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Investigating Nasal Anatomy in the Javanese Ethnic Group in Indonesia

Norina Agatri[1], Gembong Satria Mahardhika[2*], Ahmad Fawzy Mas'ud[2], Fitranto Arjadi[1,2]
[1]Faculty of Medicine, Universitas Muhammadiyah Purwokerto, Purwokerto, Indonesia
[2]Faculty of Medicine, Universitas Jenderal Soedirman, Purwokerto, Indonesia

Corresponding author: mahardhika.gembong@gmail.com

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ABSTRACT

The nasal is a fundamental anatomical feature of humans and serves as a benchmark for beauty ideals. Rhinoplasty is a popular procedure worldwide. References to anatomical elements are crucial when discussing the distinct nasal shapes of each race, particularly in the context of Indonesia. Research is scarce on the nasal morphology of the Javanese ethnic group, resulting in a lack of precise quantitative measurements for their specific nasal form. The study conducted was a cross-sectional investigation with a sample of 50 individuals, consisting of 20 males and 30 females of Javanese ethnicity. The analysis was performed to determine the precise quantities of the three variables under investigation, specifically intercanthal distance, alar width, and base of nasal width. The mean figure at the intercanthal was 2.38cm, alar base 2.92cm, and base of nasal width 3.46cm. The T-test results are significant for the base of nasal width variable at a p-value of 0.002. The acquired data were subsequently juxtaposed with data from various races in Indonesia and other regions, serving as a benchmark for rhinoplasty operations specifically for individuals of Javanese descent in Indonesia. The data reveal a significant gender gap in the Javanese base of nasal width. A study reveals that Javanese nasals are shorter and wider than those of other ethnicities, suggesting that rhinoplasty may be recommended over non-surgical methods.

INTRODUCTION

The nasal is the most conspicuous region on the face, drawing attention as the primary focal point for observers due to its allure in the context of the human visage. The desire for specific nasal characteristics remains an inherent source of attraction. The eyes and mouth are crucial components of facial aesthetics, but the nose also plays a pivotal role in this intricate process. Therefore, it holds significant importance in terms of ethnicity, culture, and society. In the past, the nasal was considered an important symbol of one's reputation and would sometimes be intentionally damaged as a punishment for wrongdoing. Due to its central position, the nasal is believed to consciously and/or subconsciously impact our opinions of people. The notion that a single prototype represents the perfect nasal is antiquated and not suitable for the wide variety of patients seeking cosmetic surgery. On the contrary, the optimal nasal structure should be regarded as a compilation of physically distinct prototypes that encompass many ethnic origins. The ideal nasal anatomy varies among different races, just as the concept of an attractive face does. By employing objective criteria and proportions of beauty, surgeons can strategically perform rhinoplasty on individuals from various ethnic backgrounds. This approach ensures that the results are aesthetically pleasing and in line with the patient's unique facial anatomy and cultural heritage (Saad et al., 2018). Rhinoplasty is a highly prevalent cosmetic surgery that is performed globally. Rhinoplasty ranked as the third most common plastic surgery operation in the United States in 2018, with over 200,000 procedures performed in the country alone (Fichman & Piedra, 2023).

Rhinoplasty is a highly prevalent surgical operation, with a total of 352,555 surgeries conducted only in the year 2020. It is the most prevalent cosmetic operation among males and consistently ranks among the highest-performing procedures annually. Indonesia, a developing nation, has a majority of its inhabitants who still rely on foreign healthcare facilities for surgical treatment. According to data recorded in 2024, the state incurred losses of 180 trillion rupiah (approximately equivalent to $11 billion USD) as a result of individuals' tendency to seek medical treatment overseas. Several countries, including Malaysia, Singapore, Japan, Korea, and the United States, still have a significant presence in most destination countries (Zaini, 2024). Plastic surgery is a significant fascination among individuals in Indonesia. Regrettably, the majority of citizens opted to engage in activities in South Korea. This is due to the fact that Indonesian beauty standards for women still adhere to Korean beauty standards. In South Korean society, there is a significant focus on physical attractiveness, especially when it comes to women. The societal pressure for women to conform to beauty standards fuels the desire for plastic surgery. The cultural pressure mentioned is driven by societal norms and the impact of celebrities and social media. These factors have all contributed to South Korea's status as the country with the highest per capita rate of plastic procedures. The business is experiencing growth due to both domestic demand and foreign medical tourism (Park et al., 2019).

