



Facial aesthetic preferences among ethnicity in Malaysia

Adibah Hanim Ismail, MD, M.Med (Fam. Med)¹, Muhammad Farhan Abdul Rashid, BSc²,
Ungku Mohd Shahrin Mohd Zaman, MD^{2,3}, Noor Shahirah Suparji, MSc², Nur Izzati Mohd Shahrol, BSc²,
Ernieida Md Hatah, PhD⁴, Qi Hao Looi, PhD⁵

¹Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, Serdang, Selangor, Malaysia

²Ungku Shahrin Medical Aesthetic Research and Innovation (USMARI) Centre, Petaling Jaya, Selangor, Malaysia

³Faculty of Medicine, Bioscience and Nursing, Mahsa University, Jenjarom, Selangor, Malaysia

⁴Faculty of Pharmacy, Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia

⁵Centre for Tissue Engineering and Regenerative Medicine, Faculty of Medicine, Hospital Canselor Tunku Muhriz (HCTM), Cheras, Kuala Lumpur, Malaysia

Background: Malaysians, known for their diverse ethnicities, exhibit unique aesthetic features influenced by cultural nuances. Research indicates that factors including ethnicity, culture, and personal experiences affect how people perceive beauty.

Objective: This study aims to address the lack of data on the preferred facial aesthetics among women from different ethnic groups in Malaysia.

Methods: A questionnaire was administered to 290 Malaysian women, covering multiple regions and dimensions of facial aesthetics, including facial shape, forehead height and slope, cheekbone height, chin shape, eye region features (eyebrow shape, eyelid creases, and inner eye fold), nose (nose bridge shape, nasolabial angle, and nose width–length ratio), and lip thickness. Edited images of Asian models were used as references for facial aesthetic criteria in this study.

Results: The survey revealed that the majority of participants were of Malay ethnicity (71.0%) and employed in the private sector (39.3%). The average age of the participants was 31.6±9.2 years, and most of them (66.9%) have not undergone aesthetic procedures before. Furthermore, a significant association was observed between ethnicity and women's facial aesthetic preferences for facial shape and nasal width–length ratio ($p<0.05$). Oval facial shape was preferred by Malay (40.3%, $n=83$), Chinese (41.4%, $n=12$), and Indian (41.3%, $n=19$) women, due to its long, narrow, and rounded chin. For nasal width–length ratio, Malay (44.2%, $n=91$) and Chinese (37.9%, $n=11$) women preferred a ratio <1 , whereas Indians (39.1%, $n=18$) favored a ratio >1 . However, no significant association was found between ethnicity and other facial aesthetic criteria assessed in the study.

Conclusion: This study identified that Malaysian women's preferences for facial shape and nasal width–to–length ratio are associated with ethnicity. These findings can serve as a valuable reference for aesthetic practitioners, emphasizing the importance of preservation and enhancement of unique ethnic features, customized according to the suitability of each ethnicity, rather than conforming to prevailing beauty standards.

Keywords: aesthetics; ethnicity; female; Malaysia

Received September 19, 2023; Revised December 8, 2023; Accepted December 8, 2023

Corresponding author: Adibah Hanim Ismail

E-mail: adibahanim@upm.edu.my

This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<http://creativecommons.org/licenses/by-nc/4.0>), which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Copyright © 2024 Korean Society of Korean Cosmetic Surgery and Medicine (KSKCS & KCCS).

Introduction

Facial attractiveness affects daily interpersonal relationships. A positive personal image or attractive face builds confidence, which is essential for developing self-esteem. As the standard of living improves, an increasing number of people are taking every opportunity to enhance their facial aesthetics through non-invasive, minimally invasive, and invasive procedures. Furthermore, the evolving definition of beauty, which may differ from historical standards, is subject to continuous change [1]. Several factors drive these shifts in aesthetic preferences, including age, sex, demographic origin, exposure to media portraying 'ideal' faces, and diverse educational backgrounds [2]. Although the balance between the proportions and symmetry of a person's face determines its beauty [3], the definition of an attractive and beautiful face is subjective and inconclusive.

