Can physique and gluteal size predict penile length in adult Nigerian men?

***J. C. Orakwe[1], B. O. Ogbuagu[2] and G. U. Ebuh[3]**

**Department of Surgery[1], [2]Department of Anatomy, and [3]Academic Planning Unit, Nnamdi Azikiwe University, Nnewi Campus, Nnewi*

E-mail: jayceeorakwe@yahoo.com

Summary

Background: **In Nigeria, especially among the Igbo tribe, there is a well-held belief that a man's penile size can be predicted from his physique and the size of his buttocks, with people of small physique and flat buttocks likely to have long penile lengths.**

Study design: **A prospective study to test the scientific veracity of this traditional and apparently mythical belief. Stretched penile length was measured in 115 men between the ages of 30-65 years and its correlation with the body-mass index and the circumference of the hip as measured around the most prominent points on their buttocks, was statistically determined.**

Result: **The mean age of the subjects was 42.30 years (SD=9.67), with a median of 40 years and a range of 30-65 years. The mean penile length was 13.37cm with a median of 13cm and a range of 7.5-19.5cm. The mean circumference of the body around the buttocks was 96.46cm (SD=10.91), median 98cm, and range 73-122cm. The body-mass index ranged 17.34-44.44, with the mean at 26.87 (SD=5.86), and the median 25.53. Linear regression statistics showed no statistically significant correlation between stretched penile length and body-mass index, thus physique. There was a significant direct correlation between penile length and gluteal size.**

Conclusion: **The supposed relationship between penile length and gluteal size may have a scientific basis, but contrary to belief, large buttocks is more predictive of longer penile length than small buttocks. Penile length has no relationship to physique.**

Keywords: ***Penile length, Physique, Body-mass-index, Gluteal size***

Résumé

Introduction: Au Nigéria, parmi la tribu d'Igbo en particulier, on avait la conviction que la grosseur du pénis d'un homme peut être prédire à travers sa physique et la grosseur de sa fesse, chez des gens avec une petite physique et la fesse plate peuvent probablement avoir un pénis long.

Plan d'Etude: Une étude en perspective pour décider la veracité scientifique de cette croyance traditionnelle et mythique. On avait mésuré la longuer des pénis allongés chez 115 hommes âgés entre 30–65 ans et sa corrélation entre l'indice de la masse du corps et la circonférence du corps comme mésurée auture des point prominents sur leur fesses était statisquement décidée.

Résultats: L'âge moyen des sujets était 42, 30 ans (SD-9,67) avec lamédiane de 40 ans et une tranche de 30-65 ans. La longueur moyenne du pénis était 13,37cm avec une médiane de 13cm et une tranche de 7,5 – 19,5cm. La circonférence moyenne du corps auteur de la fesse était 96,46cm (SD-10,91). La médiane de 98cm, et une tranche de 73-122cm. La tranche de l'indice de la masse du corps était entre 17,34–44,44 avec un moyen de 26,87 (SD–5,86), et la médiane de 25,53, statistiques de la regréssion linéaire avait indiqué aucune corrélation statisquement importante entre la longueur du pénis alongé et l'indice de la masse du corps, donc physique. Il y a une corrélation importante et directe entre la longueur du pénis et la grandeur du gluteal.

Conclusion: Le rapport présumé entre la longueur du pénis et la grandeur peut avoir une basse scientifique, mais contrairement à ce que nous croyons, la fesse grande est plus prédictive d'un très long pénis plus que une petite fesse. La longueur du pénis n'a aucun rapoort avec la physique.

Introduction

In our sociocultural environment, the genitals are sacrosanct and regarded with awe and matters of the genitals are usually handled in a secretive and reclusive manner. Nevertheless, the penis still seems to stimulate interest whenever it appears or is mentioned in any aspect of our lives. Penile size is often an exciting denominator, as there is the tenacious impression that penile size directly correlates with virility in the man, and with sexual satisfaction for the female partner. Many believe that the size of a man's penis can be estimated by assessing various other parts of the body. Prevalently, it is believed in our environment that those with a slim/asthenic physique and those with small flat-shaped buttocks usually have long penis. Such beliefs also are found in other sociocultural environments, like the belief that penile length can be estimated by assessing the foot size, the shoe size or the height of the individual[1, 2]

Because of the tenacity of this traditional and apparently mythical belief in the relationship of penile length with the body physique and the size of the buttocks in this environment, this prospective study was carried out to test if there is any supporting scientific basis.

