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Health Drivers of Fertility Intentions: An Empirical Analysis Based on CGSS Data

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Abstract: In the context of the current low fertility rate, an in-depth understanding of the factors affecting the willingness to bear children is of great significance for promoting population balance. Based on the data of CGSS2021, this paper analyzes in depth the influence of health status on fertility intentions of reproductive age groups from three dimensions: physiological, psychological and social. The results of the study show that the physiological and psychological health status of an individual has a significant positive effect on fertility intentions, especially psychological health not only directly affects fertility intentions, but also forms a dynamic mechanism of bidirectional influence with physiological health, while social health status presents a negative effect. Further research found that there are differences in the influence of health status on fertility intentions at different stages, and that the influence of overall health status on fertility intentions gradually decreases with the advancement of fertility stages.

Keywords: Health Condition; Different Stages; Fertility Intention; Empirical Analysis

1. Introduction

In social concepts, having many children is regarded as well-being, and raising children to prevent old age is deeply rooted in the hearts of the people. However, in the era of new media, with the widespread dissemination of childbearing risk information, some young people re-examine the meaning of childbearing. Among them, "physical and psychological trauma caused by childbearing" has become a topic that resonates with young people, resulting in "inability to have children" and "unwillingness to have children" among the current childbearing age groups. The phenomenon of "unwillingness to have children" has become increasingly prominent, and health status has thus become a key factor affecting the willingness to have children. This study focuses on the subjects of childbearing age at the micro level. Based on the data of China's comprehensive social survey in 2021, it first outlines the overall status of childbearing wishes. Under the premise of controlling other variables, it goes deep into the specific impact mechanism of physical, psychological and social health dimensions on childbearing wishes; Further use the multi-classification Logistic regression model to model the differentiated impact of health status on individual fertility wishes at different stages, in order to reveal the deep-seated reasons for the sluggish fertility under the impact of modern cultural concepts, and provide an accurate and effective decision-making basis for the construction of a fertility support policy system. It helps to promote the optimization and innovation of fertility policies, thereby promoting population balance.

2. Literature Review

The release of the "Decision on Optimizing Childbirth Policy to Promote Population Balance" in 2021 has completely set off a wave of encouraging childbearing in the whole society, but the three-child policy faces multiple obstacles in the process of promoting it. Wang and Luo [1] explored the relationship between women's education level and childbearing willingness from four levels: labor income effect, gender equality effect, preference effect and postponement effect; Based on CGSS data, Yang [2] pointed out that the delay in the age of first marriage of young men and women in my country significantly affects the willingness to have children, and there is an inverted U-shaped relationship between the age difference and the willingness to have children, and the age

difference between couples has a greater impact on the willingness to have children; Chen and Wang [3] found that there are significant differences in the factors affecting childbearing willingness at different stages. In the first stage, economic status has no significant impact, but demographic and health status factors significantly affect the willingness to have children; In the second stage, population, economy and health factors all have significant effects on fertility wishes.

With regard to the recent research on the relationship between childbearing willingness and childbearing behavior, in the 1980s, Bongaarts proposed the theory of reproductive intermediary variables, arguing that the intermediary variables that affect childbearing willingness include economic variables, social variables and demographic variables. Since then, it has constructed a low fertility model, arguing that unwanted births, births that replace child death, and gender preferences have increased fertility levels; The postponement of childbearing age, involuntary infertility and competitive factors affected the fertility level; In the 1990s, Castellain established a theoretical model of biological-social factors, believing that the impact of economic factors on fertility has weakened and the impact of biological factors has increased. At present, this theoretical model still occupies an important research position, and the explanation of the reasons for the decline in fertility is becoming more and more specific; Bongaarts [4] constructed fertility variation models, which show differences between fertility willingness and fertility behavior according to different groups in terms of fertility willingness, fertility timing, contraceptive failure, transitivity, competition with work, and other time occupation or necessary activities. Bastian and Hilde [5] found in the framework of planned behavior theory that family institutions frame people's intentions by influencing people's attitudes towards children and perceptions of existing fertility norms.