In Malaysia, the three predominant ethnic groups, Malay, Chinese, and Indian, each hold distinctive views and preferences regarding aesthetic value and personal appearance. One factor influencing each ethnic group's preference for beauty is the diversity of their traditions, cultures, and religions [4-6]. Moreover, external factors such as media exposure, fashion, and popular trends may influence the judgment of beauty across different ethnicities, particularly among younger generations [7]. Thus, the ideal aesthetic preferences of both doctors and patients can greatly influence the enhancement of facial features [8,9]. This trend is evident in Malaysia, where beauty assessments rely heavily on individualized and subjectively interpreted facial aesthetic preferences. The anthropometric measurements of perfect facial features published in cosmetic surgery textbooks and journals do not universally represent the value [6]. Asians have a unique facial anatomy, including monolids, darker skin tones, and flatter facial structures, leading to distinct interpretations of beauty compared to Western standards [8,9].

Given these considerations, the proposed study aimed to uncover the diverse views on facial beauty, focusing specifically on preferences related to overall facial profiles, including forehead height and slope, cheekbone height, nasal bridge shape, nasolabial angle, nasal width-length ratio, eyebrow shape, presence of epicanthal fold, lips, and chin shape. By examining these factors, this study seeks to highlight the variations and similarities in how these ethnic groups perceive beauty. Such an understanding can provide invaluable insights for aestheticians, enabling them to cater more effectively to their patients' unique needs and expectations within each ethnic group.

Materials and methods

Study design and participants

This cross-sectional study, conducted between August 2021 and February 2022, was approved by the Ethics Committee for Research Involving Human Subjects at Universiti Putra Malaysia (JKEUPM-2021-810). The study population comprised of women, aged ≥ 18 years, from diverse ethnic backgrounds in Malaysia to explore facial aesthetics preferences across multiple cultures in Malaysian society. Self-administered questionnaires were distributed through messenger applications and social media platforms, enabling convenient and accessible modes of participation. Participants were asked for their consent at the beginning of the questionnaire before proceeding to answer the rest, and only those who agreed were included.

The questionnaire comprised two sections. Section 1 (demographic information): This section collected basic demographic data such as age, sex, ethnicity, highest education level, occupation, monthly household income, place of residence, and experience with aesthetic treatment. Section 2 (photograph selection of woman aesthetic features): In this section, participants evaluated a series of images (Fig. 1-12) sourced from Mediceticeal

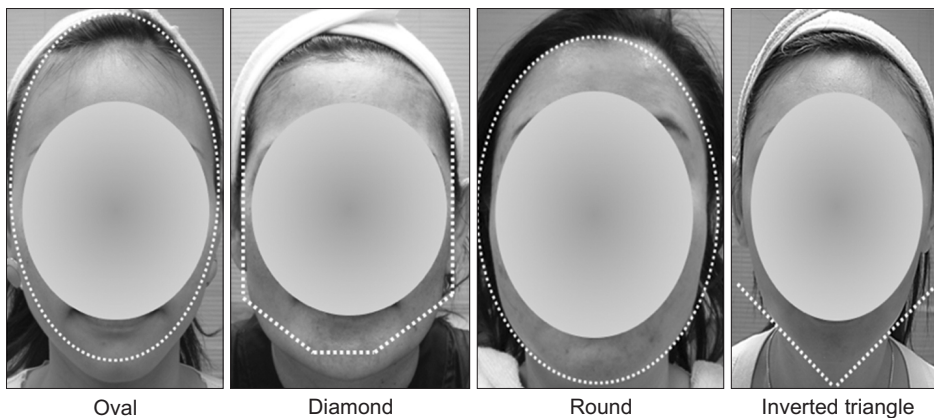


Fig. 1. Photo of facial shape.

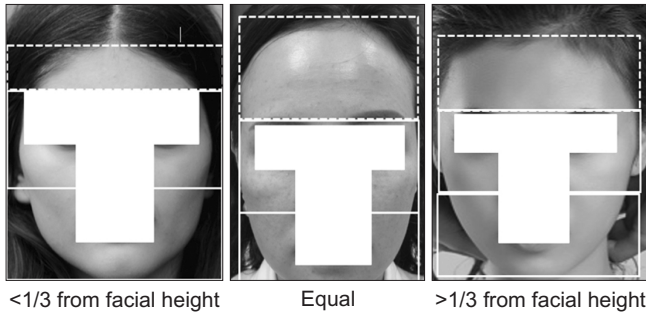


Fig. 2. Photo of forehead height (height from the hairline to the glabella).

