ECE 4061 Honours Project

The Influence of Parental Gender Roles Beliefs

on Early Children's Gender Role Behaviors in China

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Abstract

This study aims to explore the differences in gender role behaviors of different genders in early childhood and to explore the impact of parental gender role beliefs on the development of children's gender-role behaviors. This study plans to adopt a quantitative study, and select a kindergarten from China to study about 100 children aged 3-6. This research needs parents to complete a questionnaire including three parts: 1) The basic information collection is to collect participants' background information; 2) The "Pre-School Activities Inventory scale" (PSAI) is to assess children's gender-role behaviors; 3) The "Gender Role Beliefs Scale" (GRBs) is to assess parental gender-role beliefs. Through the results of the questionnaire, this study will specifically analyze children's different gender role behaviors and the relationship between parents' gender-role beliefs and children's gender role behaviors.

Keywords: Gender role · Early children · Parents

I.   Introduction

a) Background

In recent years, gender issues have received a lot of attention from society, and gender education has become one of the topics that are increasingly valued in the education field. Children know what boys and girls mean in society from a very young age. Through various kinds of guidance, such as activities, opportunities, public behaviors, etc., children will gradually form the socialization of gender roles. Liebert, Wicks-Nelson, and Kail (1986) once defined "gender

roles" as interests, behaviors, and attitudes generally considered suitable for males or females in society. To give an example, the general public generally believes that raising children is a woman's duty, and boys should pay for the family. Therefore, "gender roles" are often regarded as "gender stereotypes" (Smith, 2007). In the educational context, "gender-stereotyped expectations particularly concern interests, abilities and vocational aptitudes attributed to girls and boys", which strongly impact their educational careers (Kollmayer et al, 2018). It can be said that gender is one of the most influential and the earliest social identities in children's life (Halim and Ruble, 2010).

b) Research Motivation

As a researcher, the reason why I am interested in gender issues is that during my internship in a K3 class, I found that children of different genders would choose different games and activities when playing. Most boys and girls were playing with toys that represent their sex in the traditional sense, but not all children had such behaviors. Of course, this is only a class discovery, but through this discovery, I learned that boys and girls have different gender role behaviors in their early childhood. This interesting phenomenon inspires me to explore the differences and similarities between boys' and girls' gender-role behaviors.

In addition, before children start school, parents are their most important social agents, because parents serve as role models to share their expectations and knowledge and reward children for expected behaviors (Carli & Bukkato, 2012; Kollmayer et al., 2018). When the child is 3-6 years old, parents have a particularly strong influence on their children's gender schema (Gelman et al., 2004). So parental gender role belief would be another key variable in this research. Psychoanalysts believe that the child will eventually identify with same-sex parents and learn the

behavior of same-sex parents. Social learning theorists believe that parents are one of the models for children's behavioral imitation learning. Therefore, the influence of parents' gender role beliefs on early children's gender-role behaviors cannot be ignored.

c) Research Objectives

Therefore, based on the above research motivation, the objectives of this research are 1) to explore boys' and girls' gender role behaviors; 2) to analyze the influence of parental beliefs on their child's gender role behaviors. Based on the research objectives, the questions discussed in this study are as follows: 1). What are the differences between boys' and girls' gender role behaviors? 2). Does parental gender belief predict children's gender role behavior?

II. Literature Review

a) The early children's gender role behaviors

In fact, a child's awareness of gender concepts is very fast. Infants at 3-4 months and 6 months of age can distinguish gender-based voices and facial features (Quinn et al., 2002). By the age of 9 months, most babies can distinguish between male and female pictures through hair and clothing information (Leinbach and Fagot, 1993; Martin and Ruble, 2004). At the age of two or three, children will show behaviors that they consider to be suitable for their genders (Zosuls et al., 2009). At about 3 to 6 years old, children have a deeper understanding of gender as a social category, their understanding of gender stereotypes has also increased, and as members of gender categories, children's feelings about themselves are more complicated (Ruble et al., 2006; Maccoby, 1998). Therefore, gender-role concepts begin to develop from early childhood, and the experience learned in early childhood may be one of the factors that affect early children's gender-role concepts.

Huang (1994) believes that gender roles refer to behaviors and attitudes toward men or women under a certain cultural and social background, and a generally accepted and recognized behavior mode. Moreover, some studies have shown that young children can apply their gender concept cognition to common toys, activities, housework, and adult occupations from the age of three (Huston, 1983). Therefore, from this perspective, children's behavior can also directly or indirectly represent their gender identity development preferences. So according to the "Pre-School Activities Inventory scale" (PSAI) (Golombok & Rust, 1993), this article will analyze children's gender role behavior from three aspects: "toys", "activities" and "personality characteristics".