As mentioned earlier, scholars seldom directly study the relationship between health status and fertility willingness, but most of them roughly equate reaching childbearing age with health status with childbearing conditions. But Chang et al. [6] believes that childbearing is not a natural behavior, and the health of fathers and mothers is the most basic condition for childbearing. The research on health status and childbearing willingness in the existing literature, on the one hand, the impact of childbearing behavior on health status, such as Zhang and Mao [7] pointed out that women who have given birth undertake more reproductive labor, physical examination and physical exercise, but in diet There has been an improvement in health, hindering the maintenance of its healthy human capital; Zhao and Gao [8] found that childbearing only has a negative impact on women's health in middle-aged and old age through the impact of different types of childbearing-employment life course trajectories on the health of middle-aged and old age. On the other hand, health status is used as an intermediary variable. For example, Yan and Zheng [9] found that individuals can invest in health management, regulate emotions, and choose relative work intensity and health risk response plans according to the cognitive level of the subjective class; Xiao and Guo [10] found that health will further strengthen the negative impact of education on childbearing. Families with higher education levels pay more attention to and have more resources to manage their bodies. Less worries about health and elderly care make them less willing to have children.

Therefore, under the guidance of Tang and Li's [11] modern health concept, this study abandons the narrow perspective of "no disease is health", and comprehensively considers the impact of individual health status on reproductive wishes from the three dimensions of medical disease-free, good psychology, and social adaptation. Influence. Specifically, positive health requires not only attention to the health status of individuals at the physiological level, such as fertility, parenting experience, etc.; It is also necessary to explore their mental health status, including internal factors such as emotional state and reproductive achievement; At the same time, it also emphasizes the importance of the social health dimension, that is, the ability to fulfill personal social responsibilities, which contains the comprehensive adaptability and sense of accomplishment of individuals in social life such as childbearing cognition, family support, and social security. To sum up, this study provides theoretical support and

practical guidance for comprehensively understanding and promoting the improvement of reproductive willingness through the complex impact of physical, psychological, and social health conditions on the reproductive willingness of childbearing age groups.

3. Data, Variables and Models

3.1 Data Selection and Strategy

The data used in this article comes from the latest 2021 "China Comprehensive Social Survey" released by the China Study China Survey and Data Center. In this paper, the object of study is limited to the reproductive age group aged 20-49. Through data preprocessing, 3164 valid samples were selected and included in the empirical framework. Detailed statistics of the data and variables can be found in Table 1.

For the influence mechanism of health status on the willingness to bear children in different stages of childbearing age groups, the explained variable "number of children willing to bear children" is coded as a multi-classification variable, and the multi-classification Logistic regression model is used for statistics, and "willingness to bear one child" is set as a reference group.

Table 1. Descriptive statistics of variables (N=3164)

variable		Definition	Mean/ Proportion	Standard Deviation
dependent variable	Number of children willing to have	0 = No desire to have children	6.61%	
		1 = Willingness to have a child	24.18%	
		2 = Willingness to have two or more children	69.22%	
independent variable	Physiological health condition	1 = unhealthy, 2 = fair, 3 = healthy	2.683	0.560
	mental health status	1 = unhealthy, 2 = fair, 3 = healthy	2.664	0.585
	Social health status	1 = unhealthy, 2 = fair, 3 = healthy	2.816	0.479

3.2 Variable Settings

The dependent variable of this article is the number of children you want to have. According to the respondents' answers to the question "If there are no policy restrictions, how many children do you want to have" in the questionnaire, they are divided into three categories: no willingness to have children, willingness to have 1 child, and willingness to have 2 or more children are assigned values of 0, 1, and 2 respectively. The larger the value, the higher the willingness to have children. The independent variable in this paper was health status. One is the physical health status, according to "do you think the current physical health status"; The second is mental health status, according to the respondents' "degree of depression or depression" in the questionnaire; The third is that the social health status is measured based on the respondents' answers to the impact of physical health or emotional problems on social activities.