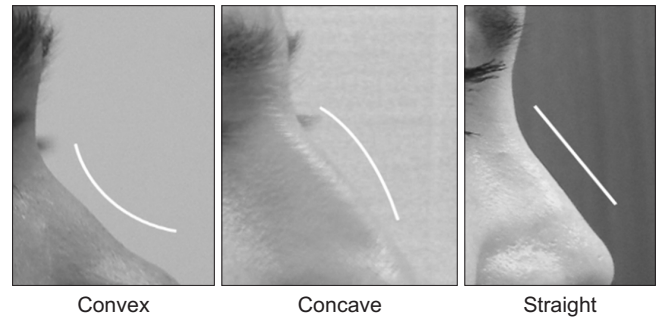


Fig. 5. Photo of nasal bridge shape.

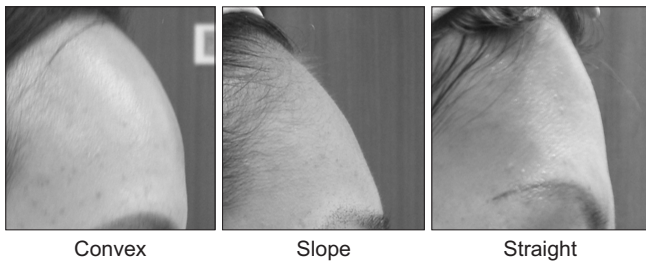


Fig. 3. Photo of forehead slope.

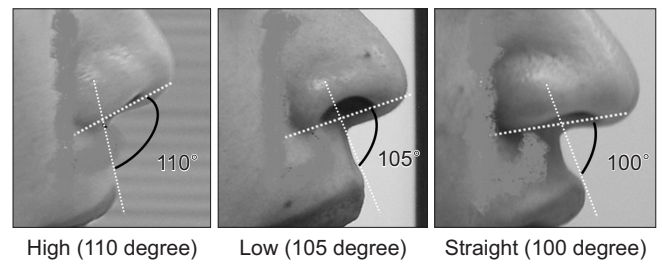


Fig. 6. Photo of nose tip angle.

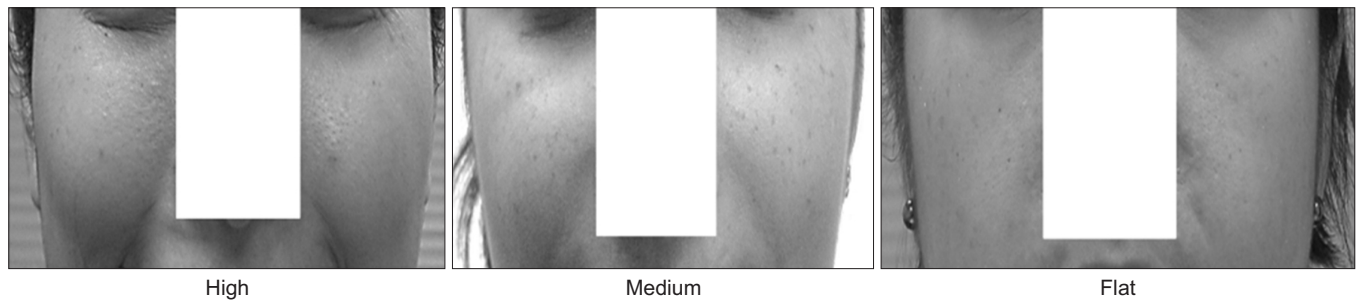


Fig. 4. Photo of cheekbone height.

Clinic, Johor Bahru, Malaysia. These images served as reference points for evaluating facial aesthetic criteria preferences. Images derived from selected photographs of Asian models were modified using special editing software to align visuals with the diverse ethnic backgrounds of Malaysian participants. Furthermore, these modifications aimed to preserve the models' anonymity and remove skin imperfections, thereby reducing the risk of selection bias. The number of images representing each facial characteristic was reduced to minimize misinterpretation (e.g., eyelid creases and epicanthal folds). The images focused on the forehead (forehead height and slope), cheekbones (cheekbone height), chin, facial shape, eyes (eyebrow shape and presence of eyelid creases and epicanthal [inner eye] fold),

nose (nose bridge shape, nasolabial angle, and nose width-length), and lips (lip thickness).

