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Research Article

Nose Size Predicts Adult Erectile Penile Length

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Previous studies have proved that nose size has a positive correlation with stretched penile length but stretched penile length does not fully represent erectile penile length. It is considered that the formation and growing ability of the penis is determined by the action of androgen in the fetal period and nose size has also been determined to some extent before birth. If the nose size is indeed related to the length of the penis, there must be a common mechanism behind it. To further confirm the relationship between nose size and penile length, especially erectile penile length, a correlation analysis was carried out by collecting general data and the data related to the nose, ears, and genitals of 377 males aged 20–56 years, including erectile penile length and erectile penile circumference. The results revealed that nose size had the highest correlation with erectile penile length ($r = 0.507$, $p = 0$) and flaccid penile length ($r = 0.451$, $p = 0$). Therefore, it is believed that nose size is an independent predictor of flaccid and erectile penile length, and the common factors that contribute to this correlation may appear in the fetal period.

1. Introduction

The saying "Big nose and big penis" has been popular among Chinese people for a long time, and many people have confidence in it. This saying may be related to Chinese physiognomy, and Chinese physiognomy regards the nose as "Saturn" and thinks that the land nourishes everything and is the representative of reproductive function. Therefore, it is believed that if a man's nose is large, then his penis is also large. Besides, the male nose is similar to the penis, which may also be one of the important reasons for this saying. According to today's view, physiognomy is not without a scientific basis, and some theories seem to have a certain scientific basis. For example, some diseases and physiological processes often bring about changes in the external characteristics of the body. Traditional Chinese medicine believes that kidneys are enlightened by ears. The kidney governs reproduction and essence storage, and it is closely related to sexual function. Therefore, Chinese folk also has the saying "big ears, strong sexual function."

Currently, there are few studies on the above saying. Ikegaya et al. [1] measured and analyzed 126 male corpses aged 30–50 years old and found that the nose size was positively correlated with the stretched penile length; that is, the larger the nose, the longer the penis. Tae Beom Kim measured and analyzed the relevant indicators of 144 males aged 20 and above and discovered that the second to fourth digit ratio of the right hand was negatively correlated with the stretched penile length; that is, the smaller the ratio of second to fourth digit length of the right hand, the longer the stretched penile length [2]. In the above studies, the length of the penis after stretching was used to simulate the data after the penis was fully erected. Although this method is considered to be able to accurately predict the length of the penis after erection [3], the length of the penis after stretching does not fully reflect the length of the penis after full erection, and the stretchability of the penis tissue under the flaccid state of the penis and the pulling force of the puller may be different for different men.

The length of the penis almost stops growing in adolescence, slightly decreases in old age, but remains unchanged in middle age [4]. Numerous studies have revealed that although postnatal androgen exposure is also important for penile growth, the formation and growth of the penis is more determined by the action of androgen in the fetal period [5, 6]. In a sense, the length of the penis may have been

determined before birth. Forensic medicine believes that the human skull, cheekbones, etc., are not affected by age and other factors. As a part of the face, the size of the nose may also be determined before birth. Therefore, the correlation between nose size and stretched penile length may have been determined before birth. Studies have proved that the second to fourth-digit ratio of the right hand is also closely correlated with androgen receptor activity [7]. Therefore, the reason why the second to fourth digit ratio of the right hand is negatively correlated with the stretched penile length is likely to be related to the androgen receptor. Until now, there have been no relevant reports on the reason why the nose size is related to the penile length.

To further explore the relationship between the nose size and the penile length, we have increased the correlation analysis between the penile length and the nose size based on previous studies and increased the ear size as a comparison in order to further confirm the relationship between the nose size and the penile length, especially the erectile penile length, thereby providing better clinical evidence for the later basic research.

