International Journal of Engineering Trends and Technology
ISSN: 2231–5381 / https://doi.org/10.14445/22315381/IJETT-V73I5P101

Volume 73 Issue 5, 1-8, May 2025

Original Article

Descriptive Analysis of Perineal Length in Women of Childbearing Age in the Jungle of Peru During 2023

Chavez-Alvarez Gloria[1], Alva Mantari Alicia[2], Cordova-Aguilar Lucy[3], Cardenas-Pineda Lina[4]

[1,3,4]*Faculty of Health Sciences, National University of Huancavelica Huancavelica, Peru.*
[2]*Image Processing Research Laboratory (INTI-Lab), Universidad de Ciencias y Humanidades Lima, Peru.*

[4]*Corresponding Author : lina.cardenas@unh.edu.pe*

Received: 22 October 2024 Revised: 19 March 2025 Accepted: 02 May 2025 Published: 31 May 2025

Abstract - *The objective of this study is to perform a descriptive analysis to estimate the length of the perineal body in women of childbearing age in the jungle of Peru in 2023. Methodology: descriptive, prospective research in 100 women (84 non-pregnant and 16 pregnant) aged 21 to 40 years, identified by non-probabilistic sampling, of the total number of women who attended from May to October 2023. Participation was voluntary, and the condition did not present pathologies or lesions at the level of the perineal body, such as episiotomies or poorly healed tears, tumors or condylomas; a measurement protocol was used. Results: the length of the perineal body of jungle women on average is 2.98 ±0.24 cm; 50% of the women had measurements below 2.95cm, the shortest perineum was 1.80 cm and the longest 4.50 cm; 25% exhibited a length below 2.60cm, and 50% below 2.95cm and 75% below 3.30 cm, understanding that 25% have perineum greater than or equal to 3.30 cm to 4.50cm. The participants weighed between 47 and 96 kg, on average 64.73 ±10.01 kg. The size was from 146 to 168 cm, presenting on average 153.57 ± 4.27 cm. Conclusion: The length of the perineum is shorter than that found in the Sierra and greater than that of Lima. This difference may correspond to the methodology used in the measurement, which is why it is necessary to carry out research with the same protocol in the three regions of Peru.*

Keywords - *Perineal body, Perineum length, Episiotomy, Perineum measurement, Perineum dimension.*

1. Introduction

The perineal body, in a fibromuscular anatomical structure, is located in the segment between the lower border of the labia minora, which gives rise to the vulvar orifice, extending to the anterior border of the anal orifice [1]. This segment plays an important role in supporting the urogenital system by maintaining harmony in the position of the pelvic organs, which can be injured by wear and tear over the years and in the reproductive process, with greater magnitude at the time of delivery, during the expulsive period due to the over-distension of this segment, when the fetal head is too large or childbirth is instrumented, generates micro-injuries at the level of the muscle group that runs through the area. Likewise, episiotomies generate tissue discontinuity; The situations described lead to loss of muscle tone, therefore leading the woman to various complications such as urinary and fecal incontinence, prolapses of the uterine, vaginal, urethral and anal apparatus [2, 3]. Therefore, it is important to reduce the factors that lead to the loss of stability of the pelvic floor, reducing the practice of episiotomy to strictly necessary situations; the recommendations of evidence-based medicine are: when there is an urgency to end the expulsion promptly in case of fetal hypoxia, fetal macrosomia, preterm delivery, rigidity of the perineum and when the length of the perineum is less than 2.5 cm. This last condition is scarcely valued because the length of the perineum of women from the Peruvian jungle is unknown; the knowledge of this anatomical measurement would reduce the discriminated practice of episiotomy to approximate the recommended 10 to 15%. On the other hand, it is necessary to know the length of the perineal body of the population being studied by the racial particularities of the population under study with others in Peru and the world, having previous studies that have identified differences according to races and populations in the world [4]. In this sense, the results of the research are made available to professionals who care for reproductive health. The most important support point of the pelvic contents is located in the middle portion of the vulva, between the anterior border of the anus and the lower edge of the labia minora; this segment is called the perineal body, a region through which various muscles that make up the pelvic girth pass. The perineum is part of the external genitalia [5, 6]. This group of muscles extends from the anterior part (pubis) to the posterior part, reaching the sacrum/coccyx and, on both sides, to the ischial tuberosities. Most pelvic muscles comprise the levator ani, which groups the puborectal, pubococcygeus and iliococcygeal muscles. The puborectalis coils like support around the anorectal junction, accentuating the anorectal angle

