception care services. Despite the fact that it is common to see couples conceive before marriage, the policy language of the one-child policy, for example, enabled the creation and sustainment of preconception care discourse that centers on the first pregnancy (6).

The one-child policy was introduced in China as a family planning law in 1979 to reduce the population density and alleviate social and economic problems (8). According to the 1979 family planning law, each couple in China was allowed to give birth to one child only (9–11). Non-adhering couples faced varying consequences that included fines, job loss, and loss of benefits (8). However, there were special conditions under which couples were allowed to have more than one child, and one of those conditions was the first child having a congenital disease. Thus, it is not surprising that the Chinese government placed an emphasis on the premarital health examination (PHE) (5,12).

The PHE, initiated as a part of the marriage law, aimed to reduce population diseases and increase preconception health awareness. The exam costs varied from 80 to 100 yuan (~12 US dollars) and included four main components: 1) a genetic, infectious, mental, and reproductive medical history; 2) a laboratory analysis; 3) a physical exam; and 4) education about conception health (8,12,13). Until 2003, the PHE was a mandatory requirement of couples at the time of marriage registration. The mandatory nature of the PHE was heavily debated (12). In October of 2003, the PHE was made

voluntary. In the months following this change, the marriage rate in China increased, and the PHE rate decreased (5,13).

As the Chinese government relaxed the one-child policy, changes were also made to the 1979 version of the family planning law. With those changes, more couples became eligible to have a second child. For example, people in rural areas were allowed to bear a second child if their first child was a girl. The most recent update of the one-child policy occurred in 2013; it stipulated that couples were allowed to have two children if either adult was an only child. However, many eligible couples declined a second conception, stating reasons related to child care costs and pressures (14).

On 29 October 2015, the Chinese Communist Leadership Party announced that all couples, urban or rural, were allowed to have two children. This announcement marked the official end of the one-child policy and the beginning of the new two-child policy (15). Although some couples were eligible to have a second child long before this policy change, this was the first time that the phrase 'two-child' became part of an official policy title. It is important to document the public responses to the opening up of the two children allowance, as it marks the lifting of the pressure to adhere to the one-child policy. Further, an exploration of the public responses to the policy change can forecast preconception care concerns in China, as the family planning law is closely tied to the preconception health and care policies in the Chinese context (12).

Analysis of public responses to the policy change can help identify entrenched patterns of thought related to discourse (16,17). Discourse is the way people enact, reproduce, and resist ideas in text or talk (18). With the integration of online communication modalities in Chinese social life (<http://www.chinarank.org.cn>), the review of the widespread news about the ending of the one-child policy can help forecast public concerns in general, and concerns related to preconception care in particular.

The purpose of this study was to describe the public discourse related to the ending of the one-child policy and its implications for preconception care in China. The specific study aims were to 1) identify the dominant public discourse in response to the news about the ending of the one-child policy and the beginning of the new two-child policy, and 2) explore implications for preconception care from the public discourse.

Methods

Research design

This critical discourse analysis (CDA)-guided media study used a cross-sectional study design. CDA is a well-established methodology that allows researchers to investigate language as an element of social practice and identity (19,20). CDA posits that language both creates and showcases social relationships of power, domination, and ideology (16). More specifically, the study used Fairclough's CDA approach (17). Analysis guided by Fairclough's CDA permits the identification of marginalized and dominant public discourse.

Using CDA, the first step in the process involved identifying the network of practices associated with a social problem. The researchers identified the shift from the one-child policy to the new two-child policy as an opportunity to investigate a contested social problem in the Chinese context, that is, state-controlled family planning. This shift also expanded the social and policy definitions of the preconception period from before the first pregnancy to before the first and second pregnancies.

Analyzing the dominant public discourse about the family planning policy change is the first step for the identification of opportunities for preconception care concerns and potential interventions. This step also informs selection of the text to be analyzed. Suitable texts for CDA studies can include written documents and interviews as well as online media sources, such as the Internet (16). Online news media information also can be included as data and is often used in current research due to the prevalence of new technologies (21).