Rhinoplasty techniques must be adjusted to the anatomical components that exhibit variation and distinctiveness across different racial groups. There is significant variation in nasal anatomy among different ethnic groups. Using standards for rhinoplasty in Caucasian patients on non-Caucasian patients can result in negative outcomes and the necessity for numerous or corrective procedures. Adopting a multicultural perspective is crucial for creating aesthetically pleasing outcomes in rhinoplasty. Indonesians will have a distinct approach to surgical rhinoplasty, specifically focused on reconstructing or enhancing facial aesthetics, which differs significantly from other countries. The Javanese population in Indonesia exceeds 100 million individuals, making them the most populous ethnic group in both Indonesia and Southeast Asia. The Javanese culture is an ancient civilization in Indonesia and Southeast Asia, known for its extensive heritage in literature, philosophy, and art. The Javanese language holds significant importance as an ethnic identifier and plays a major role in shaping their sense of identity (Zen, 2021). Therefore, the objective of this study is to conduct a comprehensive evaluation of the nasal anatomy of the Javanese ethnic group, which represents the majority population in Indonesia.

METHOD

This research is a cross-sectional study involving a sample size of 50 individuals, conducted in Purwokerto, Central Java, Indonesia. The sample comprises 20 males and 30 females, all of whom are between the ages of 18 and 23 years. These individuals are categorized as late teens. The selected responders were chosen based on multiple criteria. The identification of Javanese ethnicity was determined by examining the lineage, specifically by confirming the presence of two identical bloodlines in both parents, which originated from the Javanese tribe. Maintain a body weight within the range of 18.5kg/m^2 to 25kg/m^2, which corresponds to a healthy Body Mass Index (BMI). Participants must not have any prior record of damage or injury to the facial bones, any medical condition that affects the form of the face, any history of facial surgery, or any previous orthodontic treatment or use of braces. The factors examined in nasal morphometric analysis include three components: intercanthal space, alar width, and base of nasal width. Data collection involves the direct acquisition of measurements using various equipment, such as calipers and medlines, to determine the precise form of the variables accurately. The resulting results are measured on a centimeter (cm) scale. The acquired data underwent subsequent analysis and were then provided in the discussion section.

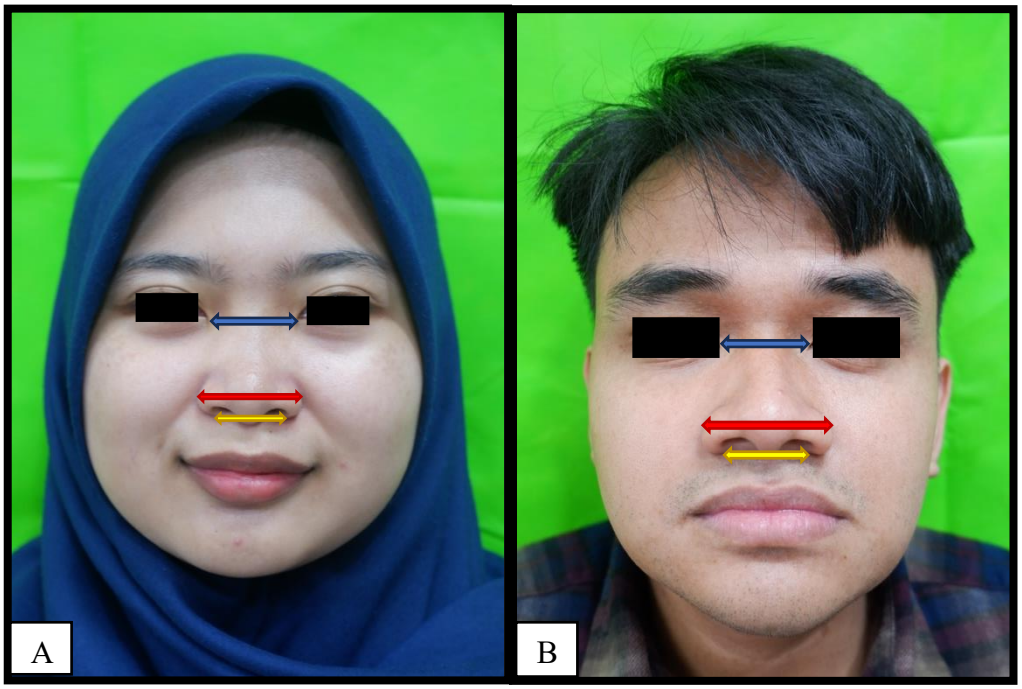

Figure 1. Measurements on samples of A) women and B) men. The blue arrow indicates the width of the interchantal. The red arrow is the base width, and the yellow arrow shows the base of nasal width. Ratio data is displayed on a centimeter (cm) measurement scale.