Statistical analyses

Descriptive and inferential statistical tests were performed using the SPSS version 27 (IBM Co.). The results were expressed as frequency and percentage (%). Correlation between respondents' ethnicities and their aesthetic features preferences were evaluated using Pearson's chi-squared test. Statistical significance was determined at a p-value <0.05.

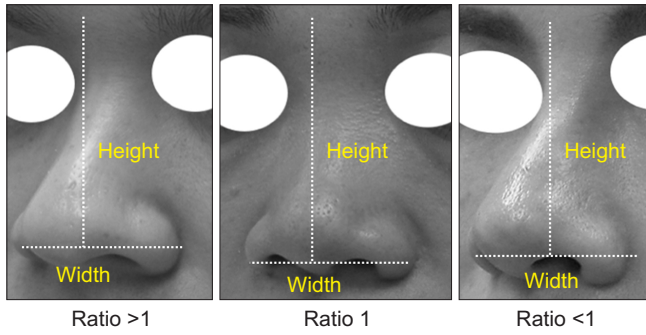


Fig. 7. Photo of nasal width-length ratio.

Results

Sociodemographic characteristics of participants

Table 1 summarizes the participants' sociodemographic characteristics. A total of 290 Malaysian women responded to the facial preference survey, with the majority having never undergone aesthetic procedures or surgery (n=194, 66.9%), in contrast to those who have undergone aesthetic procedures or surgery (n=96, 33.1%). Among the participants, 71.0% (n=206), 15.9% (n=46), 10.0% (n=29), and 3.1% (n=9) were of Malay, In-

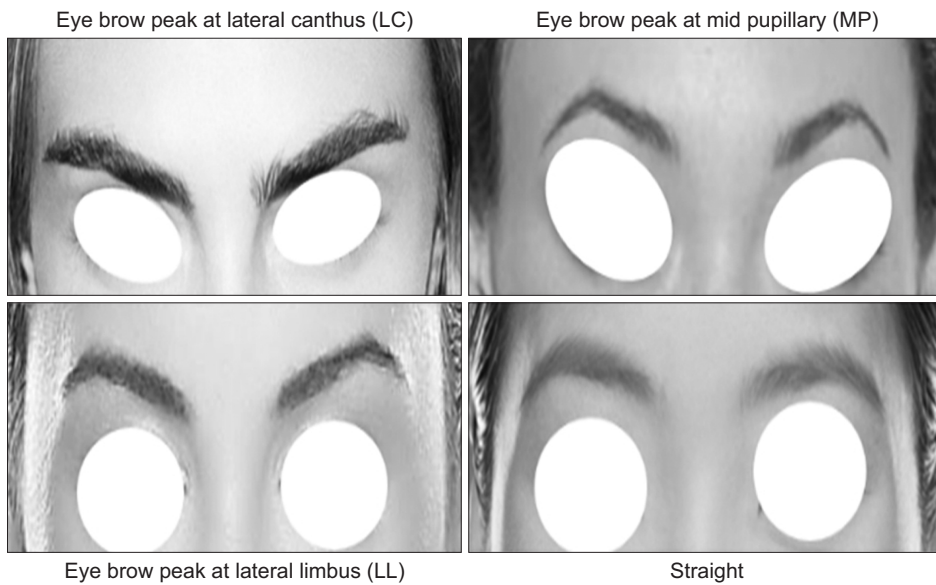


Fig. 8. Photo of eyebrow shape.

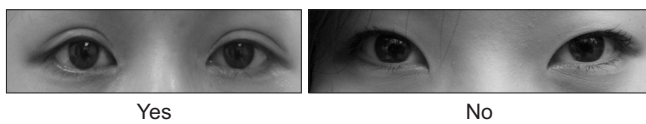


Fig. 9. Photo of presence of eyelid crease.

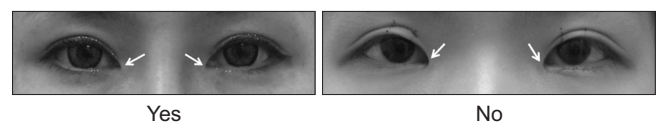


Fig. 10. Photo presence of epicanthic fold.