during contraction and is the main contributor to fecal continence [7]. This region can lose tone and integrity for different reasons: the weight of the uterine contents during pregnancy, childbirth itself, due to overdistension of the perineum, grade II, III and IV tears and unnecessary episiotomies [8]. This anatomical structure has varied in length, finding 4.1 in native Hawaiians, 4.0 in Filipinos, 3.9 in Japanese, and 3.8 cm in Chinese; likewise, in a study carried out in a hospital in Lima, he reported values lower than those indicated, identifying on average 2.3 cm ± 0.5 cm, he reported that the smallest perineum measured 1.2 cm and the largest 4 cm [9-11], significant differences are observed, which leads us to think that the genotype of women who are grouped by cities and natural regions in Peru could show differences.

To date, no research has been found on this subject in the Peruvian jungle; at the Peruvian level, there are few studies. It is necessary to better understand the anatomical structure of women in the different regions of our country in order to be able to perform episiotomies when justified. Also, it helps us to provide better health education regarding the conservation and care of the pelvic floor [10]. Therefore, this time, the idea of identifying the length of the perineal body was born, making measurements of women in the jungle, using the same protocol used in a thesis developed in the highlands of Peru [12]. The perineal body is a very important structure of the pelvic floor; it is the middle part, through which it passes various muscles that support the rectum, vagina, urethra and other internal pelvic organs. In addition, it plays an important role in sexuality and reproduction.

For the above, it is necessary to know the anatomical variations that may occur in different populations as described in the approach; in addition, there are previous studies in Peru that make us see that the average would be below 2.5 cm, a situation that makes us reflect and continue doing studies in this regard. Knowledge of the length of the perineum provides us with knowledge of the anatomy of the perineum and the anatomical variations in the different populations. It also provides reference and makes decisions when attending childbirth, specifically whether or not to perform episiotomy. In addition, relevant information to work on the preventive and recuperative aspects of the pelvic floor [13, 14].

2. State of Art

Mboua et al. [10], in the 2021 research "Perineal body length and prevention of perineal lacerations during childbirth in Cameroonian primigravid patients", 2021 prospectively studied the calculation of the ratio between perianal tears and perineum length. This study allowed us to find the length at 3.21 ± 0.75 cm on average, with the smallest reaching a length of 1.5 and the largest at 5.5 cm. They also point out that a length below 2.5 cm is not risky for developing spontaneous lacerations. In 2018 Tsai et al [15] a study was carried out on perineal length and its difference in racial groups. Its goal was to identify the variations, and its sample was made up of 200 women belonging to different racial groups, finding that the mean age was between 23.9 (4.8) and 28.4 (5.4) years and BMI between 27.3 and 34.7 (8.1) kg/m2. Regarding the values of perineal length, no significant difference was noted between the racial groups; among whites, it was 3.9 (0.6), Filipinos at 4.0 (0.6), Japanese at 3.9 (0.6), Chinese and Micronesians presented similar measures of 3.8 (0.4), and Native Hawaiians presented a length of 4.1 (0.9). They concluded that no significant difference was observed in perineal length ($p = 0.42$) or the presence of severe perineal lacerations ($p = 0.82$).

Trinh et al. [9] conducted a study to verify whether the hypothesis, due to the perception that Vietnamese women have a short perineal length, doctors in Vietnam perform routine episiotomies, which they believe prevent severe perineal tears. An observational study conducted in a Vietnamese tertiary obstetric hospital was conducted from October 2014 to June 2015. A total of 395 pregnant women with a live cephalic presentation and at least 37 weeks of gestation were included. The perineal length was measured at the beginning of labor and in the second stage. The findings indicated that the mean length of the perineum at the onset of labour was 3.4 cm (±0.4), with no significant differences between nulliparous and multiparous. The mean perineal length in the second stage was 4.3 cm (±0.6). Vietnamese women had a significantly shorter perineal length ($P < 0.001$), with means of 3.8 to 4.6 cm in other populations. These results indicate that the belief that Vietnamese women have a short perineal length is strong and that the results of studies on episiotomy in other populations might not be valid for Vietnamese women.