4. Positive Evidence

Considering the dynamic changes of childbearing age subjects' self-cognition and external effects in each stage of their life course, this study codes the dependent variable childbearing willingness into three categories of variables, and accordingly divides the transformation process of childbearing age subjects' childbearing willingness into two key stages: the first childbearing stage is the transformation process of childbearing age subjects from no childbearing intention to one child, mainly examining whether they are willing to have children, and the second childbearing stage is the transformation process from one child to two or more children, mainly examining whether they are willing to have multiple children.

4.1 Impact of Health Status on the First Childbearing Stage

It can be seen from Table 2 that in the transition from no willingness to have a child to willingness to have a child, both physical health and mental health have a significant positive impact on the willingness to have a child, confirming that the improvement of the two makes the subjects of childbearing age tend to choose to have a child. one child. In contrast, the negative effect of social health status on childbearing willingness at this stage

may reflect some structural factors that are not conducive to childbearing in the current society, such as high childcare costs, occupational pressure, and insufficient social support systems. These factors may weaken the positive effects brought about by the improvement of social health conditions, making individuals still cautious when facing the choice of childbearing wishes.

The above empirical results emphasize the importance of physical and mental health to individual fertility wishes, so we need to pay more attention to its limiting factors in order to better serve the improvement of physical and mental health. According to a survey released by the China Population Association, 15% to 20% of couples of childbearing age are facing the challenge of infertility. Around the reproductive center of a large hospital, there is a "mother's apartment" hotel that provides integrated accommodation, professional nursing and psychological assistance for infertile patients. The above phenomena reflect the huge base and growth trend of infertile and difficult families in China. Specifically, on the one hand, it is the fundamental restriction of physical health on fertility, which is not only reflected in diseases that directly hinder fertility, but also involves couples who have no obvious symptoms but are difficult to conceive naturally, even though the current medical assisted reproductive technology has made significant progress, but factors such as long treatment cycle, heavy economic burden and psychological pressure still cause many families to choose to give up in the middle of treatment. On the other hand, it is the mental health factor involving physiological cognition under social and cultural factors. The wide dissemination of new media has made the past private information such as pregnancy, childbirth and postpartum physical trauma public. Discriminatory language such as "one pregnancy is stupid for three years" has strengthened the cognition of the reproductive process and the pessimistic expectations of the health status after childbearing. This pessimistic reproductive culture further weakens the reproductive willingness of the reproductive age subjects in the first reproductive stage. Therefore, I tend to believe that physical health is the biological basis of childbearing, and its improvement needs to provide necessary medical support and care policies for infertile groups, relieve their psychological pressure in a timely manner, and further enhance their confidence and possibility of childbearing; For the improvement of mental health, individuals may view the future of childbearing and family life more positively through correct and positive childbearing culture and responsibility guidance.

4.2 Impact of Health Status on the Second Reproductive Stage

It can be seen from Table 2 that in the transition from willingness to have one child to multiple children, both physical and social health conditions have a negative impact on the willingness to have children, while mental health conditions play a positive role.

The comparison shows that compared with the first reproductive stage, the impact of physiological health status in the second stage has changed from the original positive significant to the insignificant negative, which means that with the advancement of the reproductive stage, the restrictive effect of physiological factors will further appear. The mental health status has changed from positive significant to insignificant. Although the social health status is not significant, the regression coefficients of the three dimensions of health factors all show a significant downward trend. The above results show that the influence of overall health status on childbearing wishes weakens with changes in childbearing stages.

