A Study on the Impact of Chinese Family Culture on Citizens' Voluntary Organ Donation

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Abstract

**Objectives:** Family members’ attitude is the key factor in organ donation. This study aimed to analyze the attitude and willingness of families towards organ donation and to explore the impact of Chinese family culture on voluntary organ donation.

**Methods:** Taking the family as a unit, a total of 15 families (59 family members) were interviewed using the semi-structured interviews.

**Results:** Among the 59 participants, 58 had heard of organ donation, 30 were unwilling to donate organs, 25 had an intention to donate, and 13 were very taboo about it. 29 weren’t giving consent for family members’ donation, only 8 supported families to sign up as donors. Particularly, 7 participants could donate their organs but wouldn’t donate organs of family members.

The family culture models were divided into the patriarchal family culture model (4 families), independent family culture model (8 families), patriarchal subversion family culture model (3 families). Based on the influence of social and cultural factors (taking national policy as an example) on the willingness to donate organs of relatives, the family culture models were divided into the stubborn family culture model (3 families), swing family culture model(9 families), and selfless dedication family culture model(3 families).

**Conclusions:** Organ donation is still a taboo topic in Chinese families. Although the patriarchal family cultural model is no longer dominant, the father’s thoughts and views still play an essential role in the whole family. Most families belong to the swing family culture model, and the willingness to donate is greatly influenced by social and cultural factors.

Background

Organ donor shortage is a serious problem in the world. According to statistics, more than 150,000 patients are waiting for organ donation in the world. On average, 17 die every day while waiting for donor organs. The demand for donor organs is increasing by 12% every year [1]. In 2010, China launched a pilot program of voluntary organ donation after the death of citizens. Traditional culture is one of the main factors that affect organ donation [2, 3]. Family members' attitude towards organ donation directly affects the success of potential organ donation [4–8].

The form of the family-based social structure determines that the social existence of Chinese people depends on the family with blood relationships [9]. In China, few citizens sign an organ donor card or make relevant wills before they die. Successful organ donation depends on their families [10, 11]. If there is one family member who opposes organ donation, he or she will persuade other relatives not to sign up as a donor. Especially when the parents are against organ donation, children will not donate organs successfully even they have the willingness to donate [12–15]. If parents hold a positive attitude towards organ donation, it will also increase their children's willingness to donate. However, if the parents strongly
oppose signing the organ donor card, the children will not disobey them. This phenomenon occurs in many countries [16–18]. After all, in China, “filial piety is the most important of all virtues” and “one's skin and hair are given by one's parents”. With the growth of children, parents are getting older. Thus, they need to discuss whether to donate organs with their children. If a child does not want their parents to donate their organs, the chances of their parents’ successful donation will be very low [15]. Therefore, The attitude of family members is of great importance for organ donation. In this paper, we used the semi-structured interview method to analyze the attitude and willingness of family members towards organ donation and to explore the impact of Chinese family culture on voluntary organ donation.

Materials And Methods

The design and methods of the research are in accordance with the requirements of related regulations and procedures (such as GCP, ICH-GCP) as well as the ethical principles. The study was approved by The IRB of Third Xiangya Hospital, Central South University.

The semi-structured interview method was used to collect data. From August to November 2018, a total of 15 volunteer families were recruited and interviewed. Inclusion criteria: 1. Having strong ability of expression and communication; 2. Voluntarily participating in the study and actively cooperating.

Within 3 days after the end of the interview, one interviewer first collated the recording into a text version of the data. To ensure the integrity and accuracy of the data, another interviewer checked the recording and text data, and then two interviewers jointly analyzed and coded the data.

The interview outline includes: (1) Have you heard about organ donation? Are you for organ donation? Is talking about organ donation a taboo?

(2) Will you sign the organ donation consent card when you get your driver's license? Will you ask your family for advice? Whose opinion will you mainly solicit?

(3) Will you agree to me/children/parents/husband or wife signing the organ donor card? Why?

(4) If the country implements some preferential policies, for example, if you agree to sign the registration card, your family members will have the priority for the donated organs, will you consider organ donation? Why?

Results

Attitudes of family members towards organ donation

In this study, a total of 59 subjects from 15 families were included. They were numbered by letters: N1, N2, N3, N4, N5... N14, N15. The interviewees included close relatives such as
grandparents, parents, children, aunts and their husbands, brothers, and sisters (cousins), etc. The youngest interviewee was 16 years old and the oldest was 74 years old.