As far as "toys" are concerned, Li (1983) once measured 561 children and elementary school students and found that children's gender identification in toy selection is the most obvious. He and Zhang (2012) have done research to let young children divide toys into three categories: masculine toys (eg, racing cars, toy guns), feminine toys (eg, barbie, cute house), and neutral toys (eg, picture book, puzzle). It turns out that regardless of gender and age, most children still assign masculine toys to boys based on gender stereotypes, feminine toys to girls, and neutral toys that can be played by both boys and girls. The toys for girls are mainly all kinds of dolls, such as Barbies, baby dolls, etc; the boys play with more aggressive characters, like guns (Wanger-Ott, 2002; Weisgram & Dinella, 2018).

Regarding children's "activities", studies have found that when children are asked to describe boys and girls, they will spontaneously mainly use activity or behavior-related terms to describe boys, including hitting, wrestling, rough play, and so on. But it is different when describing girls,

and some words describing appearance are used to describe them, such as pretty (Miller et al., 2009). But in fact, in the research on parent-child narrative by Cristofaro and Tamis-LeMonda (2008), it is found that the dialogue between parents and sons includes more "action-based" activities, while the dialogue with daughters mentions appearance more. This may be one of the reasons why young children describe boys and girls in this way.

In terms of "personality characteristics", Chen (2004) observed kindergartens in Taiwan and asked children to draw on the theme of "home". She conducted interviews based on the children's paintings to explore children's gender role development. Studies have found that young children think boys are more naughty than girls. Furthermore, Fabes and Martin (1991) also studied the presentation of emotional personality characteristics of boys and girls and found that girls have more expressions of fear, frustration, empathy, shyness, and love in emotional expression than boys. On the other hand, boys have more aggressive and conceited emotions in their emotional expressions. In addition, even if boys and girls feel the same about an event, the emotions they show will be quite different. For example, girls who are bullied by their classmates always use crying instead of anger; but boys use angry, angry, or aggressive language to replace crying. The interesting thing is that I have seen this situation during my internship in the kindergarten.

b) The influence of parental gender role beliefs on a child's gender-role behaviors

From birth, children are affected by a variety of cognitive, cultural, and biological factors, as well as different backgrounds, like school experience, family environment, and so on. All these have shaped the world that the child chooses to accept and believe (Welsh-Ross & Schmidt, 1996; Trepanier-Street & Romatowski, 1999). Among them, family is an important factor for young children to shape their spiritual world. A family is a place where a child's basic

personality and concepts are developed, and parents' attitudes and treatment are an important part of the socialization process (Huang, 2001). For the discussion of the concept of gender roles, Freud's psychoanalytic theory is mainly in the field of psychology. Freud believes that people are driven by natural instincts. Boys will eventually turn to identify with their fathers, while girls will identify with and learn from the characteristics and behaviors of their mothers (Holt, 1989). Therefore, parents' gender beliefs also affect their children.

Children's concept of male or female originated from their parents (Santrock, 2007; Kaplan, 1991). Starting from being a baby, parents will treat their boys and girls in different ways. Such as dressing children in gender-specific colors, providing them with toys of different genders, and encouraging boys and girls to have different behaviors (Thorne, 1993). A study has shown that as early as one day after birth, parents have different expectations for children of different genders. (Rubin, Provenzano, and Luria, 1974). Moreover, children internalize their parents' information about gender at a very young age and form an awareness of adult gender role differences at the age of two (Weinraub et al., 1984). A study has shown that a two-and-a-half-year-old child can use gender stereotypes to treat the world and are likely to extend gender stereotypes to various occupations, objects, and activities (Cowan & Hoffman, 1986; Fagot, Leinbach & O'Boyle, 1992).

So from this perspective, parents' beliefs about gender roles play an important role in children's gender role behaviors. Therefore, for the gender role behaviors of children aged 3-6 in China, this study will analyze whether parents' beliefs about gender roles have a predictive relationship with their children's behavior.

III.   Method

a) Participants and sampling

Because time and resources are limited, convenience sampling will be selected in this study.

There are 53 boys and 47 girls from a kindergarten participating in this research to ensure the same educational environment. The site of data collection is one kindergarten in Dandong City, Liaoning Province, China. As a fourth-tier city in China, Dandong's city scale and economic development are only at the ordinary level in China. Besides, compared with younger children, this research will focus on K1 K2, and K3 (3-6 years old) children to facilitate the collection of children's data.

b) Measures

This research will be the quantitative method. So it collects data by sending out questionnaires. The questionnaire is divided into three parts: 1) Basic information collection is to collect children's and parent's background information, including child's gender, child's age, parental age, parental gender, parental educational level, parental monthly income, and parental LGBT attitude; 2) The "Pre-School Activities Inventory scale" (PSAI) is a psychometric scale which is to assess children's gender-role behaviors (Golombok & Rust, 1993) (see Appendix 1); 3) The "Gender Role Beliefs Scale" (GRBs) is to assess parents' gender-role beliefs (Kerr & Holden, 1996) (see Appendix 2). But because young children are unreliable reporters, the whole questionnaire is filled out by parents.