The letter of authority for research ethics was obtained from the Ethics Commission of the Faculty of Medicine at Universitas Muhammadiyah Purwokerto, bearing the identification number KEPK/FK/006/III/2024.

RESULTS

Univariate, bivariate, and multivariate tests were conducted using data collected from 50 samples. Univariate tests were conducted to examine various aspects, such as the mean, median, and mode values, as well as the standard deviation of each measurement scale. The average value is displayed in Table 1. Each variable has a distinct mean value. The intercanthal has a value of 2.38±0.469, the alar width is 2.92±0.409, and the base of nasal width is 3.46±0.362. The variable with the highest mean value is nasal width at the base.

Table 1. Average univariate test results for each variable

Variable	Minimum	Maximum	Mean (in cm)	Standard Deviation (SD)
Interchantal	1.5	3.0	2.38	0.469
Alar Width	2.0	4.0	2.92	0.409
Base of Nasal Width	2.5	4.0	3.46	0.362

As the univariate test concluded, the normality and homogeneity tests were conducted. A normality test is performed to ascertain the presence of a normal distribution in the data. The Kolmogorov-Smirnov test was used in this study because the sample size exceeded 30 individuals. The Kolmogorov-Smirnov test yields findings of 0.221 for the intercanthal variable, 0.258 for alar width, and 0.284 for the base of nasal width. In the homogeneity test, the intercanthal figure was measured to be 0.132, the alar width was 0.133, and the base of the nasal width was 0.907. A p-value greater than 0.05 suggests that the data distribution is both normal and homogenous. No further post hoc tests were conducted in this study to evaluate significant differences between groups. This decision was made because only two groups, specifically men and women, were compared.

The data are normally distributed and homogeneous; therefore, the next step is to conduct a bivariate test and proceed with multivariate analysis. Both tests were conducted utilizing the independent t-test. The findings indicate that statistical significance was observed just in the group categorized by nasal width, with a two-tailed p-value of 0.002. Significant results are indicated by a P value of less than 0.005. In addition, the T-value results indicate that the three variables have negative values, suggesting that the group ranked second has a higher mean value than the first group. The second group included males. The results of this follow-up test indicate a substantial disparity in the breadth of the nasal base between the two groups (men and women), with the average value in the men's group being higher than that in the women's group. The t-test results are presented in Table 2.

Table 2. Independent t-test

Variable	T value	Significance two-tailed
Interchantal	- 1.496	0.141
Alar Width	- 1.134	0.263
Base of Nasal Width	- 3.327	0.002*

Notes: *significance

DISCUSSION

The purpose of this study was to evaluate the anatomical characteristics of the nasal structure in individuals of Javanese ethnicity. The obtained results were then utilized as a practical benchmark for patients in Indonesia, particularly those of Javanese ethnicity, in the execution of nasal reconstruction surgery, including rhinoplasty. The Javanese ethnicity was selected as the primary sample in the research. This pick is based on empirical evidence indicating that the Javanese population in Indonesia is the largest ethnic group, comprising over 85 million individuals, which represents approximately 40% of the overall population. Historically, the main ethnic group in Indonesia has wielded significant power and influence, exerting a profound impact on the country's culture and politics (Tirtosudarmo, 2005).

Indonesia categorizes its population into multiple racial divisions, specifically the Proto-Malay subrace and the Deutro-Malay subrace, both of which belong to the Malayan Mongoloid subrace. The majority of the Indonesian population is comprised of individuals belonging to the Deutro Malay subrace (Shindy & Sahelangi, 2020). The Javanese people are a tribe that is part of the Deutro Malay race.