Of the 59 family members interviewed, 58 had heard of organ donation. During the interview, it was found that the ways for citizens to understand organ donation are also diverse. Most of the interviewees knew organ donation by TV, newspaper, magazine, mobile phone, and computer. However, only 24 of them clearly said that they had talked about organ donation, mainly with friends, classmates, or colleagues, and few talked about organ donation with family members. Of all the interviewees, only 9 indicated that they had considered organ donation. Among the 59 people who participated in the family interview, 30 stated they were reluctant to donate organs, 13 of them explicitly said it was a taboo to talk about this topic, and 25 expressed their intention to donate organs. The results are shown in Table 1.

Through interviews, we found that the public had a certain understanding of organ donation. In daily life, if there is no certain opportunity or demand, organ donation will not be discussed. Especially in the family, organ donation is still a taboo topic. Most interviewees said organ donation has nothing to do with their lives. Young interviewees thought that they were still young and had never thought about it. While some others said that as they were old, it's useless to donate organs that were aging. Some suggested that organ donation should be considered only when the body had incurable diseases.

Table 1. Interview families' perception and attitude towards organ donation
| Heard about organ donation (n=59) |       |
|----------------------------------|-------|
| Yes                              | 58    |
| No                               | 1     |
| Way to know                      |       |
| Paper newspaper                  | 11    |
| TV, radio                        | 40    |
| New network media                | 22    |
| Hospital, school                 | 6     |
| friends                          | 9     |
| Talked about organ donation      |       |
| Yes                              | 24    |
| No                               | 27    |
| Unknown                          | 8     |
| Willing to donate organs         |       |
| Yes                              | 25    |
| No                               | 30    |
| Unknown                          | 4     |

Although most interviewees agreed that organ donation is worth promoting, many of them were hesitant when asked whether they would like to donate organs or not. During the interview, it was found that those who were willing to donate organs were not taboo about the topic of organ donation, and they were relatively calm when talking about death.

In the process of organ donation, the attitude of family members is one of the most important factors that affect the success of organ donation. We surveyed whether the
family members agree to other family members signing the organ donor card. The results are shown in Table 2.

### Table 2. Attitudes of family members toward organ donation by other family members

| Give consent to family members’ donation | Willing to donate (n=25) | Unwilling to donate (n=30) | Unknown (n=4) | Total (n=59) |
|----------------------------------------|-------------------------|---------------------------|---------------|-------------|
| Yes                                    | 8                       | 0                         | 0             | 8           |
| Respect their wishes                   | 8                       | 3                         | 0             | 11          |
| No                                     | 7                       | 22                        | 0             | 29          |
| Unknown                                | 2                       | 5                         | 4             | 11          |

Among the 59 interviewees, 29 did not agree to their family members' organ donation, 7 of whom said they could donate organs, but did not agree to their family members' organ donation. Only 8 of them agreed to their family members signing the organ donor card, and 11 said they respected their families' wishes. Some of them said that in the case of opposition from their families, even if they had the intention of organ donation, they would choose not to donate because they cared about the opinions of their families. Therefore, if family members hold a negative attitude towards organ donation, the resistance of organ donation is relatively large.

Seven interviewees thought they were willing to donate organs after death, but they were reluctant to let their families donate organs. Five of them were women, among which four were mothers. To some extent, it reflects that in Chinese families, mothers are more willing to sacrifice themselves. The interview examples are as follows.
No, I can’t accept the death of my children. I will be heartbroken and I will not sign the organ registration card. (N7 mother, 49 years old)

I don’t agree with my family members signing it, but I will agree to sign it myself. I don’t want everyone in my family to lose a certain part of their body. (N10 mother, 46 years old)

I agree to donate my organs, but I don’t agree with my parents’ organ donation. If I sign a registration card, my family will have the priority to get organs when they need them, I will not hesitate to do it. (N12 the youngest daughter, 20 years old)

The impact of the family culture models on organ donation

Through interviews, we classified family culture models into the patriarchal family model, independent family model, and patriarchal subversion family model according to whether there is patriarchy or patriarchal subversion in the family. Additionally, according to whether the willingness of family members to donate organs will change with social and cultural factors (taking the national policy as an example), family culture models were classified into stubborn family culture model, swing family culture model, and selfless-dedication family culture model. See Figure 1. Each family has a classification of family culture models. See Table 3.