Basic information collection

I collected demographic variables from the participants regarding the child's grade, child's age, child's gender, parental gender, parental age, parental educational level, family monthly household income, and parental LGBT attitude.

Pre-School Activities Inventory scale (PSAI)

It is a questionnaire designed for parents or caregivers of children aged 3-7 years old, used to assess children's gender-role playing behaviors (Golombok and Rust 1993). There are 24 items in PSAI, 12 masculine, and 12 feminine, including three aspects: "toys", "activities", and "characteristics". Parents need to use a 5-level rating scale (1 = never, 5 = very often) to select how often children play with toys, activities, and features in the list. The higher the score of the comprehensive measurement, the more masculine the behavior, and the lower the score, the more feminine the behavior. For "the combined group of boys and girls, the test-retest reliability is 0.84" (p. 133).

Gender Role Beliefs Scale (GRBS)

Kerr and Holden's (1996) "Gender Role Belief Scale" (GRBs) is one of the first scales to distinguish between gender stereotypes and gender role ideology. It is concise and psychologically reasonable. The early GRBS consisted of 20 items. The total score range of this seven-point rating scale (1 = strongly agree, 7 = strongly disagree) is from 20 to 140. But Brown and Gladstone (2012) improved and simplified GRBs. They shortened the 20-item scale to 10 items on the basis of GRBS retaining the contents of the original scale. And the resulting Cronbach's alpha of this scale is .81. According to the Gender Role Belief Scale (GRBs), "the PSAI is scored by first adding the 'male' items, subtracting the 'female' items, and then transforming to a pseudo-T scale by multiplication with 1.1 (to make the SD for boys and girls

separately close to 10) and adding 48.25 (to render the mean close to 50)" (p. 132). This is achieved by the following formula:

Score = 48.25 +1.1 * (children's masculine behavior score: the sum of "male" items - children's feminine behavior score the sum of "female" items)

Higher scores indicate more modern (more feminist) gender role beliefs, while lower scores are the opposite.

c) Procedures

Firstly, in January 2022, I contacted the kindergarten located in Dandong, Liaoning Province, China. I first sent an invitation letter to the kindergarten, and then called the kindergarten to further explain the objectives and procedures of this research to the principal. After the kindergarten agreement, I sent consent forms, invitation letters, and questionnaires to parents through the participating kindergartens. After all the questionnaires were collected, data collation and analysis began in February 2022. You can see Table 1 for details. The procedures were approved by the "Human Research Ethics Committee of The Education University of Hong Kong".

Table 1

Timetable

Content	Time
Information Sheet and Consent Form	January 2022
Data Collection	January 2022
Data Analysis	February 2022 - March 2022

d) Data analysis

I conducted the analyses by using SPSS 27.0. Firstly, I did the demographic information of the participants to detect percentages of different variables. Then, I examined descriptive statistics and correlations between substantial variables. Based on observed correlations between the corresponding variables, I conducted a further analysis based on the results of the correlation. To account for the first research question, an independent samples t-test was performed to determine whether there was a significant difference in gender role behavior scores between boys and girls (Kashy & Snyder, 1995). In addition, in order to explore the influencing factors of parent gender role belief (i.e., parental age and family monthly income), I used regression analysis with controlling variables to explore. Among them, parents' gender role beliefs will be used as the independent variable.

IV.   Results

a) Demographic characteristics

A total of 100 targeted participants completed the questionnaire, with no missing data (Table 2). The participants included 53 girls (53%) and 47 boys (47%). Among the participants, 32% of them were from K1, 36% were from K2, and 32% of them were from K3. The distribution was quite even. Among them, 4 children were 2-year-olds, 28 children were 3-year-olds, 36 children were 4-year-olds, 21 children were 5-year-olds, 9 children were 6-year-olds, and 2 children were 7-year-olds.

Besides, there are 100 parents including 63 mothers (63%), and 37 fathers (37%). Among all parents, 1% of them were 18-25 years old, 34% were 26-30 years old, 63% of them were 31-40 years old, and 2% of them were 41-50 years old.

For the parental education level, 1% of them were in junior high school and below. The percentage of participants who attained the level of high school and technical secondary school was 11%. There were 52% and 36% of participants who attained college and university respectively.

Regarding parental LGBT attitude to 'Jin Xing' transgender and marrying a man, 38% of parents expressed no opinion. 8% of parents disagree with "Jin Xing"'s behavior. 41% of parents agreed with "Jin Xing" but said they would not do it. However, 13% of parents agreed with "Jin Xing"'s behavior and said they would do the same.