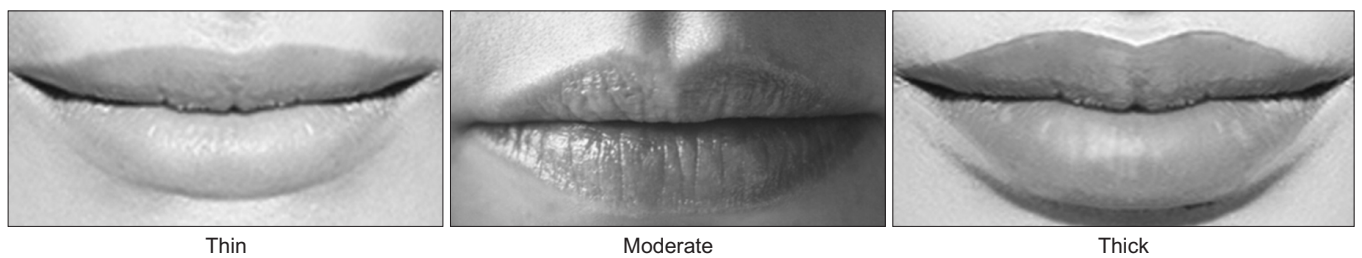


Fig. 11. Photo of lips thickness.

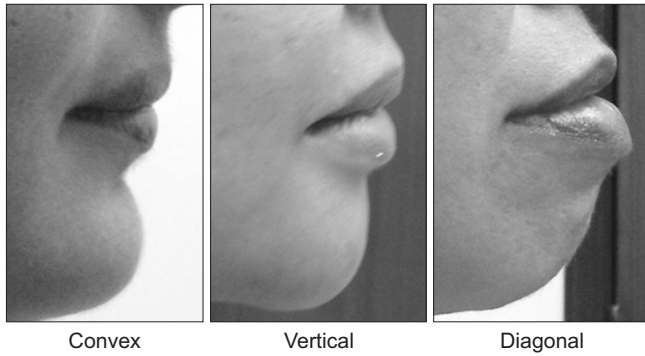


Fig. 12. Photo of chin shape.

dians, Chinese, and other ethnicities, respectively. Additionally, most of them ($n=275$, 94.8%) had a tertiary level of education and were working in the private sector ($n=114$, 39.3%) with a mean age \pm standard deviation of 31.6 ± 9.2 (range, 20–62) years. Among the participants, 106 (36.6%) had low income (ringgit Malaysia [RM] 1000–RM4000) per month and 73 (25.2%) had no income. Furthermore, 82.1% ($n=238$) of the participants lived in urban areas, whereas 17.9% ($n=52$) lived in rural areas.

Preferences for facial aesthetic features among 3 major ethnicities in Malaysia

Table 2 summarizes the facial aesthetic feature preferences among the 3 major ethnicities in Malaysia–Malay, Chinese, and Indian.

Participants' preference for facial shapes

Four types of facial shapes–oval, diamond, round, and inverted triangles–were used as references (Fig. 1). A significant association was observed between ethnicity and the preference for facial shape ($p<0.05$). Oval face was the most preferred facial shape among Malay (40.3%, $n=83$), Chinese (41.4%, $n=12$), and Indian (41.3%, $n=19$) women because of its long, narrow, and rounded chin. The second most favored facial shape among Malay (36.4%, $n=75$) and Chinese (31.0%, $n=9$) women was an inverted triangle or heart shape face, characterized by a retracted and narrow jaw, prominent chin, wide forehead, and broad cheekbones. Conversely, Indian women preferred diamond face (30.4%, $n=14$), which was the least preferred among Malay (8.3%, $n=17$) and Chinese women (13.8%, $n=4$). Notably, the least favored facial shape among Indian women was round (4.3%, $n=2$) (Table 2).

Table 1. Sociodemographic characteristics of participants ($n=290$)

Variable	Frequency (%)	Mean \pm SD (min–max)
Age (yr)		31.6 \pm 9.2 (20–62)
Gender		
Woman	290 (100.0)	
Ethnicity		
Malay	206 (71.0)	
Chinese	29 (10.0)	
Indian	46 (15.9)	
Others	9 (3.1)	
Highest education		
Secondary	15 (5.2)	
Tertiary	275 (94.8)	
Occupation		
Unemployed	5 (1.7)	
Housewife	7 (2.4)	
Government officer	55 (19.0)	
Self employed	33 (11.4)	
Private sector	114 (39.3)	
Retiree	2 (0.7)	
Degree student	74 (25.5)	
Income/month		
No income	73 (25.2)	
<RM1000	10 (3.4)	
RM1000–RM4000	106 (36.6)	
RM4001–RM6000	29 (10.0)	
RM6001–RM10000	50 (17.2)	
>RM10000	22 (7.6)	
Place of stay		
Urban	238 (82.1)	
Rural	52 (17.9)	
Undergo any aesthetic treatments		
Yes	96 (33.1)	
No	194 (66.9)	

SD, standard deviation; RM, ringgit Malaysia.