Sampling

Sampling was conducted using readily available and reliable online data sources. This study used user-generated online content written in response to the policy change announcement. Principles used in prior studies of user-created and shared content guided the sampling procedures (21). Published comments by public users to selected online news media sites were collected. A theoretically informed sample was obtained while the researchers were still drawing a comparative sample of online public responses. The researchers targeted both top government- and non-government-affiliated online news media sites. A total of four government- and six non-government-affiliated online news media sites were included in the initial search for users' postings (Table 1). In addition, Ifeng.com, a Hong Kong-based news media site, was included to provide a comparative sample to offset the possible geographical biases created by including only mainland-based viewers or state-influenced, corporation-based news media.

All selected online news media reported the ending of the one-child policy news on 29 October 2105. Xinhuanet, the state news agency, first released the news at 6.10 p.m. The time for the first news broadcast by each news media ranged between 6.10 p.m. and 7.45 p.m. on 29 October 2015 (Table 2). The subsequent newscasts about the ending of the one-child policy were excluded from this study, given that this study's focus is on initial responders. In addition, the English version of the newscasts was excluded, as this study aimed to describe the responses from the general public in China.

Data collection

This study was approved by the Texas Woman's University Institutional Review Board. Ten online news media sites were mined for the study data. Data collection focused on identifying, sorting, and storing the initial textual comments posted

Table 1. Popular government- and non-government-affiliated online news media in China.

Affiliation	Site	Domain	Type of news media
Government-affiliated	People.cn (人民网)	people.cn	A prominent national news web portal; it includes forums that provide a platform for interactions between the public and government officials
	Xinhuanet (新华网)	xinhuanet.com	The official news agency of the state government
	China.com.cn (中国网)	china.com.cn, china.org.cn	A web portal affiliated with the State Council Press Office
	CCTV.com (央视网)	cntv.cn	A national web-based television broadcaster
Non-government-affiliated	QQ.com (腾讯网)	qq.com	A web portal
	Sina (新浪网)	sina.com.cn	A web portal
	Ifeng.com (凤凰网)	ifeng.com	A Hong Kong- and web-based television broadcaster
	NetEase (网易)	163.com	A web portal
	Sohu (搜狐)	sohu.com	A web portal
	China.com (中华网)	china.com	One of the earliest Chinese web portals

The order of the listing above is based on the ranking of Chinese websites. Retrieved from <http://www.chinarank.org.cn/> on 20 November 2015. These rankings are based on usage/number of visits.

Table 2. Ending of the one-child policy news release across online news media sites on 29 October 2015, ordered by broadcasting times.

News source	News link	News release time
Xinhuanet (新华网)	http://news.xinhuanet.com/politics/2015-10/29/c_1116982932.htm	18.10
Sina (新浪网)	http://news.sina.com.cn/c/nd/2015-10-29/doc-ifkxhcfq0963784.shtml	18.34
NetEase (网易)	http://news.163.com/15/1029/18/B746VT6C0001124J.html	18.34
Ifeng.com (凤凰网)	http://news.ifeng.com/a/20151029/46044942_0.shtml	18.35
China.com.cn (中国网)	http://news.china.com.cn/txt/2015-10/29/content_36928749.htm	18.39
QQ.com (腾讯网)	http://news.qq.com/a/20151029/057219.htm	18.43
People.cn (人民网)	http://politics.people.com.cn/n/2015/1029/c1001-27755508.html	18.55
CCTV.com (央视网)	http://news.cntv.cn/2015/10/29/ART11446116645604440.shtml	19.05
Sohu.com (搜狐)	http://baobao.sohu.com/20151029/n424614019.shtml	19.15
China.com (中华网)	http://news.china.com/zh_cn/focus/wzqh/11174588/20151029/20655319.html	19.45

by users in response to the first news report of the ending of the one-child policy before midnight on 29 October 2015. In addition, the time of the initial postings and the number of *agrees* that each initial posting received were also collected and recorded in a database. *Agree* is a popular online commenting function that serves as a way to express approval. During data collection, the researchers were aware of the language variations in the use of the word *agree* across different news media. These words were: *thumbs-up*, *recommend*, and *support* (Table 3). If a public comment or the time of the initial comment were not found on the news medium's online reporting, the researchers searched for the information from the smartphone version of the news site. The primary researchers (Liu and Bao) verified the data for accuracy prior to data analysis.