2. Materials and Methods

2.1. Research Objects. In this study, 420 Chinese men aged 20–56 years old who were treated for "health counseling and fertility examination" and were admitted to the andrology clinic of Nanjing Drum Tower Hospital, the Affiliated Hospital of Nanjing University Medical School, were selected as research objects. After strict inclusion and exclusion criteria, 377 Chinese men were included in the final study. This study was approved by the Ethics Committee of Nanjing Drum Tower Hospital, the Affiliated Hospital of Nanjing University Medical School, and informed consent was obtained from the patients.

2.2. Inclusion Criteria

(1) Chinese male, 20–60 years old, with normal erectile function;
(2) Have a stable sex partner and a regular sexual life.

2.3. Exclusion Criteria

(1) The International Index of Erectile Function 5 (IIEF-5) score was less than 22 points;
(2) When collecting data, the penile erection hardness score (EHS) was less than three points;
(3) Had penile trauma, penile deformity, concealed penis, and/or previous penile surgery;
(4) Patients with nasal diseases such as rhinitis, nasal tumor, nasal deformity, and nasal trauma, patients with respiratory diseases such as asthma and chronic obstructive pulmonary disease, or those who had undergone related surgery.

2.4. Research Contents and Methods. The study was conducted by two andrology clinic doctors. First, one doctor was responsible for collecting general information such as age, height, weight, birthplace, race, education, diet, IIEF-5 scale, and EHS scale, and assisting in blood collection and testosterone inspection at 8 a.m. Then the other doctor was responsible for collecting data on the nose, ears, testicles, penis, etc., in which the testicular volume was evaluated by the doctor based on the testicular volume model. The erectile penile length and erectile penile circumference were measured after the patient wore virtual reality glasses in the private room for sexual stimulation video, and the erectile hardness was evaluated by the doctor after reaching grades III–IV (EHS 3–4 points).

Nose size was the longer distance between the midpoint of the left and right medial ocular angles and the outside of the left or right nose wings. Vertical and transverse diameters of the ear were defined as the longest vertical and transverse distance.

Refer to Davoudzadeh et al.'s method [8], penile length was measured in the absence of fluctuations in penis length caused by cold and tension, with the people lying in the supine position and the penis placed at a 90° angle to the body.

The IIEF-5 questionnaire comprises five questions related to sexual dysfunction, and a total of 22–25 points are evaluated as normal erectile function [9].

EHS is a simple, validated, semiquantitative, self-reported tool that scores EH on a 4-point scale: (0) penis does not enlarge; (1) penis is larger but not hard; (2) penis is hard but not hard enough for penetration; (3) penis is hard enough for penetration but not completely hard; (4) penis is completely hard and fully rigid [10].

2.5. Statistical Analysis. Relationships among continuous data and factors related to the genital organs were analyzed using Pearson's linear correlation. To identify independent predictive factors influencing flaccid penile length and erectile penile length, multivariate analyses were performed using linear regression models. In the comparison between groups of categorical data, a normal distribution test was performed for all measurement data, and the median (lower quartile, upper quartile) was used for measurement data with non-normal distribution. Mann–Whitney test was used for comparison between two groups, and Kruskal–Wallis test was used for comparison between multiple groups. $p < 0.05$ was considered to be statistically significant. Analysis was performed using SPSS 26.0.

3. Results

The participants' ethnic groups included Han, Manchu, Yi, Hui, and Uyghur, and 98.67% of them were Han. The places of birth involve a number of provinces in China; the top five are Jiangsu, Anhui, Henan, Shandong, Jiangxi, and Zhejiang, accounting for 60.74%, 3.18%, 2.39%, 1.86%, and 1.86%, respectively. Among the dietary habits, the participants who ate a balanced diet accounted for 66.84%, those who preferred meat accounted for 30.24%, and those who preferred a vegetarian diet accounted for 2.92%. The educational background of the participants involved primary school, junior high school, senior high school, college, bachelor, master, doctor, accounting for 1.33%, 17.24%, 14.06%,

Table 1: Relationships between penile length, penile circumference, and categorical variables.