Different from the restriction of physiological diseases during the first birth, the negative impact of physiological health status on fertility intention at this stage is mainly reflected in the following aspects. First, the actual experience of pregnancy discomfort, labor pain, postpartum recovery and raising one child makes women have a deep understanding of the physical and mental burden of giving birth again. Especially when encountering irreversible physiological problems and lacking family and social support during the process of raising one child, women who have given birth are more likely to choose to limit the number of births for fear of repeating this difficult process. Secondly, the social trend of late marriage and late childbearing has led to an increase in the

phenomenon of advanced pregnancy. Women's fertility naturally declines with age. The risk of complications associated with advanced pregnancy has increased significantly, posing a serious threat to the health of both mothers and fetuses. This reality makes some women choose not to give birth again for health reasons after giving birth to their first child. Furthermore, in the process of transitioning from giving birth to multiple children, physical recovery and the interval between rebirths become key considerations for women when making decisions. Women need sufficient time to recover their bodies after giving birth, and getting pregnant again in a short period of time may further increase the burden on their bodies.

Table 2. Multicategorical Logistic Regression Analysis

	No desire to have children	Willingness to have 2 or more children
Physiological health condition	-0.309* (-2.095)	-0.076 (-0.880)
mental health status	-0.348** (-2.629)	0.113 (1.420)
Social health status	0.304 (1.552)	-0.163 (-1.562)
intercept	-0.436 (-0.819)	1.415** (4.719)
Likelihood ratio test	$\chi 2(6) = 24.446$, $p=0.000$	

The significance of the regression coefficient of mental health and social health needs to be analyzed from the following aspects. The first is the continuity of childbearing experience. Giving birth to the first child is a brand new beginning in the life course of both parties of childbearing age. This huge change in identity and role brings Individuals bring strong emotional reactions, including the joy and sense of being a new mother, and when considering having a second or more child, the sense of accomplishment in childbearing experience is more based on the existing childbearing and role identity, showing a trend of diminishing margins. Secondly, with the accumulation of childbearing experience and the popularization of the concept of gender equality, having multiple children is more based on women's self-realization, family life, and career balance, thus creating a relationship between non-childbearing to first childbearing and subsequent childbearing. Difference in regression coefficients. Finally, having multiple children means the reconstruction of family resources and support needs. Support such as childcare services and reward policies cannot make up for the family burden caused by multiple children, especially for women who pursue high parenting and career balance. In addition, challenges such as dealing with conflicts among children and allocating limited family resources put forward higher role expectations for individuals' parenting ability and family management ability, which brings additional pressure. Therefore, the diminishing marginal utility of the sense of accomplishment, women's self-balancing needs, and the dynamic changes of family support and social expectations jointly affect the transformation process from having one child to multiple children, limiting women's willingness to have multiple children.

5. Conclusion and Enlightenment

To sum up, this study systematically explored the impact mechanism of health status and childbearing willingness of childbearing age groups from the three dimensions of physical, psychological and social health. Further research found that there are differences in the impact of health status on childbearing willingness at different stages. In the first childbearing stage, Physical and mental health have a positive role in promoting childbearing willingness, mainly reflected in the improvement of fertility and perception of childbearing risks; After entering the second reproductive stage, the influence of physiological health turned from positive to negative, and the influence of overall health status on reproductive willingness weakened with the change of reproductive stage, mainly reflected in the dynamic changes of reproductive experience and family social support. This finding reveals that fertility willingness is restricted by different factors at

different stages, and the same factor may play different roles in different reproductive stages. At present, the full liberalization of the family planning policy is only the first step. In order to achieve the expected goal of the policy, it is necessary to establish a public service system that is oriented towards stabilizing the policy fertility level and encourages people to give birth in accordance with the policy.

According to this study, we found that when building a fertility support policy system, the individual's physical, psychological and social health conditions should be fully considered. First of all, it is necessary to pay attention to the physical and mental health needs of groups of childbearing age, including those with difficulties in preparing for pregnancy, pregnancy examination and delivery, and postpartum care. Repair, etc. provide a full range of medical support and psychological care services; Secondly, in view of the important impact of mental health on fertility wishes, professional mental health services should be used to guide them to establish positive fertility concepts and effectively alleviate fertility anxiety; At the same time, promote male parenting culture through media, education and other channels, encourage family members to share reproductive responsibilities, and strive to improve social culture, so as to create a more favorable social atmosphere for childbearing.

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