The physical characteristics that typically define a person's identity as Javanese include a medium-sized body, a flat body posture, and a tendency to have brown skin. Their facial features generally consist of an oval-shaped face with a moderately sharp nasal. Additionally, their eyes and hair exhibit a range of variations, although dark chocolate hair color is commonly observed (Nugraha et al., 2004). Their ancestry can also determine an individual's ethnic identity. A person's lineage can be determined by identifying at least two ancestral lineages that share similarities (Ismail & Nst, 2021). During the research, an initial screening was conducted to ascertain the Javanese ethnicity of the respondents by examining the family tree of the two aforementioned lineages. The research sample consisted of young adolescents, as facial development tends to decelerate dramatically after the age of 14 to 16 years, with minimal alterations happening between 14 and 16 years and negligible extra growth beyond 16 years (Koudelová et al., 2019).

The fundamental anatomical composition of the nasal is a crucial determinant that serves as the foundation for the measures in this investigation. This assessment comprises measurements of intercanthal distance, alar width, and base of nasal width. The research collected data in the form of intercanthal measurements, which has a value of 2.38±0.469. The alar width is 2.92±0.409, and the base of nasal width is 3.46±0.362. The variable with the highest mean value is the width of the nasal at its base. Table 3 displays multiple comparable studies examining different variables related to the nasal in Indonesia.

Table 3. Infographic data on nasal shapes obtained from diverse studies encompassing multiple racial groups in Indonesia

Study	Race	Parameters	Result
(Marini et al., 2020)	Dayak Kenyah (Indigenous Dayah tribes in Kalimantan, Indonesia)	Nasal index	The mean nasal index and standard deviation (SD) for males and females were 77.87 ± 10.8 and 78.46 ± 7.97, respectively.
(Asthuta and Pradipta, 2019)	Bali Aga (Native Balinese, Indonesia)	Nasal Index	The nasal width has an average measurement of 38.790 mm, the nasal length has an average measurement of 45.490 mm, and the nasal index has an average value of 85.6416.
(Pratiwi et al. 2013)	Atractive Young Indonesian Woman (Race not specified)	1. Radix width nasal (mf-mf) 2. Nasal width (al-al) 3. Width columella 4. Left-right rice style thickness 5. Width of the base of the nostril (sbal-sn) 6. Left-right, nasal root slope (en-m') 7. Left-right, long ala nasi (ac-prn) 8. Left-right, nasal height (n-sn) 9. Length nasal (n-prn) 10. Protrusion of the tip of the nasal (sn-prn) 11. Columella length (sn-c') 12. Length of the ala surface of the rice (ac-prn-ac).	Indonesian women exhibit differences in nasal size and shape compared to women of other races, such as Caucasian women. Furthermore, there are noticeable variations between the average and gorgeous Indonesian women.

Indonesia is renowned for its substantial ethnic and racial heterogeneity. The nation encompasses more than 1,340 officially acknowledged ethnic groups, predominantly consisting of Austronesian peoples, while a notable minority comprises Melanesians (Leinbach et al., 2024). The presence of ethnic and racial diversity is directly correlated with racial variations in facial anatomy, particularly the nasal area, which is prevalent among the population in Indonesia. Marini et al. (2020) conducted a study in North Kalimantan, Indonesia, specifically focusing on the Dayak Kenyah tribe, an indigenous group in the region. The average nasal index and standard deviation (SD) for males and females were 77.87±10.8 and 78.46±7.97, respectively. The predominant nasal shape noticed in both Dayak Kenyah males and females remained mesorrhine, whereas platyrrhine was the second most common variety (Marini et al., 2020).

A study conducted by Asthuta and Pradipta (2019) examined the Bali Aga people, a native Balinese population residing in the mountains of Bali, Indonesia. The study yielded results, with measurements indicating an average nasal width of 38.790 mm and an average nasal length of 45.490 mm. The nasal index measures resulted in an average of 85.6416, indicating the presence of a platyrrhine nasal, which is characterized by its broadness (Asthuta & Pradiptha, 2019).

A study conducted by Pratiwi et al. (2013) in Indonesia examined the nasal index. The research found that the average nasal index was 73.23, indicating a mesorhine type. Furthermore, the study obtained results of nasal was identified as the primary facial feature that

determines attractiveness. The Javanese comprised 76.19% of the subjects. Six characteristics exhibited substantial differences between attractive women and regular women. Women deemed beautiful exhibited reduced measurements in columella width, right and left radix slopes (en-m'), and columella length. Additionally, they had larger values for left ala nasion thickness and left ala nasion length in comparison to women classified as normal. Indonesian women who are considered attractive and those who are not have a nasal width (al-al) that is usually more than 25% of the facial width (zy-zy) and greater than the intercanthal distance (en-en). The nasal index enables the categorization of Indonesian women's nasal features into the mesorhine type (Pratiwi et al., 2013).