The patriarchal family culture model

The patriarchal family culture model does not represent a family that is completely father-centered or listens to the father’s opinions but refers to the father’s opinions or ideas that can greatly affect the wife’s and children’s ideas and decisions.

For example, in the N4 family, the father who is a member of the Chinese Communist Party believed that he should sign the organ donor card. The mother of the N4 family who is a traditional Chinese woman would follow the father’s decision and ask for the opinions of her husband and child before signing the card. The son himself was not for organ donation. Even if all the people around him signed the organ donor card, he would not sign
it himself. But if the father took the lead in signing it, the son said he would consider signing the donor card or even was willing to take the lead in signing it.

As a government official, even if other people are not willing to sign up as an organ donor, I will sign it. I will take the lead in signing the organ donor card. (N4 father, 48 years old)

I agree with your father and I will follow his decision. (N4 mother, 46 years old)

There is no need to donate organs as the dead should be laid to rest. I would not sign the donor card even if all the people around me sign it. It depends on my own will and the will of my family. If my father takes the lead in signing, I’m willing to sign up as a donor. (N4, son, 19 years old)

Besides, in the N11 family, the mother did not agree to organ donation and thought it was a taboo. The father was not willing to sign the organ donor card, but he was willing to sign it when the national leaders took the lead in signing it. At this time, the mother's attitude also changed with the change of the father's attitude.

It is obvious that the patriarchal family is dominated by the father. As the spiritual pillar of the family, whether the father signs the organ donor card directly affects the whole family's attitude and decision on organ donation.

**The independent family culture model**

In the independent family culture model, each member of the family has independent thoughts and the opinion of one family member will not easily affect the decisions of the whole family. Everyone has the same status in the family. This is the current model of most families in China. There is no obvious class division in the family, and there is no "monopoly of power". For example, in the N5 family, the father was in favor of organ donation. As for whether the family members are willing to donate organs after death, he will respect the wishes of the family members. However, the mother was not willing to donate organs after death and opposed to the attitude of family organ donation, not willing to donate organs by
relatives. The daughter was neutral on this issue and would respect the decision of her parents. She would respect her parents' decision.

Table 3. Classification statistics of interview family culture models

| Family culture models                  | Family number           | Total |
|----------------------------------------|-------------------------|-------|
| The patriarchal family culture model   | N4,N9,N11,N13            | 4     |
| The independent family model           | N1,N3,N5,N6,N8,N10,N14   | 8     |
|                                        | ,N15                    |       |
| The patriarchal subversive family model| N2,N7,N12               | 3     |
| The stubborn family culture model      | N2,N8,N11               | 3     |
| The swinging family culture model      | N1,N3,N4,N5,N9,N10,N12   | 9     |
|                                        | ,N14,N15                |       |
| The selfless dedication family culture model | N6,N7,N13               | 3     |

Agree to organ donation. Family members can donate organs if they are willing to. It’s OK if it is useful. The dead can't be reborn. Why not help others? (N5 father, 55 years old)

I agree with others donating organs, but I am unwilling to do it. I won’t allow family members to donate organs. I’m just not so selfless. Death, especially unnatural death, is a taboo to me. (N5 mother, 49 years old)

If parents or my husband agree to sign it, I will not object to it and will respect their decisions. (N5 daughter, 25 years old)
In the patriarchal subversive family model, the father does not occupy the "central" position in the family, and there are members in the family who can affect the decision of the whole family, generally the mother, wife, or children. The patriarchal subversive family model can also be classified into two categories. One is the "feminist" family model, in which the mother or wife plays a very important role. For example, in the N7 family, there is a more obvious tendency of "feminism". During the interview, the father attached great importance to the opinions of the mother and agreed with organ donation. When deciding whether to sign the organ donor card, he would consider the opinions of his family, especially his wife.

The other is the "children deciding" family model. Children play a leading role in the family because with the growth of children, parents grow old slowly. At this time, children's discourse power at home also increases, and parents often listen to their children's opinions. For example, in the N2 family, grandparents said that whether they donated organs was decided by posterity (including children, grandchildren, etc.). The father and mother also said that they should consider their children's opinions.