In terms of monthly household income, 7% of households earn less than ¥3,000 per month. 35% of households have a monthly income of ¥3000 - ¥5000, and 43% have a monthly income of ¥5000 - ¥7000. 9% of households have a monthly income of ¥7000 - ¥10,000, while only 6% of households have a monthly income of ¥10,000 or more.

Table 2

Demographic characteristics

Variable ($N = 100$)	n	%
Child's grade		
K1	32	32.0
K2	36	36.0
K3	32	32.0
Child's age		
2-year-olds	4	4.0
3-year-olds	28	28.0
4-year-olds	36	36.0

Variable ($N = 100$)	n	%
5-year-olds	21	21.0
6-year-olds	9	9.0
7-year-olds	2	2.0
Child's gender		
girl	47	47.0
boy	53	53.0
Parental gender		
mother	63	63.0
father	37	37.0
Parental age		
18-25	1	1.0
26-30	34	34.0
31-40	63	63.0
41-50	2	2.0
Parental educational level		
Junior school and below	1	1.0
High school and technical secondary school	11	11.0
College	52	52.0
Undergraduate	36	36.0
Parental LGBT attitude to 'Jin Xing' transgender and marrying a man		
I don't know	38	38.0
Disagree	8	8.0
Agree and I won't do that	41	41.0
Agree and I will do that	13	13.0
Family monthly income		

Variable (*N* = 100)	n	%
¥0 - ¥3000	7	7.0
¥3000 - ¥5000	35	35.0
¥5000 - ¥7000	43	43.0
¥7000 - ¥10000	9	9.0
¥10000 and above	6	6.0

b) Descriptive Statistics

Standard deviations and means of and correlations among variables were presented in Table 3. Meanwhile, correlation analyses revealed that children's gender role behavior score was associated positively with the child's gender (r=.642, p<.01). The parental gender role belief score was not significant between the child's gender role behavior score and the parental gender role belief score because the p-value is greater than 0.05. However, I also found some interesting results. Parental gender role belief score was associated negatively with the child's age (r= −.260, p<.01) and parental age (r= −.212, p<.01). On the other hand, the parental gender role belief score was linked positively to the family's monthly income (r=.343, p<.01).

Table 3

Means (Ms) and standard deviations (SDs) of and correlations among variables

Variable	M	SD	1	2	3	4	5	6	7	8	9	10
1. Child's grade	/	/	—									
2. Child's age	4.09	1.093	.931**	—								
3. Child's gender	/	/	.000	.060	—							
4. Parental gender	/	/	.078	.146	.265**	—						
5. Parental age	2.66	.536	-.070	-.085	-.074	-.055	—					
6. Parental educational level	/	/	-.111	-.137	.024	-.077	-.227*	—				

7. Monthly income of the household as a whole	2.72	.944	-.359**	-.279**	.082	.074	-.130	.164	—		
8. Parental LGBT attitude	/	/	.327**	.302**	.084	.024	.065	-.036	-.124	—	
9. Child's gender role behavior score	45.115	10.713	-.005	.016	.542**	.161	-.124	-.153	-.056	.014	—
10. Parental gender role belief score	39.20	11.765	-.328**	-.260**	-.013	.065	-.212*	-.026	.343**	-.069	.079	—

Note. *p < .05. **p < .01

c) Independent samples t-test: children's gender role behaviors of different genders

Because the Sig. (2-Tailed) value in Table 4 is .000, which is less than .001, it can be concluded that there is a statistically significant difference between the mean number of the child's gender role behavior scores for boys and girls. Besides, Table 5 shows the group statistics box that the mean value for boys was greater than the mean value for girls (M_{boys} = 50.55, M_{girls} = 38.98). Considering the higher scores of children's gender role behavior mean more masculine behaviors, the result shows that compared to girls, boys are more likely to do masculine behaviors.

Table 4

Independent samples t-test of the gender

	Levene's Test for Equality of Variances			t-test for Equality of Means					
								95% Confidence Interval of the Difference	
F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference		Lower	Upper

Children's gender role behavior score	Equal variances assumed	1.210	.274	-6.381	98	.000	-11.57186	1.81335	-15.17039	-7.97333
	Equal variances not assumed			-6.294	87.562	.000	-11.57186	1.83850	-15.22575	-7.91797

Table 5

Group Statistics

	Child's gender	N	M	SD	Std. Error Mean
Children's gender role behavior score	girl	47	38.98	10.09664	1.47275
	boy	53	50.55	8.01179	1.10050

d) Hierarchical regression analysis: the predictors of parental gender role belief

According to Table 3, parental gender role belief score was associated with parental age and family's monthly income. Therefore, according to the correlation, further hierarchical linear regression analysis was required in order to explore the influencing factors affecting the parental gender role belief score, where the parental gender role belief score was the dependent variable and parental age, parental gender (because parental gender is also an important influencing factor) and family's monthly income were predictor variables. Because in order to exclude the influence of some variables, some variables (such as child's age and child's gender) needed to be controlled in this regression analysis. Specifically, Table 6 shows that after entering the child's age and the child's sex as "control variables" into Block 1, the research investigated whether

parental age, parental gender, and family's monthly income statistically predict parental gender role belief (i.e., criterion variables). In this study, parental age and parental gender were entered in Block 2, and the family's monthly income was entered into Block 3.