Participants' preference for forehead shapes (height and slope)

The forehead height was classified into narrow ($<1/3$ of the facial height), equal, and broad ($>1/3$ of the facial height) categories (Fig. 2). Equal forehead height was the most preferred by Malay (58.7%, $n=121$), Chinese (58.6%, $n=17$), and Indian (43.5%, $n=20$) women. Conversely, a narrow forehead height was the least favored by Malay (18.0%, $n=37$) and Chinese (10.3%, $n=3$) women, whereas Indian (21.7%, $n=10$) women least preferred a broad forehead height.

The forehead shapes were classified into convex, sloped, and straight (Fig. 3). Interestingly, Malay (53.9%, $n=111$), Chinese

Table 2. Preferences for facial aesthetic features among women from three major ethnicities in Malaysia (n=281)

Facial features	Ethnicity			Total	χ^2 (p-value)
	Malay (n=206)	Chinese (n=29)	Indian (n=46)		
Face shape					0.003
Oval	83 (40.3)	12 (41.4)	19 (41.3)	114 (40.6)	
Diamond	17 (8.3)	4 (13.8)	14 (30.4)	35 (12.5)	
Round	31 (15.0)	4 (13.8)	2 (4.3)	37 (13.2)	
Inverted triangle	75 (36.4)	9 (31.0)	11 (23.9)	95 (33.8)	
Forehead height					0.057
<1/3 from a facial height	37 (18.0)	3 (10.3)	16 (34.8)	56 (19.9)	
>1/3 of facial height	48 (23.3)	9 (31.0)	10 (21.7)	67 (23.8)	
Equal	121 (58.7)	17 (58.6)	20 (43.5)	158 (56.2)	
Forehead slope					0.121
Convex	14 (6.8)	4 (13.8)	7 (15.2)	25 (8.9)	
Slope	81 (39.3)	12 (41.4)	11 (23.9)	104 (37.0)	
Straight	111 (53.9)	13 (44.8)	28 (60.9)	152 (54.1)	
Cheekbone height					0.659
High	135 (65.5)	17 (58.6)	26 (56.5)	178 (63.3)	
Medium	56 (27.2)	9 (31.0)	14 (30.4)	79 (28.1)	
Flat	15 (7.3)	3 (10.3)	6 (13.0)	24 (8.5)	
Nasal bridge shape					0.371
Concave	29 (14.1)	5 (17.2)	8 (17.4)	42 (14.9)	
Convex	22 (10.7)	6 (20.7)	8 (17.4)	36 (12.8)	
Straight	155 (75.2)	18 (62.1)	30 (65.2)	203 (72.2)	
Nasolabial angle					0.590
High (110 degree)	11 (5.3)	2 (6.9)	5 (10.9)	18 (6.4)	
Low (105 degree)	62 (30.1)	11 (37.9)	13 (28.3)	86 (30.6)	
Straight (100 degree)	133 (64.6)	16 (55.2)	28 (60.9)	177 (63.0)	
Nasal width-length ratio					0.039
>1	80 (38.8)	10 (34.5)	26 (56.5)	116 (41.3)	
1	35 (17.0)	8 (27.6)	2 (4.3)	45 (16.0)	
<1	91 (44.2)	11 (37.9)	18 (39.1)	120 (42.7)	
Eyebrow shape					0.057
Eyebrow peak at lateral canthus	25 (12.1)	4 (13.8)	8 (17.4)	37 (13.2)	
Eyebrow peak at mid pupillary	15 (7.3)	3 (10.3)	2 (4.3)	20 (7.1)	
Eyebrow peak at lateral limbus	48 (23.3)	5 (17.2)	20 (43.5)	73 (26.0)	
Straight	118 (57.3)	17 (58.6)	16 (34.8)	151 (53.7)	
Eyelid creases					0.284
Yes	192 (93.2)	25 (86.2)	44 (95.7)	261 (92.9)	
No	14 (6.8)	4 (13.8)	2 (4.3)	20 (7.1)	
Epicanthal fold					0.362
Yes	182 (88.3)	23 (79.3)	41 (89.1)	246 (87.5)	
No	24 (11.7)	6 (20.7)	5 (10.9)	35 (12.5)	
Lip thickness					0.061
Thin	13 (6.3)	3 (10.3)	7 (15.2)	23 (8.2)	
Moderate	124 (60.2)	18 (62.1)	18 (39.1)	160 (56.9)	
Thick	69 (33.5)	8 (27.6)	21 (45.7)	98 (34.9)	
Chin					0.125
Convex	132 (64.1)	17 (58.6)	38 (82.6)	187 (66.5)	
Vertical	70 (34.0)	11 (37.9)	8 (17.4)	89 (31.7)	
Diagonal	4 (1.9)	1 (3.4)	0 (0.0)	5 (1.8)	