Based on the aforementioned investigations, it can be inferred that the nasal morphology of Indonesian individuals is characterized by a broad and short form, with the majority falling into the mesorhine type category. The results exhibit a linear relationship, with notable distinctions observed between the profiles of women's nasals that are considered attractive and those that are considered normal for females. This study identified substantial variations in many characteristics between attractive women and women with average physical appearance. The shape of a woman's nasal is considered attractive when it stands out due to a narrower slope at the base and a greater protrusion at the tip. However, the length of the columella is shorter (Pratiwi et al., 2013).

Brito et al. (2020) conducted a study on the 10-7-5 approach, which involves examining the optimal facial features of individuals of Caucasian descent from three perspectives: frontal (10 points), lateral (7 points), and basal (5 points). The primary emphasis is on the basal view of the nasal, specifically examining nasal projection, nostrils, columella, alar base, and alar flare (Brito et al., 2020). The conventional tip configuration, distinguished by its triangular shape and distinct delineation, should be distinguished from the bulbous tip, which is rounded and lacks definition, as well as the boxy tip, which is square and wide. The nasal tip exhibits an anatomical divergence angle of 30 degrees, a domal arc width of 4 mm or less, and a distance of 5-6 mm between the tip-defining sites. The idea may demonstrate a broad range and a deficiency of specificity in males. The presence of a boxy tip can be attributed to an angle of divergence above 30 degrees, a domal arc wider than 4mm, or a combination of both factors (Rohrich & Liu, 2012). The excessive protrusion of the infratip lobule, which occurs when the typical peak of the nose aligns with the midway of the infratip lobule, is often a result of abnormalities in the middle crus and lower lateral cartilage. The surplus classification is divided into inherent factors (such as an elongated middle crus, a broad middle crus, a lower lateral malposition, and combinations) and extrinsic factors (such as a sizable septum). An uneven rotational alignment of the lateral crus can generate a pinched tip with excessive projection of the infratip lobule, where the lower edge is positioned below the upper edge (Unger et al., 2016). The nostrils should exhibit bilateral symmetry and possess a teardrop morphology, characterized by an elongated axis stretching from the base to the apex (Rohrich & Liu, 2012; Villanueva et al., 2019).

The optimal ratio between the nostril and the tip of the nasal should be approximately 2:1 (Ghavami et al., 2008). An asymmetrical relationship might lead to a nostril that is elongated and narrow, or conversely, one that is short and wide. The alar rims are positioned within an equilateral triangle in the optimal basal view. A concave ala might result in alar collapse or a constricted tip due to the presence of weak lateral crura. Common causes of this issue include inappropriate interruption or excessive excision of the lower lateral cartilage, faulty placement of a tip graft that reaches too far laterally from the existing dome, or a transdomal suture that is overly tight (Totonchi & Guyuron, 2016; Unger et al., 2016) A convex ala is commonly caused by an exaggerated curvature of the lower lateral cartilage or thickening of the alar area (Totonchi & Guyuron, 2016).

Despite the study conducted by Uzun et al. (2020) in Türkiye, the percentage of girls with narrow nasals was 78%, whereas the percentage of males with narrow nasals was 70%. The average angles for females' nasofrontal, nasal tip, nasolabial, and alar slope were 133.16°±8.88°, 77.91°±9.80°, 98.91°±10.01°, and 80.89°±8.33°, respectively. The average angles for males' nasofrontal, nasal tip, nasolabial, and alar slope were 123.85°±13.23°; 82.16°±9.98°; 97.91°±8.78° and 85.98°±8.72°, respectively. The mean values of nasal characteristics in this cohort can serve as a reference for planning remedial esthetic-cosmetic surgery and for treating burn scars on the nasal (Uzun & Ozdemir, 2014).