Table 6

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Child's gender, Child's grade[b]	.	Enter
2	Parent's age, Parent's gender[b]	.	Enter
3	Monthly income of the household as a whole[b]	.	Enter

Note. a. Dependent Variable: Parent's gender role belief score

b. All requested variables entered.

After hierarchical regression, the results of the predicting parental gender role belief from parental age, parental gender, and family's monthly income are reported in Table 7 after controlling the child's age and child's gender. The results of step one indicated that the variance accounted for (R^2) with the control variables (child's age and child's gender) equaled .068, which was significant with DV ($\Delta F = 3.515$, $p < .05$). Next, parental age and parental gender were entered into the regression equation. The change in variance accounted for (ΔR^2) was equal to .065, which was an increase in variance accounted for over model 1 ($\Delta F = 3.587$, $p < .05$). Among them, parental gender role belief was not statistically significant with parental gender ($p > .05$）. However, parental gender role belief was associated negatively with parental age ($\beta = -.234$, $p < .05$). In step three, after entering the family's monthly income, The change in variance

accounted for (ΔR^2) was equal to .058, which was an increase in variance accounted above the variability contributed by the previous predictor variables entered in step two (ΔF=6.726, p<.05). parental gender role belief was associated positively with parental age (β=.256, p<.05)。 In summary, parental age and family's monthly income were predictors of parental gender role belief, but parental gender was not statistically significant. there is a significant negative association between parental age and parent gender role belief score. More specifically, the younger parents were more likely to have more modern gender role beliefs. In addition, monthly income significantly positive related to parent gender role belief. Parents with higher monthly income were more likely to have more modern gender role beliefs.

Table 7

Hierarchical Regression Analyses Evaluating Predictors of Parental Gender Role Belief

Variables	R	R^2	ΔR^2	ΔF	*df*	*β*
1	.260	.068	.068	3.515*	297	
Child's age						.002
Child's gender						-.260**
2	.365	.133	.065	3.587*	295	
Parental gender						.106
Parental age						-.234*
3	.437	.191	.058	6.726*	194	
Family's monthly income						.256*

Note. Betas reported are those from the step at which the variable was entered into the equation.

*p< .05. **p < .01.

V.   Discussion

As previously theorized, "gender differences still exist in students' performance and motivation, vocational aspirations, and also in salaries, and participation in different substantive fields" (European Commission, 2015). Not only in Europe, but also in China. The findings of this article also provide evidence for this view: there is indeed a significant positive correlation between young children's gender behavior and gender in China, that is, boys prefer masculine behaviors; girls prefer feminine behaviors.

Through the three categories in the questionnaire, it is shown that there are significant differences in toy choice, game choice, and personality performance between Chinese young children and men and women who are influenced by traditional gender role beliefs. Most of the participating children exhibited gender-role behaviors that were traditionally appropriate for their gender, which is consistent with previous research that children's gendered behavioral preferences emerged as early as early childhood (Freeman, 2007). Boys prefer a variety of challenging, exploratory and dynamic toys, like toy cars and guns, while girls prefer quieter, static toys such as dolls and cutlery. Boys rarely have the patience to sit and play with dolls for long periods of time, while girls can hold dolls, comb their hair, change clothes, etc. When young children choose games, boys mostly like creative games that use their brains and games that require vigorous exercise, such as kicking a ball, chasing, running, etc. while girls prefer imitative and quieter games, such as learning how to cook for their mothers and feeding the dolls. eat and so on. In the choice of game characters, boys show more interest in playing fathers, policemen, firefighters, etc., while girls show more interest in playing female roles such as mothers. At the same time, young children also show obvious differences in personality characteristics, that is, boys are more likely to explore, like to create, and will not avoid getting themselves dirty. So in early childhood, children show such obvious gender-differentiated

behavior. Beginning in the 1970s, Bem (1974) has claimed to break traditional gender role stereotypes and free individuals from culturally imposed constraints of masculinity and femininity. Therefore, if we want to achieve this, we need to change the environment that young children are exposed to and then change the traditional gender role behavior of young children.