Dua et al. [16] during 2009 conducted a study to generate normal measurements of perineal length in Caucasian and Asian women during labor. The distance from the posterior fork to the center of the anal opening was measured in 1,000 women in the dilation phase. Data on ethnicity, body mass index, mode of delivery, and perineal trauma were collected prospectively. The results showed the perineal length at 3.7 ± 0.9 cm in Caucasians while in Asians at 3.6 ± 0.9 cm. It was observed that primigravid women with a perineum less than 2.5 cm are more likely to suffer a third-degree perineal tear during childbirth ($p = 0.03$). This study is the first to report normal measurements of perineal length in the racial groups studied during labor. They found that the shorter the perineum, the more likely it is to suffer severe tears in the first delivery.

Mendez [11] A descriptive cross-sectional study was conducted to assess the length of the vagina, genital hiatus, and perineal body in 85 nulliparous women. Participants were selected for convenience from among those who attended gynaecological evaluation at a state hospital in Lima, Peru, between January and March 2014. Weight, height, length of vagina, genital hiatus, and perineal body were measured; The last three measurements were made in the gynecological

position and used a millimeter swab as an instrument. The average height of the participants was 150 ±1 cm, an average weight of 55.7 ±8.6 kg and a BMI of 23.7 ±3.8. The mean total length of the vagina was 8.1 ±1.4 cm, that of the genital hiatus was 2.2 ±0.5 cm, and that of the perineum was 2.3 ±0.5 cm, with a range of 1.2 to 4 cm. The study concluded that there were no significant differences between the measured values and the results of similar international studies. The need to carry out additional studies with larger samples and in different regions of Peru to obtain more representative data was highlighted.

Ccanto et al. [12], in a specialty thesis, estimated the average length of the perineum of women of childbearing age in the district of Huancavelica, Peru. The study was carried out on a sample of 51 women treated at the first level of care in the city in the first quarter of 2022. The participants had an average weight of 56.85 kg and an average height of 151.04 cm. Of these, as obstetric antecedents, 64.7% had had at least one pregnancy, 29.4% reported a history of abortion, 54.9% were nulliparous, 41.2% were primiparous, and 3.9% were multiparous.

The mean perineal length was 3.6 cm, with a median of 3.5 cm and a range of 2.2 cm to 5 cm. The study concluded that the average perineal length in these women is lower compared to women from other countries. They recommended standardizing measurement processes and conducting additional studies with larger samples and in different regions of Peru to obtain more representative data.

The studies examined the length of the perineal body in various populations and its relationship with perineal lacerations during childbirth. Mboua [10]. They evaluated the relationship between perineal length and perineal tears in Cameroonian primigravives, finding that a perineal length of less than 2.5 cm is a significant predictor of lacerations ($P < 0.04$). Tsai [15] (2018) investigated racial differences in perineal length in women in labor, finding no significant variations between groups. However, it is slightly higher in native Hawaiians (4.1 cm) and the lowest in Chinese and Micronesian women (3.8 cm). Trinh [9] (2015) measured perineal length in Vietnamese women, finding that it is significantly shorter than in other populations ($P < 0.001$), with an average of 3.4 cm in the first stage of labor and 4.3 cm in the second. Dua [16] (2009) established normal measurements of perineal length in Caucasian and Asian women, finding averages of 3.7 cm and 3.6 cm, respectively.

Measurements made in Peru were outside of pregnancy, such as Méndez's [11] (2015) in Lima, which reported 2.3 ± 0.5cm identifying the shortest perineal length due to the revisions presented; likewise, Ccanto et al. [12] (2022) in Huancavelica, reported in 3.6 cm, a difference is observed between what was identified in Lima and Huancavelica, to which they recommend standardizing the measurement methods. These studies allowed us to propose this research that we make available with the aim that the results serve to reduce episiotomies to preserve the integrity of the pelvic floor.

3. Conceptual Basis

3.1. Perineal Body

It is the central tendon of the perineum, also known as the perineal body; it is a crucial structure located in the midline between the upper end of the anterior anal canal and the entire posterior portion of the vagina, which is characterized by being thicker and wider concerning the male [17]. Their length can vary between 2 and 4 centimeters, which have been documented in different populations [18]. Therefore, it can be presumed that this variation would be related to race and genetic patterns [19, 20].

3.2. Anatomy of the Pelvic Floor

Within the anatomy of the pelvic floor, divergences in the approach have been identified, in contrast to Delancey et al. [21]. They propose a unified model to study morphological changes, composed of five anatomical structures: the pubovisceral, puborectal, and iliococcygeal muscles with their superficial and inferior fascia; the membrane or perineal body and the anal sphincter complex [21].