Variables	Rigidity	Flaccid penile length		Erectile penile length	
		Length	Circumference	Length	Circumference
Birthplace					
Jiangsu	3.5 (3.5, 4)	6.5 (6, 7)	7.5 (6.9, 8)	12 (11.2, 13)	10.8 (10, 11.4)
Others	3.5 (3.5, 4)	6.5 (6, 7)	7 (6.5, 8)	12 (11.23, 13)	11 (10, 11.5)
Z	−1.900	−0.592	−1.331	−0.692	−0.994
p	0.057	0.554	0.183	0.489	0.320
Race					
Han	3.5 (3.5, 4)	6.5 (6, 7)	7.2 (6.8, 8)	12 (11.2, 13)	11 (10, 11.5)
Others	3.5 (3, 3.5)	7.5 (6.3, 7.7)	7.1 (6.25, 8.3)	13 (12.25, 13.8)	11 (9.75, 11.7)
Z	−1.968	−1.54	−0.193	−1.812	−0.118
p	0.049	0.123	0.847	0.07	0.906
Education					
Below bachelor	3.5 (3.5, 4)	6.5 (6, 7)	7.3 (6.8, 8)	12 (11.2, 13)	11 (10, 11.5)
Bachelor	3.5 (3.5, 4)	6.5 (6, 7)	7.2 (6.8, 8)	12 (11.1, 13)	11 (10, 11.5)
Master	3.5 (3.5, 3.5)	6.5 (6, 7.25)	7 (6.75, 7.9)	12.5 (11.45, 13)	10.8 (9.95, 11.5)
Doctor	3.75 (3.13, 4)	6.25 (5.63, 6.5)	6.5 (6.05, 7.38)	11.65 (11.5, 12.75)	10.5 (9.85, 11)
χ^2	3.376	1.248	6.285	3.411	1.677
p	0.337	0.742	0.099	0.332	0.642
Diet					
Balanced	3.5 (3.5, 4)	6.5 (6, 7)	7.25 (6.8, 8)	12 (11.2, 13)	11 (10, 11.5)
Preferred vegetarian	3.5 (3.5, 4)	6.5 (6, 7)	7.2 (6.5, 8)	12 (11, 13)	11 (10, 11.63)
Preferred meat	3.5 (3, 4)	6.5 (6, 7.2)	7.2 (7, 7.8)	12 (11, 13)	10.5 (10.3, 11.2)
χ^2	0.117	0.082	1.073	0.007	1.001
p	0.943	0.96	0.585	0.996	0.606

Table 2: Relationships between penile length, penile circumference, and other continuous variables.

Variables	Flaccid penile length				Erectile penile length				Rigidity	
	Length		Circumference		Length		Circumference			
	r	p Value	r	p Value	r	p Value	r	p Value	r	p Value
Age	0.006	0.904	0.005	0.920	0.006	0.915	−0.014	0.783	−0.044	0.393
Height	0.160	0.002	0.233	≤0.001	0.194	≤0.001	0.241	≤0.001	−0.041	0.422
Weight	0.120	0.020	0.320	≤0.001	0.030	0.559	0.271	≤0.001	−0.019	0.711
The first sexual life's age	−0.009	0.862	−0.057	0.267	−0.064	0.219	−0.131	0.011	−0.098	0.057
Testosterone	0.088	0.165	−0.026	0.679	0.053	0.402	0.029	0.652	−0.093	0.144
IIEF-5	−0.066	0.199	0.024	0.638	−0.156	0.002	0.039	0.451	−0.041	0.430
Left testis weight	0.188	≤0.001	−0.033	0.527	0.163	0.001	0.132	0.010	−0.046	0.376
Right testis weight	0.192	≤0.001	−0.077	0.135	0.168	0.001	0.085	0.100	−0.082	0.112
Nose size	0.451	≤0.001	0.268	≤0.001	0.507	≤0.001	0.243	≤0.001	−0.013	0.806
Vertical diameters (ear)	0.159	0.002	0.133	0.010	0.075	0.147	0.118	0.022	−0.004	0.937
Transverse diameters (ear)	0.087	0.094	0.064	0.217	0.012	0.817	0.136	0.008	−0.016	0.757

22.81%, 33.69%, 8.75%, and 2.12%, respectively. As shown in Table 1, the Han people have a higher penile erection hardness compared with other investigated ethnic groups ($p = 0.049$). But given the number of people in the other ethnic groups is too small, such a result may be accidental and may not be meaningful.