*It depends on our children's decisions. We don't know anything when we die. You can do whatever you like. They will decide whether to donate our organs. (N2 grandpa, 71 years old; N2 grandma, 68 years old)*

**The stubborn family culture model**

In the stubborn family culture model, most of the family members hold a negative attitude towards organ donation, and it is not easy to change with social and environmental factors. Take the N8 family as an example, the mother thought organ donation was a taboo, saying that no matter whether there was a national policy for it or not, she would not donate organs.

*If you ask someone else for their opinions about organ donation, you will be scolded. It's not good. I will not donate my organs anyway because I want to have a complete body. (N8 mother, 50 years old)*
The swing family culture model

In the swing family culture model, the willingness to donate organs changes with social and environmental factors. Among the 15 families interviewed, most of them are swing families, indicating that the willingness of organ donation of citizens is largely affected by national policies and social environment. This kind of family has little knowledge about organ transplantation and organ donation, so the willingness to donate organs is not strong. Taking the N12 family as an example. Both father and mother were against organ donation, and they thought it was a taboo to talk about organ donation. But considering the current national preferential policies (if they agree to donate organs, their family members have a priority for the donated organs), they said they would consider signing the organ donor card.

The selfless dedication family culture model

In the selfless dedication family culture model, most of the family members are willing to sign up as a donor. Such families are generally altruistic and selfless. They are willing to donate organs no matter whether the state implements preferential policies or not, but the number of such families is very limited. Take the N13 family as an example. Parents and children were all for organ donation and had the willingness to donate organs. They thought organ donation was very meaningful and they were willing to take the lead in signing the organ donor card.

This proposal is very good. After a person leaves the world, if he or she can leave some useful organs for the world, he or she will make a valuable contribution. (N13 father, 51 years old)

Even if there is no preferential policy, I will consider organ donation, as long as I am qualified for it. (N13 daughter, 21 years old)

Discussion

Factors triggering citizens to think about organ donation
This study adopts qualitative interview research based on the family. The selected objects are not defined as family members or people who are close to organ donation. It can reflect the public's knowledge about and attitude towards organ donation to a certain extent. According to the results of this study, we found that the public only heard about organ donation, but did not have a deeper understanding of organ donation policies. Therefore, more work needs to be done to inform the public about organ donation in China.

In Chinese families, organ donation is still a taboo topic. The main reasons are as follows:  
- Organ donation is related to death; once the topic of death is involved, most people are very afraid of it [19, 20].
- According to Chinese traditions, the deceased should be laid to rest. It is disrespect for the dead if their organs are donated because their bodies would become incomplete [6, 21–23].
- From the perspective of the family, "as one's fair and skin were given by one's parents, one should not have them damaged, which is the beginning of filial piety". As a result, it is a taboo to talk about it with family members [24–28];
- the Chinese are deeply influenced by Buddhist thoughts; many Chinese believe in karma, and think that if the body is not complete after death in this life, they will be disabled in the next life [29, 30].

Among the 59 interviewees, 29 did not agree to their family members donating organs. It can be seen that the organ donation resistance from the family members was great [8, 21, 30]. Some interviewees thought that they were willing to donate organs after death, but they were reluctant to let their families donate organs. Most of them were mothers. This is in line with the "mother spirit" in Chinese culture. Most mothers are selfless and dedicated to the family [31].

**The impact of the family culture model on organ donation**

According to whether there is patriarchy or patriarchal subversion in the willingness to donate organs, the family culture model can be classified into the patriarchal family culture model, the independent family culture model, and the patriarchal subversion family culture model. In the Three-Character Classic, it is said that "there should be affection between father and son, as well as the love between husband and wife. Brothers should be kind to each other; the elder is amiable and the younger respectful. Harmony should be maintained among families". The traditional concept of family organization structure in China is based on the Confucian "three ethical disciplines" of father and son, husband and wife, and brothers. However, with the development of the times, the family structure tends to be simplified. The family size is becoming smaller and smaller, and the family relationship is gradually changing. In the traditional family relationship, the father is the center of the family, while the mother and the children are the two points around the "center". Thus forming a more stable family relationship structure, similar to a pyramid, which is embodied in the traditional family ethics such as filial piety and obedience. With the progress of society, the patriarchal idea in family relations has been gradually weakened, and replaced by the plane family relations. Under the influence of equality, democracy, and other ideas, the relationship between father, mother, and children constitutes a plane tripartite relationship, and any one of the three parties no longer has an overwhelming advantage in family relations [32]. Although the family structure is not dominated by patriarchy, it is not easy to completely discard the idea of patriarchy that has lasted
thousands of years. In most families, the father's thoughts and views play an important role in the development of the whole family or spiritual culture.