When considering nasal standards, it is worth noting that Asian countries, such as Indonesia, continue to show a strong interest in the cosmetic practices of South Korea. Koreans seek a decrease in the angle of their nasal alae, which is naturally measured at 87.2° in males and 83.8° in females. The study found that among young Koreans, especially males, the majority had a nostril axis angle of either 60° (38%) or 55° (22%), while females had an angle of around 60° (55%). Our analysis revealed that the angle measured 84.8°±24.5° in males and 76.9°±18.3° in females. Koreans tend to choose a nostril axis angle that is smaller than their natural angle (Hwang & Kang, 2003). The plastic surgeon must consider variations in taste among different countries when determining the appropriate measures and techniques for reconstruction. Rhinoplasty must possess the ability to identify the various anatomical variances that determine the optimal cosmetic outcomes specific to different cultures or ethnicities (Villanueva et al., 2019).

The findings of our analysis revealed a statistically significant disparity in the width of the nasal base, with a p-value of 0.002. There is a correlation between the width of the nasal base and other facial characteristics. There exist connections and statistical relationships between the size of the nasal opening and the maximum width of the nasal cavity. A strong correlation exists between the maximum width of the nasal aperture and the maximum width of the nasal cavity, with a correlation coefficient of 0.462 and a p-value of significance in the Maximum Nasal Width (MNW). The data confirm the significant association between the maximum width of the nasal aperture and the maximum breadth of the nasal cavity. The bone is essential in determining the form of the soft tissue. The statistical research indicates that an individual's sex is a major predictor of the maximum width of the nasal aperture, specifically among adults in Romania (Diac et al., 2020). The nasal morphology is correlated with cephalometric variables, skeletal features, age, and sex. As individuals get older, both the angle at the base of the nose and the angle between the nose and the chin diminish. Moreover, females typically exhibit a smaller nasal base angle (Jankowska et al., 2021). Assessing the nasal base width is crucial in determining the overall symmetry and aesthetic appeal of the face. The width of the alar base is a critical factor in addressing alar flare and ensuring proper nasal proportions during rhinoplasty (Brito et al., 2020). The importance of accurately assessing the width of the nasal base is highlighted by these measurements and associations, in both clinical and research settings. Acquiring an understanding of these connections is advantageous for developing appropriate surgical approaches to achieve ideal aesthetic proportions from the front, side, and bottom views.

According to our research, the mean intercanthal measurement is 2.38 cm, the alar width is 2.92 cm, and the base of the nasal width is 3.46 cm. The width of the ala nasi is roughly equivalent to the length of the nasal. When comparing Javanese women to white women, Javanese women exhibit a reduced amount of nasal tip projection, a wider nasal base (with an average width of 23.38 mm), broader alae nasi, a shorter columella (measured at 5.83 mm), and a larger nasal lobule. The nasal lobule accounts for 56% of the overall breadth of the nasal base (Reksodiputro & Koento, 2009).

The nasal breadth at its widest point can be a subjective element of facial attractiveness, and its level of acceptability varies across cultures and individuals. While some individuals find a wider nasal appearance visually appealing, others may prefer a more slender one. Individual preferences have a significant impact on determining what is considered aesthetically pleasing. Individuals may perceive a wider nasal as appealing because of its distinctive characteristics, but others may like a narrower nasal for its daintier look. The optimal alar width is typically considered to be thinner than the intercanthal distance, which is the distance between the inner corners of the eyes. According to Tavakoli et al. (2020), the ideal width of the female nasal cavity was found to be 2 mm narrower than the distance between the inner corners of the eyes. In contrast, the optimal width of the male nasal cavity was found to be equal to the distance between the inner corners of the eyes (Tavakoli et al., 2020).

Throughout history, humanity has endeavored to establish the perfect nasal characteristics, leading to the development of neoclassical standards that defined the ideal nasal based on the typical facial features of European-Americans, influenced by ancient Greek and While the Greeks primarily emphasized the proportions of the body, Renaissance artists such as da Vinci, Dürer, Cousins, and Audran utilized these classical Greek standards to highlight the proportions of the face, which were eventually referred to as the Neoclassical Canons (NCCs)

(Saad et al., 2018). The NCCs originated from a purely artistic background, but their involvement in anatomical drawings from the seventeenth to nineteenth centuries spread their principles to the field of plastic surgery. Various facial aesthetic proportions, particularly related to the shape of the nasal, have been discussed and shared within the field of aesthetics. However, based on the limitations of the NCCs, it is exceedingly improbable that the existing aesthetic standards (CAS) accurately reflect ethnic backgrounds. Facial aesthetic surgery is not a form of discrimination, nevertheless, the existing guidelines are basic and fail to capture the intricate nature of the ethnic variety among our patients. Considering the generally held belief that the nasal significantly impacts the overall appearance of the face (Saad et al., 2018).