The correlation between continuous variables and penis-related data such as nose size, ear size, testosterone level, and testicular volume is shown in Table 2. The results revealed that the correlation between nose size and erectile penile length was the highest ($r = 0.507$, $p = 0$), followed by flaccid penile length ($r = 0.451$, $p = 0$). Besides, there was also a correlation between nose size and flaccid penile circumference ($r = 0.268$, $p = 0$) and erectile penile circumference ($r = 0.243$, $p = 0$). Height was correlated with flaccid penile length ($r = 0.160$, $p = 0.002$), erectile penile length ($r = 0.194$, $p = 0$), flaccid penile circumference ($r = 0.233$, $p = 0$), and erectile penile circumference ($r = 0.241$, $p = 0$). Weight was correlated with flaccid penile circumference ($r = 0.320$, $p = 0$) and erectile penile circumference ($r = 0.271$, $p = 0$). There

Table 3: Relationship between nose size and flaccid and erectile penile length.

Nose size (cm)	n	Mean ± SD	
		Flaccid penile length	Erectile penile length
−4.5	114	6.093 ± 0.711	11.437 ± 1.028
4.51–5.00	189	6.611 ± 0.840	12.140 ± 1.177
5.01–5.50	68	7.701 ± 0.768	12.835 ± 1.106
5.51−	6	7.833 ± 0.471	14.000 ± 0.645

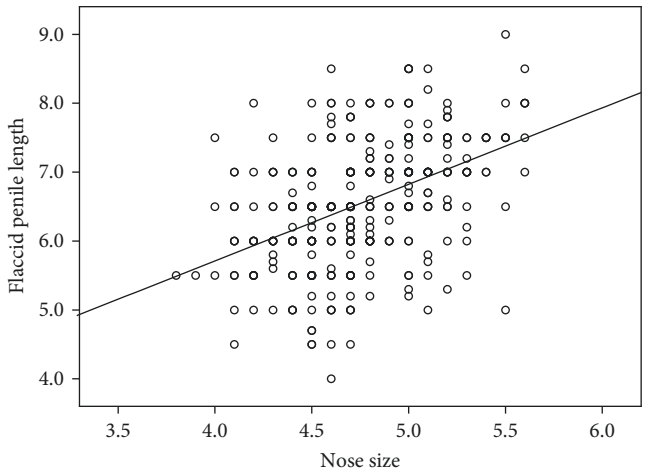

Figure 1: The relationship between nose size and flaccid penile length.

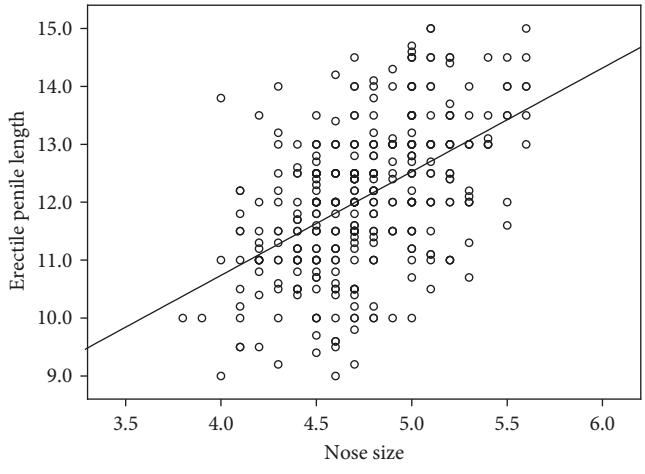

Figure 2: The relationship between nose size and erectile penile length.