Values are presented as frequency (%).

(44.8%, n=13), and Indians (60.9%, n=28) women displayed a preference for a straight forehead. Conversely, the convex forehead was the least favored among Malay (6.8%, n=14), Chinese (13.8%, n=4), and Indians (15.2%, n=7) women.

However, despite these preferences, the study did not find a significant association between ethnicity and the preference for forehead shape (height and slope) (Table 2).

Participants' preference for cheekbone height

The cheekbone height was categorized as high, medium, or flat (Fig. 4). High cheekbones were preferred by Malay (65.5%, n=135), Chinese (58.6%, n=17), and Indian (56.5%, n=26) women. Conversely, the flat cheekbone type was the least preferred among Malay (7.3%, n=15), Chinese (10.3%, n=3), and Indian (13.0%, n=6) women. However, no significant association was observed between ethnicity and the preference for cheekbone height (Table 2).

Participants' preference for nasal bridge

The nasal bridge was classified as concave, convex, and straight (Fig. 5). A straight nasal bridge was preferred by Malay (75.2%, n=155), Chinese (62.1%, n=18), and Indian (65.2%, n=30) women. Conversely, a convex nasal bridge was the least favored among Malay women (10.7%, n=22), a concave nasal bridge among Chinese women (17.2%, n=5), and both concave and convex nasal bridges among Indian women (17.4%, n=8). Despite these preferences being observed among different ethnic groups, no significant association was observed between ethnicity and the preference for nasal bridge shape (Table 2).

Participants' preference for nasolabial angle

The nasolabial angle, defined as the intersection between the nose tip and alar crease, was categorized as high (110°), low (105°), or straight (100°) (Fig. 6). Malay (64.6%, n=133), Chinese (55.2%, n=16), and Indian (60.9%, n=28) women considered a nasolabial angle of 100° as the most desirable type. Conversely, 5.3% (n=11) of Malay women, 6.9% (n=2) of Chinese women, and 10.9% (n=5) of Indian women found that a high nasolabial angle was the least attractive choice. Nonetheless, no significant association was observed between ethnicity and the preference for nasolabial angle (Table 2).

Participants' preference for nasal width-length ratio

The nasal width-length ratio was categorized as >1, 1, and <1 (Fig. 7). A ratio >1 indicated a wider nasal width than nasal bone length, a ratio <1 represented a narrower nasal width than nasal

bone length, and a ratio of 1 indicated an equal ratio between nasal width and nasal bone length. A significant association was observed between ethnicity and participants' preference for the nasal width-to-length ratio ($p < 0.05$) (Table 2). Malay (44.2%, n=91) and Chinese (37.9%, n=11) women perceived a nasal width-to-length ratio <1 to be attractive, whereas Indian women (56.5%, n=26) preferred a nasal width-to-length ratio >1. Across the three ethnicities, Malay (17.0%, n=35), Chinese (27.6%, n=8), and Indian (4.3%, n=2) women perceived an equal ratio of nasal width to nasal bone length as the least attractive choice.

Participants' preference for eyebrow shape

The eyebrow shapes were categorized as eyebrow peak at the lateral canthus, eyebrow peak at the mid-pupillary, eyebrow peak at the lateral limbus (LL), and straight eyebrows (Fig. 8). The findings revealed that Malay (57.3%, n=118) and Chinese (58.6%, n=17) women preferred a straight eyebrow shape, whereas Indian (43.5%, n=20) women favored an eyebrow peak at the LL type. Additionally, across the three ethnicities, Malay (7.3%, n=15), Chinese (10.3%, n=3), and Indian (4.3%, n=2) women did not prefer the eyebrow peak at the mid-pupillary. However, no significant association was observed between ethnicity and the preference for eyebrow shape (Table 2).