Data analysis

There were four steps for study analysis. These steps, all guided by CDA, were as follows: (1) the identification and selection of popular online news media sites in China; (2) the identification of the intertextuality of public responses to the announced news; (3) the identification of the dominant discourse in the public responses; and (4) the analysis of the existence or absence of preconception/interconception care language in the public discourse. This analysis approach allowed for an examination of how certain terms represented public sentiment in response to the news about the ending of the one-child policy and the beginning of the new

two-child policy and how those terms were linked to preconception/interconception language.

To address the first study aim, all initial postings were categorized according to the number of *agrees* (*thumbs-up/recommends/supports*). The researchers divided all initial postings into four categories based on the number of *agrees*: (1) 0–99; (2) 100–499; (3) 500–999; and (4) 1,000 or more. The use of the number of *agrees* to divide the data was helpful to the analysis of the intertextuality of the postings. Intertextuality refers to the relationship between the texts. The intertextuality shows how some discourse becomes dominant and often benefits those with the most power to shape the discussion. The postings that received 1000 or more *agrees* were considered the best data to represent the public's responses to the user's text. These postings formed the basis for the identification of the dominant discourse. The researchers examined intertextuality among the 33 postings to decide how various postings were related to one another and to the other postings with fewer than 1,000 *agrees*.

To address the second study aim, postings with 1000 or more *agrees* were analyzed separately according to the principles of *interdiscursivity*, or the presence of multiple, overlapping discourses within a given textual excerpt (16), in CDA. This was accomplished through textual analysis of related discourse mentioned in conjunction with the dominant public discourse with regard to the change in family planning policy. This step allowed researchers to explore the social context of the discussed issue. Texts can also exhibit interdiscursivity. For this study, the goal was to examine how the dominant public discourse converged or diverged with the

Table 3. User options under posted comments across different online news media.

News source	User options under posted comments								
	Agrees			Disagrees					
	Thumbs up (sign/顶/赞)	Recommends (推荐)	Supports (支持)	Thumbs down (sign)	Opposes (反对)	Reply (回复)	Save (收藏)	Share (分享)	Copy (复制)
China.com.cn (中国网)			Yes		Yes	Yes			
CCTV.com (央视网)						Yes			Yes
QQ.com (腾讯网)	Yes			Yes		Yes			
Sina (新浪网)			Yes			Yes		Yes	
Ifeng.com (凤凰网)		Yes				Yes			
NetEase (网易)	Yes					Yes	Yes	Yes	Yes
Sohu.com (搜狐)	Yes					Yes		Yes	
China.com (中华网)	Yes					Yes		Yes	

Because People.cn (人民网) and Xinhuanet (新华网) do not provide platforms for making comments, they are automatically excluded from the table. People.cn (人民网) and Xinhuanet (新华网) are excluded from Table III because they did not provide platforms for making comments. On the news page, People.cn (人民网) provides direct links to social media sites, such as t.people.com.cn (人民微博), but Xinhuanet (新华网) does not provide direct links to any social media sites.

Table 4. Initial postings by users from the time of the news release night to midnight on 29 October 2015, ordered by time of the first posting.