According to whether the willingness of family organ donation is influenced by social and cultural factors, the family can be classified into the stubborn family culture model, swing family culture model, and selfless dedication family culture model. Among the 15 families interviewed, most of them are swing families. They know little about the procedures and laws of organ donation. Their willingness to donate organs is greatly influenced by social and environmental factors. Given the existence of a large number of such families, the state should increase the publicity of organ donation knowledge, introduce feasible preferential policies for organ donation, and strengthen the supervision of the organ donation process.

Conclusions

Organ donation is not only individual behavior, but also closely related to family culture. In Chinese families, organ donation is still a taboo topic, and the resistance from family members against organ donation is great.

According to whether the willingness of family organ donation is dominated by the father, the family culture models can be classified into the patriarchal family culture model, independent family culture model, and patriarchal subversive culture model. According to whether the willingness of family organ donation is influenced by social and cultural factors, the family culture models can be classified into the stubborn family culture model, swing family culture model, and selfless dedication family culture model. At present, the patriarchal idea in the family relationship has been gradually weakened, but in most families, the father's thoughts and views still play an important role in the whole family. Besides, most families are in the swing family culture model, and the organ donation willingness is greatly influenced by social and environmental factors. Different family culture models in China have different influences on organ donation. Understanding the family culture models will help promote organ donation work and increase the consent rate.

Declarations

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Availability of data and materials

The datasets used and/or analyzed during the current study are available
from the corresponding author on a reasonable request.

Authors’ contributions

AJL and WZX conducted the projects and designed this research. HYH, ZHX, WOY participated in research design. HYH, ZRX, YC, YFY and FL collected the data. HYH analyzed the data and wrote the paper. WZX participated in data analysis and paper revision. All authors approved the final submission.

Competing interests

The authors declare that they have no competing interests.

Ethics approval and consent to participate

The study protocol was reviewed and approved by The Institutional Review Board of the Third Xiangya Hospital, Central South University. Participants were informed in the description of the survey that their agreement to participate in the study was voluntary and completion constituted their informed consent.

Consent for publication

Not applicable.

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References

1. Huang J, Mao Y, Millis JM. Government policy and organ transplantation in China[J]. Lancet. 2008;372(9654):1937–8.

2. Hvidt NC, Mayr B, Paal P, et al. For and against Organ Donation and Transplantation: Intricate Facilitators and Barriers in Organ Donation Perceived by German Nurses and Doctors[J]. Journal of Transplantation. 2016.

3. Irving MJ, Jan S, Tong A, et al. What factors influence people’s decisions to register for organ donation? The results of a nominal group study[J]. Transpl Int. 2014;27(6):617–24.

4. Delgado J, Molina-Pérez A, Shaw D, et al. The role of the family in deceased organ procurement. A guide for clinicians and policy makers. Transplantation. 2019;103:e112–8.

5. Marck CH, Neate SL, Skinner MR, et al. Factors relating to consent for organ donation: prospective data on potential organ donors[J]. Internal Medicine Journal. 2015;45(1):40–7.
6. Miller C, Breakwell R. What factors influence a family's decision to agree to organ donation? A critical literature review[J]. London Journal of Primary Care. 2018;10(4):103–7.

7. Zk Y, Yan J. A qualitative study on motives of organ donation[J]. Journal of Nursing Science, 2013(3):85–87.

8. Dundar HZ, Ofizal R, Cinar YS, et al. Is Donor Age an Important Factor in Cadaveric Organ Donation? [J]. Istanbul Medical Journal. 2018;19(3):235–8.

9. Gong XP. Comparison and scrutiny of Chinese and American family culture [J]. Movie Review. 2007(20):108–109.

10. Yin ZK, Liu S, Yan J, Liu J. Motivations for Deceased Organ Donation Among Volunteers in China: A Qualitative Research Study. Ann Transpl. 2016;21:360–7.