**Correspondence*

Subject and method

The subjects were of the Igbo tribe of Nigeria amongst whom this myth is prevalent. The Igbos are natives to the Southeastern States of Nigeria, and the study base was the Nnamdi Azikiwe University Teaching Hospital, Nnewi, which is located in the region.

Men between the ages of 30 – 60 years were assessed. They comprised mostly of men who were ordinarily well looking but were consulting for various urological reasons, especially infertility. They also included healthy volunteers from the general population.

The nature of the study was explained to the subjects in English or in Igbo, and their verbal consents obtained.

A full-stretch length of the flaccid penis (stretched penile length) was measured and recorded. This was obtained by measuring the linear distance from the pubic symphysis to the tip of the glans penis along the dorsal aspect under maximal manual extension of the phallus. The age, height, and weight of each subject were documented. Also documented was the circumference of the body around the most prominent points of the buttocks, which was used as a determinant of the gluteal size. The body-mass index was calculated from the subject's height and weight using the formula BMI = WT/ H^2, where BMI = body-mass index, WT = weight in kilogrammes, and H = height in metres. The body-mass index was used as an objective measure of the physique. The first two authors, who are urologists, carried out all the measurements.

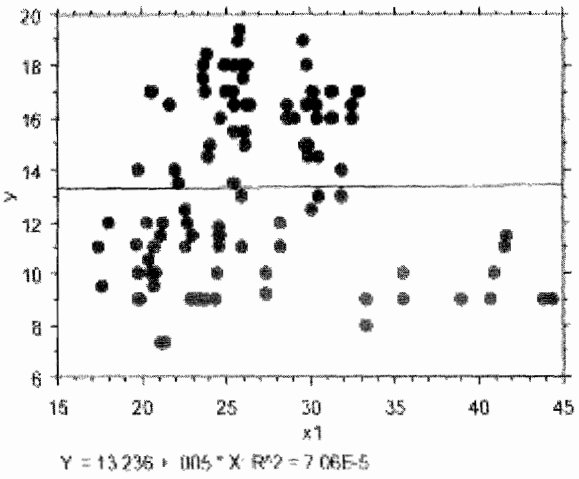

Figure 1 ***Relationship between penile length and body mass index (X1)***

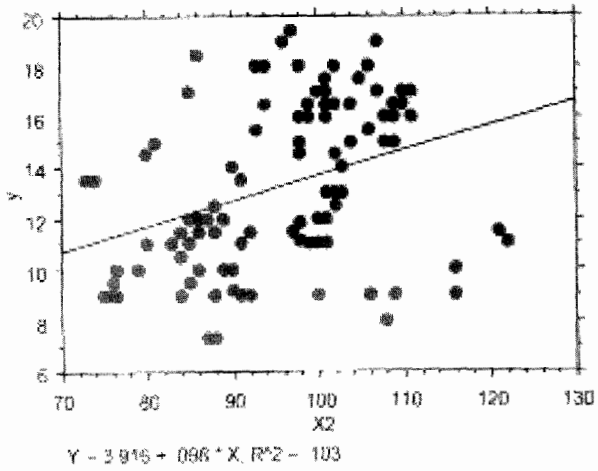

Figure 2 ***Relation between penile length (Y) against hip circumference.***

The linear regression model in the Statview statistical computer software package was used for the statistical analysis, with the level of statistical significance set at $p<0.05$.

Result

The mean (SD) age of the subjects was 43.30 (9.67) years, with a median of 40 years, and range 30-65 years. The mean stretched penile length was 13.37cm, with a median of 13cm, and a range of 7.5-19.5cm. The mean circumference around the buttocks was 96.46cm (SD=10.91), median 98cm, and range 73-122cm. The body-mass index ranged 17.34-44.44, with the mean of 26.87 (5.86) and a median of kg/m^2 25.53.

Figure 1 shows the regression plot of stretched penile length versus the body-mass index. There is no significant correlation between penile length and body-mass index and, thus physique, (r^2=7.0, p=0.9290).