Affiliation	News source	Time of the first posting	Time between news release and first posting in minutes	Number of postings in response to the news
Government-affiliated	CCTV.com (央视网)	22.18 ^a	193	1
	China.com.cn (中国网)	23.16	277	1
Total				2
Average			235	1
Non-government-affiliated	Sina (新浪网)	18.37	3	2,148
	Ifeng.com (凤凰网)	18.41	6	2,522
	NetEase (网易)	19.01	27	180
	QQ.com (腾讯网)	19.05	22	75
	Sohu.com (搜狐)	19.27	12	2
	China.com (中华网)	19.47	2	32
Total				4,959
Average			12	862.5

^aCCTV.com's (央视网) time of the first initial posting was stamped as '2015-10-29 10:18:52'. It is referred to as 10.18 p.m. here, as the news was released in the evening.

preconception/interconception care discourse. Postings were uploaded into NVivo, Version 10, a qualitative data management software program. Coding and textual analysis were conducted using the CDA procedures previously described. To ensure study trustworthiness, data were coded independently by the two primary researchers (Liu and Bao) and verified by the third researcher (Boutain), who is an expert in CDA research.

Results

Sample description

By midnight on 29 October 2015, less than six hours after the first news broadcast about the ending of the one-child policy and the beginning of the new two-child policy, a total of 4,961 initial postings were collected from the 10 online Chinese news media sites (Table 4). Two government-affiliated online news media sites, namely People.cn and Xinhuanet, do not provide public comment platforms. While People.cn provides direct links for users to other social media sites, where the user-commenting function is enabled, Xinhuanet, the official news agency of the state government, does not provide a commenting platform or the links to such platforms. The time between the news release and the first

user posting ranged from 2 to 277 minutes, with an average of 235 minutes for the government-affiliated online media sites and 12 minutes for the non-government-affiliated online media sites (Table 4). As seen in Table 4, the time difference is shorter for the non-government-affiliated compared to the government-affiliated online news media sites. Table 4 also shows that the non-government-affiliated online news media had the higher number of postings compared to the government-affiliated sites. As seen in Table 5, all postings that received 100 or more *agrees* were from the non-government-affiliated online news media. Of all the postings, 33 received 1,000 or more *agrees* (Table 5). These 33 postings were from QQ.com ($n = 10$), Sina ($n = 14$), Ifeng.com ($n = 3$), and NetEase ($n = 6$). Of the 33 most-liked postings, the highest number of *agrees* any one posting accumulated was over 8,000 (Table 6).

Dominant discourse

Three main discursive concepts were signified in the online postings about the news of the family planning policy change in China on 29 October 2015. These discursive concepts were 1) cost, 2) generation, and 3) timing. All three of these concepts are discussed in more detail later, with selected quotes from the online postings.

Discourse of cost

The discourse of cost was the most dominant throughout the text. The word *cost* was referenced in 10 postings, five of which clearly stated that it is too expensive to raise a child. Of these five postings, two mentioned the cost of educating children. Three postings cited the condition of having *financial ability* or *having money* to support a second child. For example, one online user stated, 'It's good for a family that can afford [another child], but for a family that does not have good financial conditions, they may not want to do it even if they were asked to have another child'. The quote that best described the cost issue was, 'One can afford to bear a child, but not to raise one'. There were more concerns about costs incurred after having a child, not costs associated with pregnancy or immediate childbirth.

Two of the 10 postings indirectly referred to the discourse of cost by including the phrase *the pressure of living*. The pressure of living is a phrase which refers to the difficulty of making money in contrast to the easiness of spending money. Everything is costly including raising children. Regardless of the cost associated with having children, some users viewed having another child as advantageous. For example, one posting stated, 'Regardless of the pressure of living, there is a companionship that comes with having two

children'. Although the decision to have another child is often viewed through a cost lens, this online user also noted a potential benefit of a second child.

Discourse of generation

The discourse about the concept of generation was the second dominant discourse agreed upon by users. The word *generation* was written in seven postings. The discourse of generation refers to how users identified themselves temporally in relationship to social-historical decades or to Chinese history decades. Six postings included *generation* in the context of categorizing people born in different decades. The textual phrases were the *generation born in the 1960s*, *generation born in the 1970s*, *generation born in the 1980s*, and *generation born in the 1990s*. The emphasis of this demarcation of the generations born in different decades is not about which age group one belongs to; rather, it is about what political landmarks one experienced.