The perineal body or also called the perineal membrane marks the point of convergence of the bulbospongiosus muscles, the superficial and deep transverse perineum, the perineal membrane, the external anal sphincter, the posterior vaginal muscle and the insertion of the puborectalis and pubococcygeus muscles, this portion is innervated by the sensory and motor branches of the pudendal nerve that arises in the S2 -S4, which exits the pelvis through the greater sciatic foramen, to travel along the medial surface of the obturator internus; mainly this portion reaches the perineal nerve.

The irrigation is in charge of the pudendal artery, which runs along the pudendal nerve to leave the pelvis; later, it divides into three branches; one of them is the perineal artery, which is largely responsible for the maintenance of the deep and superficial tissues [5]. The perineal body is a site of attachment of the muscles of the external anal sphincter, bulbosponjos, the superficial and deep transverse muscles of the perineum and the levator ani muscle, which constitute the basic girth to maintain the abdominopelvic organs in homeostasis [15].

3.3. Functions

The functions of the perineal body are fundamental in the biomechanics of the pelvic floor, fulfilling functions of support or support of pelvic and abdominal organs such as the small intestine, bladder, urethra, vagina, uterus, anus and rectum, because the perineal body is the site where the muscle fibers of these muscles and the external anal sphincter pass uninterruptedly from one side to the other [17] Bowel

movements, urination, childbirth, and the sexual functions of arousal and orgasm are commanded by the innervation that runs along the perineum [7].

3.4. Pathologies

Pelvic floor disorders also have a genetic component that is not fully understood because the exact cause is not yet known; several studies suggest that there is a significant hereditary predisposition. For example, women with a family history of pelvic floor disorders have an approximately 2.58-fold higher risk of developing these disorders compared to those with no family history.

In addition, a meta-analysis has identified a moderate association between certain genes and urinary symptoms in women, placing them in the condition of 2.5 times more likely to develop overactive bladder and 2.1 times more likely to develop emergency urinary incontinence, which indicates a possible genetic role in the predisposition to these disorders [22]. Likewise, the white race and Latin American women have a higher risk of developing prolapse, between 4 and 5 times more frequent than in other races. In addition, white women have a 1.4 times higher risk than African-American women of urethral diverticulosis [22].

Among the risk factors that produce pelvic floor disorders are: Obstetric events, such as pregnancy and vaginal delivery, are related to pelvic floor deterioration; during pregnancy due to the increase in weight at the abdominal and pelvic level, which occurs due to the development of the pregnancy itself and the modifications suffered by the pelvic and abdominal organs and during childbirth, the distension that occurs at this level generates damage to the nerves, muscles and connective tissue of this region, To all this is added the episiotomy, lacerations or tears and in some cases instrumental births.

In this regard, it has been observed ultrasonographically that there is greater mobility of the perineum measured 3 to 6 after delivery compared to measurements before the event [2, 4]; increased mobility may be due to damage to the levator ani muscle, which can be injured by stretching (overstrain or microtrauma) or avulsion (muscle rupture or macrotrauma) [3, 23]. These alterations generate denervation and manifest themselves in women with urinary incontinence and sexual dysfunction, which mostly occur as a result of dystotic and prolonged births, in which the nerve loses its contractile capacity [1]. As the indicated alterations have the same origin, preventive interventions or treatment will have benefits in both [24, 25]. However, we must act with preventive strategies based on the knowledge of some anatomical variations that occur at the perineal level [4].

3.5. Episiotomies and Tears

The perineal body can be injured in the expulsive period when the need to make a cut at this level arises (episiotomy), with the desire to widen the birth canal. Accidentally when the tissues are torn, and sometimes the picture could be complicated in situations where the episiotomy is extended with the expulsive force and the dimensions of the fetal head. In order to avoid the complications indicated, it is necessary to evaluate the perineum to opt for an appropriate technique; for example, when the length of the perineum is less than 2.5 cm, it is recommended to perform a mediolateral episiotomy [10].

4. Methodology

4.1. Temporal and Spatial Scope

The research was developed in the "Dr. Jose Peña Portuguez" hospital in the District of Tocache, Province of Mariscal Cáceres, Department of San Martín; this hospital was created in 1987, whose name honors its founder, it is currently a Level II-1 hospital with specialities in accordance with the technical health standard of Peru.

It receives patients from the first level of care to solve health problems of greater complexity; the population it serves mostly lives within the District of Tocache.

The Tocache District, located in the northern part of the jungle region of Peru, is located in the foothills of the eastern mountain range of the central Andes, providing a naturally diverse and lush environment. The population is eminently rural; its economy is based on agriculture, especially cocoa.