Bronfenbrenner (1977) proposed that a child's environment is a nested arrangement of structures, each contained within the next, naming these structures "microsystems, mesosystems, exosystems, macrosystems, and temporal systems" (Figure 1). Among them, the microsystem is the first level. Things in the microsystem have direct contact with the child, like teachers, parents, and schoolmates. Therefore, according to Bronfenbrenner's Ecological Systems Model (1977), the family, as a child's direct living environment, has an important impact on children's behaviors. Therefore, the role of parents in the formation of children's concepts cannot be ignored. Previous research (Santrock, 2007) has also shown that parenting can influence young children's conception of gender roles. The same assumptions I made about young children before the results of my research came out. However, the results of this research show that in China, parental gender role beliefs have no correlation with children's gender-role behaviors, that is, parents' gender role beliefs cannot predict children's gender-role behaviors. This result is completely different from the previous theoretical results, and it is also interesting.

Figure 1.

Bronfenbrenner's Ecological Systems Model
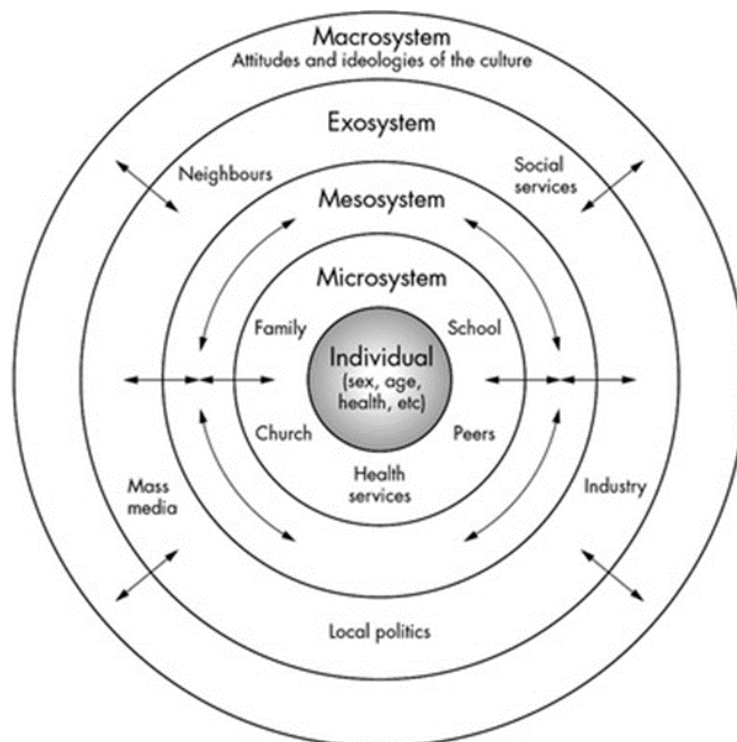
Of course, this does not mean that the effects of parental gender role beliefs on young children are completely absent, as this research is not perfect. Parents, as direct influencers on their children, cannot ignore their gender role beliefs. So it still makes sense to consider their gender role beliefs. As my additional findings found, parents' gender role beliefs were also influenced by multiple factors. Parental gender role belief was associated negatively with parental age and was associated positively family's monthly income.

Younger parents are more receptive to modernized gender role beliefs, which is also consistent with previous research finding that older adults are less attuned to modern gender role beliefs (DeArmond et al., 2006). It should be known that China has paid more attention to gender issues in recent years than before. The environment and education that older parents are exposed to are more traditional, which leads to more traditional beliefs about gender roles. Deep-rooted traditional gender ideas are not conducive to them accepting and changing trendy and modern

gender ideas. In addition, the monthly income of a family represents an individual's economic ability, which often affects the social environment they are exposed to. As income levels increase, the possibility of meeting families of different structures and cultures increases, the fact that there is more possibility to gain more exposure and experience to more stimulating and enriching environments by visiting different countries and cities, which may change their views of gender stereotype (Yagan Güder & Ata, 2018). Thus, it can be said that they are more likely to see more positive gender role equality role models, which allows them more able to overcome traditional gender role beliefs. Therefore, families with higher monthly incomes are more accepting and identify with more modern gender role beliefs. If parental gender role beliefs want to be changed, these factors should be focused on. For example, to change parental gender role beliefs through parental education, the parent's monthly income and age can be considered to further change the mode or method of parental education.