The generation descriptor also highlighted other dynamics. One posting stated, 'I am an only-child of the generation born in the 1990s'. Another stated, 'Many from the generation born in the 1980s are an only-child'. The sentiment of being the only-child generation was best expressed in the following: 'My generation became the only one-child-generation in Chinese history ever'. This user employed the term *generation* to denote identity status in relationship to the country's history.

Thus, generation refers to a specific population born within a certain period of time and to a specific label, such as *only-child generation*, *the most unfortunate generation*, and *the generation short of family ties*. The last descriptor derives meaning from the context of Chinese social policy history related to the one-child policy. The generation born in the 1960s and the generation born in the 1970s were bundled together in one posting about their being the most unfortunate generation and another posting about their being the generation with fewer family ties. However, three other online users also mentioned the generation born in the

Table 5. Number of initial postings based on the number of thumbs-up/recommends/supports as of 30 November 2015 (at the time of data collection).

News source for the postings	Number of postings based on the number of thumbs-up/recommends/supports			
	0–99	100–499	500–999	≥1,000
China.com.cn (中国网)	1	0	0	0
CCTV.com (央视网)	1	0	0	0
QQ.com (腾讯网)	61	2	2	10
Sina (新浪网)	2,084	47	3	14
Ifeng.com (凤凰网)	2,468	49	2	3
NetEase (网易)	160	12	2	6
Sohu.com (搜狐)	2	0	0	0
China.com (中华网)	31	1	0	0
Total number of postings	4,808	111	9	33

People.cn (人民网) and Xinhuanet (新华网) are excluded from the table.

Table 6. Highlights of postings receiving 1,000 or more thumbs-up/recommends/supports.

Posting with highest and lowest thumbs-up/recommends/supports	Posting time	Posting content	
QQ.com (腾讯网)	Lowest: 1,084 Highest: 4,495	23.23 22.07	Few parents think of themselves when it comes to having a second child. I believe most parents want to provide company for their (first) child, so that there is one more blood-related relative. Think about how cold this society is nowadays. Blood-related relatives are more dependable. There are not many dependable friends and classmates. There are advantages to having another one. After all, one child is too lonely. Having two [children] offers companionship [to each other], and [they] can take turns to take care of [the] elderly in the future. Having just one child is very hard and risky. What if . . . what will the parents [of the only child] do when they get old? Thus, have a second child. Although it will be hard and tiring for the time being, it will get better [later].
Sina (新浪网)	Lowest: 1,128 Highest: 8,546	19.21 18.37	This news is too late for the generation born in the 1970s. Too bad, the news came too late. I am too old [to have a second child].
Ifeng.com (凤凰网)	Lowest: 1,029 Highest: 1,483	19.11 18.41	Few people will bear a second child. Do they think human beings are machines that they can just switch on and off as they wish? Very timely, it's a must.
NetEase (网易)	Lowest: 1,195 Highest: 3,130	19.07 19.58	Start working on it tonight. My generation becomes the only one-child generation in Chinese history ever.

China.com.cn (中国网), CCTV.com (央视网), Sohu.com (搜狐), and China.com (中华网) are excluded from the table because none of their initial postings received 1,000 or more thumbs-up/recommends/supports.

1970s. Two postings that indicated a *no* to having a second child referenced the 1970s generation. The other posting suggested that the generation born in the 1970s needed to make a concerted effort to give birth to another child.

Discourse of timing

The discourse of timing also was dominant in the texts. The concept of timing was noted in seven postings. There are two dimensions to the timing concept, as documented in the text. First, timing referred to reproductive timing, as stated in 'this age is not appropriate for reproduction'. Second, timing was used to signify the end of the one-child policy, as seen in the following posting: 'Very timely, it's a must'.

Whether it was reproductive timing or the policy timing, the idea of either 'timely' or 'too late' was textually noted. Two postings asserted that the policy change news came too late. One posting announced that the policy change was timely. Three online users indicated that they had passed their reproductive time. The policy change was long awaited by some, as one online user stated, 'We have been waiting for this policy change for many years'. In addition to the description of this long waiting period for policy change, there was also a written, expressed eagerness for the new policy to take effect. For example, one user stated, 'I wish that the official policy document gets issued locally soon'. All seven postings were linked to the discourse of timing.