4.2. Kind of Investigation

The research is observational, prospective, cross-sectional, and descriptive, and the height, weight, and length of the perineal body were measured in women of childbearing age and legal age [26].

4.3. Research Level

The research is of a descriptive level, referring to collecting the indicated measures as they are in nature. The general research method was descriptive, and as a specific method, the inductive deductive method was used, which allowed us to observe each unit of study and then generalize to the population studied, women who live in the jungle of Peru.

4.4. Research Design

The design corresponds to the simple descriptive one.

M → Or

Where:

M = Sample made up of women between 21 and 40 years old.
O = Length of the perineal body.

4.5. Population, Sample and Sampling

Population: women between 21 and 40 years old from the district of Tocache total 4105, according to the 2017 census.

Sample and sampling: the sample was of 100 women who were taken into account due to economic limitations; the sampling was for convenience; it was made up of women who came to the hospital and agreed to participate in the study from May to October 2023, they also had to meet the requirements indicated to be admitted to the study and if they presented any of the exclusion premises, they were withdrawn from the study thanking them for their predisposition, before the measurement of the perineum.

4.5.1. Inclusion Criteria

- Women ages 21 to 40
- Voluntary authorization (signed informed consent).

4.5.2. Exclusion Criteria

- If the inspection of the perineum shows pathologies or lesions at the level of the perineal body (poorly healed episiotomies, tears, tumors, condylomas or others), that may alter the measurement.

4.6. Technique and Instrument for Data Collection

- Measuring instrument: 10 cm disposable rubber tape measure.
- Technique: Structured observation.
- Observation protocol: The measurement protocol is presented in an annexe, which was distributed and trained in its use to those who made the measurements.

4.7. Data Processing and Analysis Techniques

The data were ordered in a Microsoft Office spreadsheet, and the data was reviewed and using descriptive statistics for quantitative variables, the measures of central tendency and quartiles were evaluated; for this, the SPSS V22 software was used.

5. Results

The results are presented, responding in the first instance to the specific objectives and then to the general objective.

Table 1. Perineal body length in women of childbearing age in the jungle of peru, 2023

Measures of Central Tendency and Position (n = 100)	Value
Mean	2.98
Median	2.95
Mode	3.20
Standard Error of Asymmetry	0.24
Minimum	1.80
Maximum	4.50
Percentiles 25	2.60
Percentiles 50	2.95
Percentiles 75	3.30

Source: Observation Sheet of the thesis "Perineal body length in women of childbearing age in the jungle of Peru, 2023"

Table 1 shows that the perineum of jungle women on average is 2.98cm ± 0.24 cm, and 50% have a perineum below 2.95cm and, the most repeated measurement is 3.20 cm, the smallest perineum measured 1.8 cm, the largest 4.5 cm. It is observed that 25% exhibit a perineum length below 2.60 cm and 75% below 3.30 cm, understanding that 25% have a perineum greater than or equal to 3.30 cm to 4.50 cm.

Table 2. Weight and height of women of childbearing age in the jungle of peru, 2023

Measurement (n=100)				
Anthropometry	**Minimum**	**Maximum**	**Mean**	**Standard Deviation**
Weight (kg)	47,00	96,00	64,73	10,01
Size (cm)	146,00	168,00	153,57	4,27

Source: Observation Sheet of the thesis "Perineal body length in women of childbearing age in the jungle of Peru, 2023"

In Table 2, the women who participated in the study exhibited an anatomical constitution where the average weight was 64.73 kg, with a variation of ±10.01 kg.

The minimum weight found was 47 kg, and the maximum was 96 kg. As for height, the average was 153.57 cm, with a variation of ±4.27 cm, and the minimum height was recorded at 146 cm and the maximum at 168 cm.

Table 3, in the age distribution, there is a greater accumulation in the ranges of 29 to 32 years, in which 36% of the participants accumulate, and between 33 and 36 years, 22%. Additionally, 16% are pregnant.

To see the data distribution, the Kolmogorov Smirnov test was applied, having a quantity of data greater than 50; in this regard, we observed that the data do not follow a normal distribution (p-value is 0.032 less than alpha (0.05).