Non-surgical rhinoplasty utilizing dermal fillers, the appropriateness within the Javanese ethnic group in Indonesia

Non-surgical rhinoplasty, commonly referred to as filler for the nasal or liquid nasal job, is a cosmetic technique that employs injectable dermal fillers to reshape the nasal without the need for surgery. This process is optimal for persons seeking to make subtle alterations to the aesthetic of their nasal without enduring an invasive surgical rhinoplasty. Furthermore, the rising popularity of non-surgical rhinoplasty can be attributed to the availability of various injectable fillers that have been proven to be safe and effective. This procedure appeals to patients who desire to alter the shape or appearance of their nose without the typical risks, costs, and recovery period associated with surgical rhinoplasty. The primary aesthetic purposes of using dermal fillers in the nasal area are to improve the general shape of the nasal bridge and to correct individual deformities, irregularities, or asymmetries (Mehta & Fridirici, 2019; Moon, 2018; Raggio & Asaria, 2022). In recent years, hyaluronic acid (HA) injectable dermal fillers have gained significant popularity as the preferred method for shaping and adding volume to soft tissues (Devgan et al., 2019; Fallacara et al., 2017; The International Society of Aesthetic Plastic Surgery (ISAPS), 2020). Although fillers are not entirely free of issues, they typically exhibit a favorable safety profile, particularly when the appropriate filler is selected for each patient and therapy (Moon, 2018; Raggio & Asaria, 2022).

Based on our research, it has been observed that individuals of Javanese descent in Indonesia often have shorter and wider nasals. Therefore, the use of fillers is not advisable. Filler merely enhances the angle of the tip, without altering the overall shape. Moreover, it is deemed less ideal for Asian nasal types, particularly among Indonesians of Javanese descent. Non-surgical rhinoplasty is currently recommended for treating minor aesthetic or cosmetic flaws of the nose in patients who either opt out of traditional surgical rhinoplasty due to its expense and associated risks or have medical conditions that make the procedure inappropriate. Therefore, it is primarily advised to go for non-surgical rhinoplasty using hyaluronic acid (HA) injectable fillers to augment the size of the dorsum, rectify any problems with the dorsum, and improve the projection of the tip (Raggio & Asaria, 2022).

Patients with a history of non-surgical rhinoplasty using silicone or an unknown injectable substance should avoid getting additional non-surgical rhinoplasty. Moreover, it is crucial to exercise prudence in patients with a history of nasal implants or prior rhinoplasty, since they are at risk of experiencing more severe outcomes, such as infection and tissue ischemia. Consequently, multiple authors recommend a 12-month waiting period after a rhinoplasty before giving injections (Segreto et al., 2019). The nasal size and shape of Indonesian women differ from those of other races, particularly Caucasian women, and there are significant differences between the nasal features of average and attractive Indonesian women (Pratiwi et al., 2013).

CONCLUSION

The study yielded average measurements for individuals of Javanese ethnicity in Indonesia, including an intercanthal distance of 2.38cm, alar base width of 2.92cm, and nasal base width of 3.46cm. Statistically significant findings were observed for the measurement of nasal width at the base, with a p-value of 0.002. The results suggest a notable disparity in the base of the nasal width variable between male and female groups within the Javanese population

in Indonesia. The results align with the negative T value, indicating a significant difference in nasal width between males and females, with males having a higher mean base width. Further research should be conducted to examine different projections of nasal anatomical variables and include samples from various races, taking into account the diverse racial composition of Indonesia, which also influences the anatomical structure of the face, particularly the nasal, which varies as well. Researchers are willing to collaborate with interested parties on this study issue for further collaboration.

AUTHOR'S DECLARATION

Authors' contributions and responsibilities

NA, GSM: The conceptualization; data collection, formal evaluation, research, methodology, project administration, resource management, supervision, original draft composition, review and editing of manuscript; **AF:** Formal evaluation, research methodology, project administration, resource management, supervision, original draft composition, review and editing of manuscript; **FA:** Supervision, original draft composition, review and editing of manuscript.

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Availability of data and materials

All data are available from the authors.

Competing interests

The authors affirm that there were no conflicts of interest in this research.

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