was a correlation between left testicular volume and flaccid penile length ($r = 0.188$, $p = 0$) and flaccid penile circumference ($r = 0.161$, $p = 0.001$). The right testicular volume was correlated with flaccid penile length ($r = 0.192$, $p = 0$) and flaccid penile circumference ($r = 0.168$, $p = 0.001$). There was a correlation between the vertical and transverse diameters of the ears and the flaccid penis length ($r = 0.159$, $p = 0.002$) and the flaccid penis circumference ($r = 0.133$, $p = 0.01$). The vertical and transverse diameters of the ear were correlated with the penile erectile circumference ($r = 0.136$, $p = 0.008$). Table 3 shows the relationship between nose size, erectile penile length, and flaccid penile length.

The linear regression model analysis was carried out on the erectile penile length and the flaccid penile length with the nose size, as shown in Figures 1 and 2.

4. Discussion

Previous Japanese scholars have analyzed the correlation between nose size and penile length of 126 male corpses and confirmed that there was a positive correlation between nose size and stretched penile length, but these studies lack relevant data after erection [1]. Although stretched penile length is considered to be similar to the erectile penile length, it does not fully represent the length of the penis after full erection [3]. There are individual differences in the extension of the penis, which is affected by many factors. Fetal testosterone levels and age may affect the extension of the penis [11]. This difference in extension may be related to the elasticity of the albuginea penis, which means that different tension and different intracavernosal pressures may lead to different penile measurement lengths [12]. Moreover, we added the length data after the complete erection of the penis, the ear size as a comparison, as well as androgen levels.

Our study shows that nose size is an independent predictor of erectile penile length and flaccid penile length. Compared with the size of the nose, the size of the ears, which are also facial organs, has a weak correlation with the erectile penile length and the flaccid penile length. Penile length is considered to be closely related to androgen in the fetal period [13]. Therefore, we added the level of androgen in adulthood and found that it had no correlation with penis-related indicators, indicating that adult androgen levels may have no effect on penis length. This is consistent with previous studies that the penis length remains unchanged in middle age [4]. It has been widely recognized that there are differences in penis length among people of different races. So, we also added the correlation analysis between related factors (such as race, diet, birthplace, and education) and penis-related indicators. However, limited by the great differences in the number of different individuals, for example, nearly 98% of the ethnic groups included in the study are Han, so the corresponding statistical results may not be of practical significance.

The androgen level of male fetuses begins to increase at the 8th week of pregnancy and peaks at 14–16 weeks. During this period, the increase of androgen level and the activation of androgen receptors are very important for penis growth and development [13]. Although postnatal androgen exposure can promote the growth of the penis, prenatal androgen still plays a decisive role. Forensic medicine holds that the head, cheekbones, and other facial organs do not change with age in adulthood, and in a sense, their size has also been determined before birth.

Previous studies have found that the ratio of second to fourth-digit length of the right hand is closely correlated with

the prenatal androgen/estrogen ratio [7], while it is negatively correlated with the stretched penile length [2]. Therefore, the common reason for the correlation between the two may be the prenatal androgen level, and Homeobox genes (Hox a and d) may be the key genes [14]. Based on the above research, it is believed that there is a correlation between penis length and nose size, indicating that, to some extent, there may also be common factors and regulatory genes that affect the development of the penis and nose in the fetal period, which may have a certain significance for exploring the mechanism of penile development and the pathogenesis of diseases such as penile shortness.

Our study illustrated the correlation between nose size and erectile penile length for the first time, providing a direction for future related basic research.

5. Conclusion

Nose size was related to erectile penile length in Chinese males.

Data Availability

The data used to support the findings of this study are available from the corresponding author upon request.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

Authors' Contributions

Chunlu Xu and Tao Song contributed equally to this work.

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