Interdiscursivity with preconception/interconception care discourse

Further analysis identified two postings directly linked to the time frame for either preconception or interconception care. Some online users expressed immediate pregnancy intentions, not wanting to wait for planning. For example, one online user stated, 'start working on it [getting pregnant] tonight'. This text implied a sense of urgency among those who wished to get pregnant soon. At the same, there was a sense of humor or playfulness. Another user stated, 'Working extra time tonight ... Try to have the good news [of being pregnant] next month'. It is possible that this posting was reflective of a desire to have a second child and of having waited for the ending of the one-child policy for a while.

Discussion

The study findings confirm that the general public sentiment in response to the news about the family planning policy change varied. The dominant discourse highlighted through the textual analysis related to cost, generation, and timing concepts. Since the primary study purpose was to understand the public responses to the news, it is important to note that the Chinese public was online, interested, and engaged. There were, for example, immediate postings related to the change of the family planning policy in China on 29 October 2015.

The number of postings to the initial news broadcast varied by online news media site. The access to public

comments about the policy was more accessible on non-government-affiliated sites, however, as several government-affiliated online news media sites do not provide user-commenting platforms. Online users of the non-government-affiliated online news media sites also tended to respond to the news more quickly. These findings suggest that the popularization of the Internet has reshaped the landscape of political discourse, which tends to be formalistic (22). According to Schoenhals (22), Chinese political discourse is restricted not so much with respect to content as with respect to form. This discourse analysis study of news media responses provides a glimpse of the changing landscape of political discourse in China. The results show that non-governmental platforms are used and easily accessed. This finding demonstrated a degree of communication freedom related to public health policies in general (23,24).

Specifically, the main study focus was the public discourse about the ending of the one-child policy and the beginning of the new two-child policy. The findings showed that the one-child policy was so embedded in the family and social history of the online users that they defined themselves in relationship to their distance (in years) from the policy in addition to defining themselves by their generational era. That is, the word *generation* was used in relationship to how the year of the one-child policy affected them (e.g. the last generation, the one-child generation). *Generation* was re-employed as a concept to describe a new type of era, the one-child generation, for example. The one-child policy helped form the identity of the online users, as seen through their language use.

To some degree, the users' online concerns as future caretakers of children were also highlighted within the textual excerpts. These online users posted about finances as a prerequisite of concern for pregnancy. That is, they embedded messages in the public discourse about financial preparedness as a preconception need. This concern about finances before conception is similar to the rationale for the one-child policy as a mechanism for economic stability and national preparedness for China. This indicates that the one-child policy narrative exists within citizens' current mental models of what is needed to be an effective caregiver for children. Although the current parenting culture is not necessarily good for the children and has had a negative impact on the behaviors of the only-child generation (25), concerns about the costs of providing for children will continue as a reason for not having more children (14). This idea that having money is a prerequisite for childbirth was also reported in a rural cohort of women in regard to their preconception beliefs (26). Even as online users rejected the one-child policy, there was an acknowledgement of its fundamental economic principle. This cost concern, which was once expressed by the Chinese government, is now being expressed by potential parents. Indeed, the Chinese government has effectively embedded their discourse into the discourse of potential parents.

At the intersection of discourse of timing and generation, it is interesting to note that the conceptualization of generation is certainly not the same as the demarcation of generations (e.g. Generation Y) that received popularity in the

United States (27). The phrase 'generation born in the 1970s' was used more often than other generational descriptors by the Chinese online viewers. The public described the generation born in the 1970s with mixed sentiments. It is a generation viewed as both fortunate and unfortunate. They were fortunate due mainly to their current reproductive capacity to have a second child. They were unfortunate due mainly to the increased pregnancy risks associated with their age (28). For women born in the 1970s, the youngest age group would be older than 35 as of 2015 and would have passed the most ideal childbearing age. Even for men, aging is related to male sexual function, sperm health, and fertility (29). Indeed, the phrase 'I am old' in a posting that was most highly agreed upon by the Chinese online users did not specify gender in relation to timing for reproduction.