11. Iltis AS. Building Norms for Organ Donation in China: Pitfalls and Challenges. J Med Philos. 2019;44(5):640–62.

12. Thybo KH, Eskesen V. The most important reason for lack of organ donation is family refusal[J]. Dan Med J. 2013;60(2):A4585.

13. Cherry MJ. Contested Organ Harvesting from the Newly Deceased: First Person Assent, Presumed Consent, and Familial Authority. J Med Philos. 2019;44(5):603–20.

14. Shaw D, Georgieva D, Haase B, Gardiner D, Lewis P, Jansen N, et al. Family Over Rules? An Ethical Analysis of Allowing Families to Overrule Donation Intentions. Transplantation. 2017;101(3):482–7.

15. Shaw D, Gardiner D. Increasing organ donation rates by revealing recipient details to families of potential donors. J Med Ethics. 2018;44(2):101–3.

16. Sharif A, Moorlock G. Influencing relatives to respect donor autonomy: Should we nudge families to consent to organ donation? Bioethics. 2018;32(3):155–63.

17. Ali A, Ahmed T, Ayub A, Dano S, Khalid M, El-Dassouki N, et al. Organ donation and transplant: The Islamic perspective. Clin Transplant. 2020;34(4):12.

18. Araujo C, Siqueira M. Brazilian Healthcare Professionals: A Study of Attitudes Toward Organ Donation. Transplant. Proc. 2016;48(10):3241–3244.

19. Yu CP. The cultural sensitivity of organ donation and Chinese practice [J]. Journal of Sun Yat-sen University(Medical Sciences). 2014;54(01):131–44.

20. Bo N, Yin M. Analysis on the Death Culture Differences between China and the West from Medical Perspective [J]. Medicine Philosophy. 2014;35(05):21–3.

21. Doggenweiler I, Guic E. Psychosocial determinants of organ donation among Chilean university students[J]. Revista Medica De Chile. 2014;142(1):27–33.

22. Rios A, Lopez-Navas AI, Navalon JC, et al. The Latin American population in Spain and organ donation. Attitude toward deceased organ donation and organ donation rates[J]. Transpl Int. 2015;28(4):437–47.

23. Le Nobin J, Pruvot FR, Villers A, et al. Organ donation, reasons for family refusal: A retrospective study in a French organ harvesting center[J]. Prog Urol. 2014;24(5):282–7.
24. Gao H, Wang Y, Jiang L. Influencing Factors of Family Members' Willingness for Organ Donation and the Corresponding Solutions [J]. Medicine Philosophy. 2016;37(09):45–8.

25. Li YN, Gao Y, Wang MC, et al. The Investigation and Analysis of College Students 'Body Organ Donation Willingness [J]. Management Observer. 2016(10):86–88.

26. Lin R, Qiu HZ, Huang H. Willingness of organ donation in college students: cultural and mental characteristic [J]. Chinese Journal of Tissue Engineering Research. 2018;22(04):600–5.

27. Zhang HC, Zheng JN, Liu WH, et al. Investigation and strategic analysis of public attitudes and willingness towards organ donation in Jiangsu [J]. Journal of Nanjing Medical University(Social Sciences). 2015;15(05):339–43.

28. Zhu SJ, Zhang J, Cui YJ, et al. Investigation and analysis of public cognition and willingness to organ donation [J]. The Journal of Medical Theory Practice. 2017;30(10):1556–8.

29. Yang Y, Huang H, Qiu HZ. Study on the willingness and influence factors of organ donation after the death of citizens in China [J]. Chinese Hospitals. 2014;18(03):18–9.

30. Tian LJ, Yu XF, Zhu XJ, et al. Research on the willingness and influencing factors of organ donation in Chinese people based on literature analysis [J]. Soft Science of Health. 2018;32(03):50–3.

31. Martinez-Alarcon L, Rios A, Ramis G, et al. Attitude Toward Organ Donation and Transplantation in Veterinary Students: A Multicenter and Stratified Study in Spain [J]. Transplant Proc. 2018,2(5):362–365.

32. Sun NL. The Family Culture in the China's Contemporary Social Thoughts——Dual Nature of China' s Contemporary Family Culture [J]. Hebei Academic Journal. 2013;33(04):97–101.

**Figures**

![Classification of family culture models](image)

**Figure 1**

Classification of family culture models