In addition, it is also worth discussing that, reflecting on this study in conjunction with Bronfenbrenner's Ecological Systems Model (1977), there are other very important factors or environments that have a direct impact on young children, such as the kindergarten. It is worth reflecting that in my research, kindergarten was not included in the research category. That is to say, if it is assumed that children's behavior and gender behavior are really not affected by parents' gender role concepts, then the influence of kindergarten teachers on children should also be considered. Because in China, young children spend more time interacting with teachers in a kindergarten setting than with their parents at home. Zhao (2021) collected cases of gender stereotypes existing in the kindergarten class environment through observation, interview, and other research methods on the basis of the field investigation of the kindergarten class environment. She deeply explored the impact of the kindergarten teaching environment on young

children's gender role beliefs. In her study (2021), through observation of the kindergarten class environment and interviews with preschool teachers, she found that although teachers hold a "gender-neutral" educational concept, they can still find that gender stereotypes are prevalent in In the material environment and spiritual environment of kindergartens, its presentation forms are: 1) children's picture books, 2) game materials and 3) gender stereotypes reflected in the wall creation, 4) preschool teachers' stereotyped evaluation of children's personality, 5) preschool teachers' educational behavior with gender stereotypes, 6) preschool teachers' role expectations for children of different genders. Teachers are expected to be the starting point for implementing change (Hattie, 2012). They are more accessible to children than parents. There is strong evidence that, in addition to their attitudes, their teaching practices also has an impact on children's gender role differences. When teachers are able to develop autonomy, personalization, and self-regulation, children's gender differences in the classroom are reduced (Lüftenegger et al., 2012). Therefore, if we want to discuss the differences between boys' and girls' gender role behaviors, the influencing factors of kindergartens are worth further analysis in subsequent research.

VI.   Limitations and future research

There are some limitations in this research that could be developed in future research. The first issue was the sample size of this quantitative research was too small, and it was difficult to find significant relationships from the data. Another limitation was that I chose convenience sampling, that was, only one kindergarten in Dandong City, Liaoning Province, China, was selected to collect data. Additionally, for the average gender ratio of children in education, the gap between the gender ratios of parents collected is too large. Finally, I did not include

kindergarten as a factor in the research, which would cause the data to be incomplete and the correlation would not be more accurate.

Therefore, for the first three limitations, in my future research, I will improve to conduct a wider range of data collection in different provinces in China, and control the gender ratio of parents to a relatively average range. According to the variable of the kindergarten, in the future research, I will collect and analyze the kindergarten background data, like collecting teachers' gender role beliefs, observing the kindergarten environment, etc.

VII.   Implications and suggestions

Early childhood is a critical period for gender role stereotyping. The concepts about their own gender roles formed during this period have a great impact on the later choices of their own interests, hobbies, and activities, and the formation of ideas, beliefs, and self-concepts (Ruble et al., 2006）. When looking at traditional gender role concepts, we do not deny that there are differences between men and women, especially in biological structure. However, stereotyping male and female gender roles are unreasonable. Bem (1974) proposed that a new type of personality should be shaped through education - androgyny. Androgyny is a brand-new gender role model. It does not require training girls to become boys and boys to girls, but to make a person possess both traditional masculine and feminine psychological qualities to be more adaptable (Bem, 1974; Kark, 2020). The changeable social life makes the development of personality more perfect. Experiments have shown that androgynous individuals are healthier and more adaptive than single-sex individuals (Kark, 2020). We should find and create conditions, in reality, to help adults and young children eliminate gender stereotypes, maximize

their potential, and form a perfect personality through androgyny education. Here are a few suggestions to reduce differences between boys' and girls' gender role behaviors:

a) *The design of the game in the curriculum*

In the early childhood curriculum, the form of play is an important way of presentation. Adults should make full use of games to break traditional gender role restrictions. When teachers organize games, they should carry out complementary games in a targeted manner according to the gender differences of children and give play to the "complementary" role of boys and girls, so that children can develop equally in all aspects. Take an example: in role-playing games, teachers should encourage children to make more role transitions, such as taking turns being a father or mother, and letting girls play the roles of "hunters" and so on so that children can fully acquire the behaviors possessed by different gender roles. For those young children who are not interested in games of the opposite sex, teachers should focus on cultivating their interests in various ways and attracting them to participate in games.

b) *Selection of children's books*

Children's books are generally regarded as authoritative and positive cultural resources, and their implied outlook on life and values also affect children's concepts and behaviors in an unconscious form (Taylor, 2003). Therefore, when choosing children's books, adults should be more cautious, boldly challenge the spiritual constraints of traditional gender roles on boys and girls, and establish a balanced and diverse gender image of men and women. On the one hand, parents and teachers should try to diversify the occupational and gender characteristics and behaviors reflected in the children's books, rather than the singularity and fixation on certain gender behavior (Filipović, 2018). For example, girls can also play adventure games. On the

other hand, adults can make use of the gender-stereotyped content in children's books to guide children to discuss and inspire children to properly reflect on their existing gender role concepts, so as to gradually help children from diverse gender roles identities.

c) *Elimination of gender stereotypes in the social environment*

Chinese society has a history of this traditional feudal ethics, so some traditional gender biases still exist today. In such a social environment, both children and adults will be negatively affected. Therefore, in order to change the gender stereotypes in the social environment, it requires joint efforts and education of different classes. For example, for teachers and parents, what is needed is teacher training as well as parent education. Only through continuous training and education can traditional gender role concepts be changed layer by layer, and then influenced from generation to generation.