Table 3. Age and physiological condition of women in whom the perineal body length of the peruvian jungle was estimated 2023

Characteristic	Women of Childbearing Potential (n = 100)		
	Category	n	%
Age (Years)	21-24	7	7%
	25-28	19	19%
	29-32	36	36%
	33-36	22	22%
	37-40	16	16%
Pregnancy Status	Non-pregnant	84	84%
	Pregnant	16	16%

Source: Observation Sheet of the thesis "Perineal body length in women of childbearing age in the jungle of Peru, 2023"

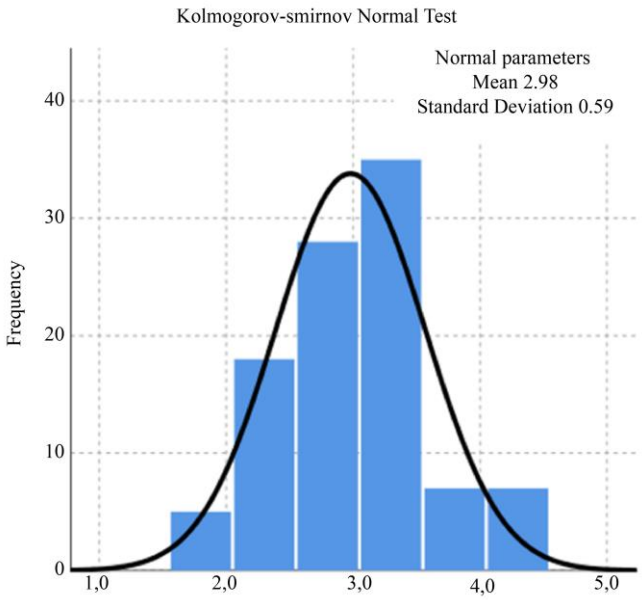

Fig. 1 Distribution of the periné length data

6. Discussion

The perineum, a small structure compared to the anatomy of the human in general, is located in the segment that extends from the vaginal introitus to the anterior border of the anal opening. It fulfils important functions in the lives of both men and women. On this occasion, the anatomical segment of women is studied, which performs crucial functions in reproductive and sexual life; the segment has as its main function support, allowing to keep the anatomically well-located pelvic organs, which allows women to fulfil functions, such as defecation, urination and full sex. The study is developed by observing variation in the length of the perineum in the previous studies, which suggests that the dimension may be different in women from the jungle of Peru, as they are of a different racial type from those who live on the coast and highlands of Peru and not to mention in comparison with other countries.

The importance of determining the length of the perineum is essential to decide whether to perform an episiotomy in the expulsive period of labor, taking into account that it is always recommended when it is less than 2.5cm; in these cases, the middle lateral type is recommended, in order to prevent tears from the second to the fourth degree that in most cases generate alterations in sexual function and cause weakening of the floor pelvic (5); however, if it is greater than 2.5cm it is unnecessary in most cases. In this sense, knowledge of the length of the perineum will help us make decisions when attending vaginal delivery. The length of the perineal body, measured from the vaginal introitus or hairpin, which is constituted by the outer edge of the labia minora to the anterior edge of the anal opening, ranged from 1.8 to 4.5 cm, with an average of 2.98 cm ±0.24 cm; these measurements are lower than those identified in women from the highlands of Peru, who show an average of 3.6 cm (10), and higher than that reported on the coast (Lima 2.3 ± 0.5 cm) (9). It could be said that women from the mountains (Huancavelica) would have the longest perineum on average in Peru. The difference between the women of the mountains and the jungle could be due to the anatomical constitution since the same measurement technique was applied; however, on the coast, a different measuring instrument was used (calibrated swabs), while in the studies carried out in the mountains and the mountains a rubber tape measure was used.

It remains pending to develop a comparative study in the three natural regions where the same methodology must be used and the measurement instruments standardized. The length of the perineum in Peru is similar to those identified in Cameroonian women (3.21 ± 0.75 cm), Vietnamese women (3.4 cm ±0.4), Asian women (3.6 +/- 0.9 cm) and less than the length identified in other populations such as Filipinos, Japanese, Hawaiians, Micronesia and Caucasians. (7).5, 9,10).

The weight and height of the women of the jungle have been identified at 64.73 ± 10.01 kg and the height at 153.57 ± 4.27 cm, and the women of the sierra presented an average of 151.04 cm in height and 56.85 kg in weight, and the study carried out in Lima identified the average weight at 55.7 ±8.6 kg and the height at 150 ±1cm; We can note similarity in the three Peruvian studies, although the weight of women from the jungle is slightly higher. In this regard, Méndez (9) found no relationship with the length of the perineum. This corroborates the differences in measurements despite having similarities in their anatomical constitution. 25% of women in the jungle have a perineum of less than 2.6cm who require an episiotomy at the time of delivery due to the risk of tears (8). Therefore, it would be justified that 25% of births can have an episiotomy.