Figure 2 shows the linear regression plot of stretched penile length versus the circumference of the body around the buttocks. There is a direct linear relationship between the two variables and this relationship is very significant (r^2=0.103, p=0.0005). Thus, a bigger circumference of the body around the buttocks, which represents the gluteal size, may predict a longer penile length.

Table 1 shows the regression coefficients of the stretched penile length (Y) versus the combination of the two independent variables of body-mass index (X1) and body

Table 1 Regression coefficients of penile length against combined body mass index and buttocks circumference

	Coefficient	Std. error	Std. Coeff.	T.value	P-value
Intercept	2.324	2.576	2.324	.902	.3688
xl	–.217	.067	–.376	–3.263	.0015
X2	.175	.035	.574	4.978	<.0001

circumference around the buttocks (X2). There is a very significant relationship of the penile length with both independent variables when they are combined, [p=0.0015 for body-mass index (X1), and p <0.0001 for body circumference around the buttocks (X2)]. Thus if a man has a large gluteal size, an associated long penile length is predictable. But this predictability becomes even more so if he also has a big body mass.

Discussion

There have been studies investigating the relationship between penile length and foot length and height[1], and shoe size[2]. To our knowledge, this is the first time that the relationship between penile length, physique, and gluteal size is being investigated. It is known that the flaccid penis is deformable, extensible, elastic, and influenced by variations in ambient temperature[3], and its flaccid size does not predict the erect length[4]. Thus, we are aware that the true physiological length of the penis can only be obtained when the penis is fully erect. Nevertheless, we opted for the indirect method of measuring the penile length by the full-stretch method because previous studies had shown that the stretched penile length is a valid estimate of the full erect length[4]. This method of measurement was also more feasible and practicable for our study

Men within the age range of 30-60 years were used for the study because we know that within this range, the growth potentials have not only been attained, but are also maintained in the absence of militating illnesses. The biomechanical qualities of the penis have been found to decrease significantly with aging, and the biomechanical behavior of the flaccid penis during stretching is highly different in the young men and in the old men[3]. This determined change in behaviour would expectedly be more prominent in the very young and the elderly men.

The mean stretched penile length of 13.37cm in this study is similar to the finding of 13cm by Shah and Christopher in the United Kingdom[2], and the 12.45cm by Wessel et al in the United States of America[4], using the same method of estimation. This may suggest that penile length is not influenced by race, as these other studies were done on Caucasians.

In our communities, it is common for people to confront the scientists and other educated elites whenever there is a disagreement over a myth or any traditional belief. The insistence is that such a disapproval of traditional beliefs and institutions is not only arrogant, but is also usually based on lack of understanding and knowledge, and fuelled by the so-called colonial mentality. There is no doubt that most of the disapprovals are anecdotal and influenced by western and other religious beliefs. It therefore behoves the scientists and the other elites to arm themselves with valid proofs to the contrary, otherwise their arguments and disapprovals would continue to be baseless and not satisfying to their consciences.

Our findings in this study, it is hoped, will provide a scientific support to the belief that gluteal size has a relationship with penile length. However, contrary to the well-held belief that people with small gluteal size have are likely to have long penile length, the probable situation is that it is people with big gluteal sizes who are likely to have long penile lengths. No relationship was found between body mass and penile length.

Conclusion

The supposed relationship between penile length and the size of the buttocks may have a scientific basis, as this study suggests that the bigger the gluteal size the more likely it is that the penile length is longer. This is contrary however to the belief that it is the people with flat-shaped buttocks, thus small gluteal size, that are likely to have longer penis.

There is probably no scientific basis to support the belief that people with small physique, who are also slim or asthenic, have predictably longer penile length. However, when body mass is combined with big gluteal size, the larger the body mass, the more predictable a longer length of the penis will be.

References

1. Siminoski K, Bain J. The relationships among height, penile length, and foot size. Ann Sex Res. 1993; 6:231-235

2. Shah J, Christopher N. Can shoe sizes predict penile length? BJU International 2002; 90: 586-587

3. Bondil P, Costa P, Daures JP, Louis JF, Navratil H. Clinical study of the longitudinal deformation of the flaccid penis and of its variations with aging. Eur Urol. 1992; 21: 284-286

4. Wessells H, Lue TF, McAninch JW. Penile length in the flaccid and erect states: guidelines for penile augmentation. J Urol. 1996; 156: 995-997