VIII.   Conclusion

It is not easy to completely eliminate the traditional concept of gender roles, but it does not mean that we should follow and obey such traditional gender role concepts and behaviors. Gender differences in early childhood have important implications for future growth and development. Therefore, the environment around the child plays an important role. It is hoped that the issue of gender role differences in young children in China will attract attention, and at the same time, I hope this article can provide some reflections and contributions to the future gender development of young children.

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Appendix 1

Pre-School Activities Inventory (PSAI) (Golombok & Rust, 1993)

Name:_____

Age:_____years_____months

Sex: M / F

Instructions

This inventory is about the everyday activities of preschool children. It is in three sections: toy preferences, activities, and characteristics. Each question asks how frequently the child plays with particular toys, engages in particular activities, or shows particular characteristics. There are five possible answers: (N) Never, (HE) Hardly Ever, (S) Sometimes, (O) Often, or (VO) Very Often. Answer each question by ticking in front of the response that best describes the child.

e.g., ▢N ▢HE ☑ S ▢O ▢VO

Please answer all of the questions. If you are unsure about which response best describes the child for any of the questions then please answer according to the response which seems most appropriate.

(KEY: N = Never, HE = Hardly Ever, S = Sometimes, O = Often, VO = Very Often)

PART 1: TOYS: Please answer these questions according to how often the child played with the following toys during the past month.

1. Guns (or used objects as guns)....................................▢ N ▢ HE ▢ S ▢ O ▢ VO

2. Jewelry...▢ N ▢ HE ▢ S ▢ O ▢ VO

3. Tool set..▢ N ▢ HE ▢ S ▢ O ▢ VO

4. Dolls, doll's clothes, or doll's carriage......................▢ N ▢ HE ▢ S ▢ O ▢ VO

5. Trains, cars or airplanes...□ N □ HE □ S □ O □ VO

6. Swords (or used objects as swords) ....□ N □ HE □ S □ O □ VO

7. Tea set...□ N □ HE □ S □ O □ VO

PART 2: ACTIVITIES: Please answer these questions according to how often the child engaged in the following activities during the past month.

1. Playing house (e.g., cleaning, cooking)........................□ N □ HE □ S □ O □ VO

2. Playing with girls..□ N □ HE □ S □ O □ VO

3. Pretending to be a female character (e.g., princess)......□ N □ HE □ S □ O □ VO

4. Playing at having a male occupation (e.g., soldier)........□ N □ HE □ S □ O □ VO

5. Fighting..□ N □ HE □ S □ O □ VO

6. Pretending to be a family character (e.g., parent)...........□ N □ HE □ S □ O □ VO

7. Sports and ball games…..□ N □ HE □ S □ O □ VO

8. Climbing (e.g., fences, trees, gym equipment)...............□ N □ HE □ S □ O □ VO

9. Playing at taking care of babies.....................................□ N □ HE □ S □ O □ VO

10. Showing interest in real cars, trains and airplanes..........□ N □ HE □ S □ O □ VO

1 1 . Dressing up in girlish clothes......................................□ N □ HE □ S □ O □ VO

PART 3: CHARACTERISTICS: Please answer these questions according to how often the child shows the following characteristics:

1 . Likes to explore new surroundings.................................□ N □ HE □ S □ O □ VO

2. Enjoys rough and tumble play..□ N □ HE □ S □ O □ VO

3. Shows interest in snakes, spiders or insects...................□ N □ HE □ S □ O □ VO

4. Avoids getting dirty.. ☐ N ☐ HE ☐ S ☐ O ☐ VO

5. Likes pretty things.. ☐ N ☐ HE ☐ S ☐ O ☐ VO

6. Avoids taking risks.. ☐ N ☐ HE ☐ S ☐ O ☐ VO

Appendix 2

Gender Role Beliefs Scale (GRBs) (Brown and Gladstone, 2012)

1. It is disrespectful to swear in the presence of a lady.

2. The initiative in courtship should usually come from the man.

3. Women should have as much sexual freedom as men.

4. Women with children should not work outside the home if they don't have to financially.

5. The husband should be regarded as the legal representative of the family group in all matters of law.

6. Except perhaps in very special circumstances, a man should never allow a woman to pay the taxi, buy the tickets, or pay the check.

7. Men should continue to show courtesies to women such as holding open the door or helping them on with their coats.

8. It is ridiculous for a woman to run a train and a man to sew clothes.

9. Women should be concerned with their duties of childbearing and house tending, rather than with the desires for professional and business careers.

10. Swearing and obscenity is more repulsive in the speech of a woman than a man.

1= strongly agree, 2 = moderately agree, 3 = Slightly agree, 4 = Undecided, 5 = Slightly disagree, 9=moderately disagree, 7 = strongly disagree