The findings identified and the analysis of the studies on the subject lead us to hypothesize that the length of the perineal body of women differs between the three natural regions of Peru. Proving the proposition requires a study with the same methodology and population standardization. In the study, the participants were between 21 and 40 years old, with a higher concentration between 29 and 32 years old (36%), and 16% were pregnant.

Two physiological conditions to take into account in future research, due to the possible influence on the dimensions, due to a hormonal aspect, that after the age of 40, the hormonal decrease of the woman leads to certain anatomical changes, and pregnancy must be a variable that must be controlled. The studies reviewed were mostly in pregnant women, while those developed in Peru were carried out in both pregnant and non-pregnant women, with a predominance of non-pregnant women. To achieve this, the need arises to propose research in the country's three regions with the same measurement protocol and better control of the intervening variables.

7. Conclusion and Future Work

The length of the perineal body ranged from 1.8 to 4.5 cm, with an average of 2.98 cm ±0.24cm; 25% of women have less than 2.6 cm, generating a need for a median lateral episiotomy. As for the weight and height presented by the women of the jungle, it was 153.57 ±4.27 cm and 64.73 ±10.01 kg, similar to the other studies in Peru. The women who participated were aged 21 to 40 years, with the highest accumulation between the ages of 29 and 32 years (36%). Additional studies are suggested in different regions of Peru, using a standardized methodology to better understand these anatomical differences and their potential impact on obstetric clinical practice. In addition, the impact of perineum length on pelvic floor preservation during and after childbirth should be measured.

References

[1] Oriol Porta, and Montserrat Espuña, *Manual of Functional and Surgical Anatomy of the Pelvic Floor*, Marge Books, pp. 1-208, 2010. [Google Scholar] [Publisher Link]

[2] Victoria L. Handa et al., "Pelvic Floor Disorders 5-10 Years after Vaginal or Cesarean Childbirth," *Obstetrics & Gynecology*, vol. 118, no. 4, pp. 777-784, 2011. [CrossRef] [Google Scholar] [Publisher Link]

[3] Joan L. Blomquist et al., "Association of Delivery Mode with Pelvic Floor Disorders After Childbirth," *JAMA*, vol. 320, no. 23, pp. 2438-2447, 2018. [Google Scholar] [Publisher Link]

[4] Varisara Chantarasorn, Ka Lai Shek, and Hans Peter Dietz, "Mobility of the Perineal Body and Anorectal Junction Before and After Childbirth," *International Urogynecology Journal*, vol. 23, no. 6, pp. 729-733, 2012. [CrossRef] [Google Scholar] [Publisher Link]

[5] Bruno Bordoni, Kavin Sugumar, and Stephen W. Leslie, *Anatomy, Abdomen and Pelvis, Pelvic Floor*, StatPearls, 2023. [Google Scholar] [Publisher Link]

[6] Bruno Bordoni, and Marjorie V. Launico, *Anatomy, Abdomen and Pelvis, Perineal Body*, StatPearls, 2024. [Google Scholar] [Publisher Link]

[7] W.R. Grimes, and Michael Stratton, *Pelvic Floor Dysfunction*, StatPearls, 2023. [Google Scholar] [Publisher Link]

[8] Holly Priddis, Hannah Dahlen, and Virginia Schmied, "Women's Experiences Following Severe Perineal Trauma: A Meta-Ethnographic Synthesis," *Journal of Advanced Nursing*, vol. 69, no. 4, pp. 748-759, 2013. [CrossRef] [Google Scholar] [Publisher Link]

[9] Anh T. Trinh et al., "Perineal Length Among Vietnamese Women," *Taiwanese Journal of Obstetrics and Gynecology*, vol. 56, no. 5, pp. 613-617, 2017. [CrossRef] [Google Scholar] [Publisher Link]

[10] Véronique Mboua Batoum et al., "Perineal Body Length and Prevention of Perineal Lacerations During Delivery in Cameroonian Primigravid Patients," *International Journal of Gynecology & Obstetrics*, vol. 154, no. 3, pp. 481-484, 2021. [CrossRef] [Google Scholar] [Publisher Link]