Although fertility is believed to be a probable and retrievable capacity (30), the idea of postponed or additional parenthood has not been embraced by the general Chinese public. Eriksson et al. (30) noted that the main motivation for parenthood postponement is to conform to changing societal lifestyles. This was not the case, however, for the Chinese public. Even the online users who asserted that they would have a second child, regardless of older age or cost, did not express a focus on society in general. Their expressed motivation was mainly to provide companionship for the first child. The online users were focused on the nuclear family's needs more than conforming to societal standards.

This study has a few limitations. The first limitation is related to the data availability. The data collected were based on what was available on the websites. There is a possibility that some data were censored. The data from the government-affiliated online news media were unavailable. One way to address the limitation is to keep a clear data trail and to detail the research process. A related limitation is the impossibility of verifying whether certain online users clicked on *thumbs-up/recommend/support* more than once, which would have caused an inflation of the total number of *agrees*. Although most news media sites require registered users to post comments, most news media sites (e.g. Ifeng.com) also allow non-registered users to click on *thumbs-up/recommend/support*. Thus, there is no way to confirm the presence of inflation. The second limitation was related to the study sampling strategy. The researchers included only initial textual postings and did not collect non-textual or secondary textual postings. The secondary textual postings (user responses to the initial posts) were not available for certain online news media sites. The researchers justified the use of only textual data for this CDA-guided study based on the study aims.

Finally, the study results provide an understanding of the Chinese public's responses to the ending of the one-child policy and the beginning of the new two-child policy. This analysis is based on the postings of people who had access to the Internet and who were willing to share their comments in a public forum. A related limitation is the impossibility of determining how rural and urban online users were represented even though it is a common understanding that Internet access is more available in the urban areas. It would be interesting to know this representation because the study findings may represent the urban Chinese discourses as the

urban Chinese were the ones most impacted by the policy change. Furthermore, certain users might have been particularly satisfied or dissatisfied with the policy change news, but, instead of creating their own textual comment, they may have just clicked on *agree* to other viewers' comments. The researchers believe that, because the data period was in the evening time until midnight on 29 October 2015, the off-work time period possibly widened the range of online users who posted and responded.

The study has implications for policy, practice, and future research. The policy implications concern the need to incorporate interconception care into various health initiatives and to institutionalize the new health care services into the existing free preconception care services. These are the services already available to couples at the time of marriage registration or married women before their first pregnancy. Because the phrase 'two-child' first appeared as a part of a new policy title, in essence, this family policy change concerns the one-child to two-child policy language change. This change creates an additional interconception care period, adding to the Chinese policy definition of preconception care. Therefore, there is a need to incorporate the language of *interconception care* into relevant governmental policy and institutional documents. There is also a need to accelerate the policy implementation process in clinical practice due to the public's sense of urgency. Because some older couples have a sense of urgency to reproduce, health providers will need to focus more immediately on the provision of preconception care services. Preconception services and support are needed for couples who are planning for a second-child pregnancy.

The concern about the cost of children is important, and it is possible that many couples with reproductive capacity will choose not to conceive. This unwillingness to have a second child, however, is related not only to cost but also to other aspects of parenthood. Research has already shown that Chinese children born and parented after the implementation of the one-child policy were less optimistic, more sensitive or nervous, and less conscientious than were children of prior generations (25). There is a need for a shift in how parenthood is perceived, as there are other conditions necessary for healthy parenting and child development. Considerations such as parental time commitment and emotional readiness also are important. The one-child to two-child policy language change does not automatically change the culture of parenting and child-rearing. Cultural change efforts are needed on a national scale gradually to recalibrate the popular mindset about parenting and childhood expectations. Further research is needed to explore effective strategies to change cultural norms.

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Disclosure statement

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