[11] Fernando Méndez, "Length of Vagina, Genital Hiatus and Perineal Body in Nulliparous Women," *Peruvian Journal of Gynecology and Obstetrics*, vol. 61, no. 1, pp. 11-14, 2015. [CrossRef] [Google Scholar] [Publisher Link]

[12] Raquel Noemi Hilario Quispe, and Mariluz Ccanto Moran, "*Perineal Body Length in Women of Childbearing Age in the District of Huancavelica - Peru, 2022*," Thesis, National University of Huancavelica, 2022. [Google Scholar] [Publisher Link]

[13] Guillermo Carroli, and Luciano Mignini, "Episiotomy for Vaginal Birth," *Cochrane Database of Systematic Review*, vol. 1, 2009. [CrossRef] [Google Scholar] [Publisher Link]

[14] Guillaume Ssi-Yan-Kai et al., "Female Perineal Diseases: Spectrum of Imaging Findings," *Abdominal Imaging*, vol. 40, no. 7, pp. 2690-2709, 2015. [CrossRef] [Google Scholar] [Publisher Link]

[15] Pai-Jong Stacy Tsai et al., "Perineal Body Length Among Different Racial Groups in the First Stage of Labor," *Female Pelvic Medicine & Reconstructive Surgery*, vol. 18, no. 3, pp. 165-167, 2012. [CrossRef] [Google Scholar] [Publisher Link]

[16] Anupreet Dua et al., "Perineal Length: Norms in Gravid Women in the First Stage of Labour," *International Urogynecology Journal*, vol. 20, no. 11, pp. 1361-1364, 2009. [CrossRef] [Google Scholar] [Publisher Link]

[17] Ahmed Shafik et al., "A Novel Concept for the Surgical Anatomy of the Perineal Body," *Diseases of the Colon & Rectum*, vol. 50, pp. 2120-2125, 2007. [CrossRef] [Google Scholar] [Publisher Link]

[18] Changyul Oh, and Allan E. Kark, "Anatomy of the Perineal Body," *Diseases of the Colon & Rectum*, vol. 16, no. 6, pp. 444-454, 1973. [CrossRef] [Google Scholar] [Publisher Link]

[19] Luis C. Moya-Jiménez et al., "New Approach to the Evaluation of Perineal Measurements to Predict the Likelihood of the Need for an Episiotomy," *International Urogynecology Journal*, vol. 30, no. 5, pp. 815-821, 2019. [CrossRef] [Google Scholar] [Publisher Link]

[20] Zarko Alfirevic, Tamara Stampalija, and Therese Dowswell, "Fetal and Umbilical Doppler Ultrasound in High-Risk Pregnancies," *Cochrane Database of Systematic Reviews*, no. 6, pp. 1-129, 2017. [CrossRef] [Google Scholar] [Publisher Link]

[21] John O. DeLancey et al., "A Unified Pelvic Floor Conceptual Model for Studying Morphological Changes with Prolapse, Age, And Parity," *American Journal of Obstetrics and Gynecology*, vol. 230, no. 5, pp. 476-484, 2024. [CrossRef] [Google Scholar] [Publisher Link]

[22] Sabrina L. Lince et al., "A Systematic Review of Clinical Studies on Hereditary Factors in Pelvic Organ Prolapse," *International Urogynecology Journal*, vol. 23, no. 10, pp. 1327-1336, 2012. [CrossRef] [Google Scholar] [Publisher Link]

[23] H.P. Dietz, and P.D. Wilson, "Childbirth and Pelvic Floor Trauma," *Best Practice & Research Clinical Obstetrics & Gynaecology*, vol. 19, no. 6, pp. 913-924, 2005. [CrossRef] [Google Scholar] [Publisher Link]

[24] Kari Bø, Trygve Talseth, and Anne Winsnes, "Randomized Controlled Trial on the Effect of Pelvic Floor Muscle Training on Quality of Life and Sexual Problems in Genuine Stress Incontinent Women," *Acta Obstetricia et Gynecologica Scandinavica*, vol. 79, no. 7, pp. 598-603, 2000. [Google Scholar] [Publisher Link]

[25] Carolyn W. Swenson et al., "Randomized Trial of 3 Techniques of Perineal Skin Closure During Second-Degree Perineal Laceration Repair," *Journal of Midwifery & Women's Health*, vol. 64, no. 5, pp. 567-577, 2019. [CrossRef] [Google Scholar] [Publisher Link]

[26] José Supo, *Scientific Research Seminars: Research Methodology for Health Sciences*, Arequipa, Peru, Biostatistics, 2014. [Google Scholar]