Participants' preference for eyelid creases

Participants were asked for their preference regarding the presence of eyelid creases (Fig. 9). The findings revealed a consistent preference for eyelid creases across all three ethnicities: Malay (93.2%, n=192), Chinese (86.2%, n=25), and Indian (95.7%, n=44) women. However, no significant association was observed between ethnicity and the preference for eyelid creases.

Participants' preference for epicanthic fold

Participants were asked for their preferences regarding the presence of an epicanthic fold (Fig. 10). The results revealed that most Malay (88.3%, n=182), Chinese (79.3%, n=23), and Indian (89.1%, n=41) women expressed a preference for epicanthic folds. However, no significant association was observed between ethnicity and the preference for an epicanthic fold (Table 2).

Participants' preference for lip thickness

Lip thickness was classified into thin, moderate, and thick (Fig. 11). The findings indicated that Malay (60.2%, n=124) and Chinese (62.1%, n=18) women tended to prefer moderately thick

lips, whereas Indian women (45.7%, n=21) preferred thick lips. Conversely, thinner lips were the least preferred choice among Malay (6.3%, n=13), Chinese (10.3%, n=3), and Indian (15.2 %, n=7) women. However, no significant association was observed between ethnicity and the preference for lip thickness (Table 2).

Participants' preference for chin shape

Chin shapes were categorized into convex, vertical, and diagonal (Fig. 12). A convex chin shape is characterized by slight protrusion of the chin from the face, resulting in a rounded or pointed chin, whereas a diagonal shape features a noticeable backward angle. The findings revealed that most Malay (64.1%, n=132), Chinese (58.6%, n=17), and Indian (82.6%, n=38) women perceived a convex chin shape as an attractive feature. Conversely, a minimal percentage of Malay (1.9%, n=4), Chinese (3.4%, n=1), and Indian (0.0%, n=0) women perceived the diagonal chin shape as the least attractive characteristic. However, no significant association was observed between ethnicity and the preference for chin shape (Table 2).

Discussion

People's choices and preferences for each facial feature depend mainly on their ethnicity, age, sex, culture, personal preferences, life experiences, and their perception of beauty. In Malaysia, individuals from various ethnic groups have unique facial characteristics and bony structures [9-11]. This may have a significant impact on cosmetic surgery outcomes, resulting in suboptimal outcomes and low satisfaction levels. To overcome this problem, aesthetic practitioners must recognize and address the differences in patients' perceptions of beauty.

An oval face with a gradual transition from the forehead through temples, zygoma, and cheeks, jaw angle and jawline, and the chin, without indentations or projection in the line, is universally considered attractive [9,12,13]. Park et al. [14] and Ahn et al. [15] reported that Asian women prefer individuals with a delicate, oval facial shape and "oval and almond-shape faces". Similarly, our study demonstrated that an oval facial shape was the most attractive across all ethnicities. This shape is characterized by a long, narrow, and rounded chin, making it aesthetically pleasing. This study provides valuable insights into preferences for facial shapes across different ethnicities, providing information that can inform future marketing and product design strategies.

Nose shape is a distinctive feature that reveals an individual's race, age, and sex. Variations in size, shape, and proportion of

the nose contribute to diverse interpretation of beauty depending on an observer's personal preferences. Recent data have shown racial- and sex-based anatomical variations in the shape and size of the nose [16-19]. Previous research has shown that Asian people typically have small nose, with a straight bridge and broad nasal tip [17,18]. However, our findings revealed that the preference for a straight nasal bridge and straight nasolabial angle was not exclusively associated with any particular ethnic group. However, a correlation was observed between ethnicity and the preferred nose width-to-length ratios. Malay and Chinese women preferred smaller nasal width-to-length ratios, whereas Indian women preferred larger ratios. Nevertheless, research conducted by Broer et al. [20] concluded that no single parameter could define the ideal nose aesthetics across all cultures and ethnic backgrounds.

The upper third of the face, including the eyebrows, is essential for facial expressions and appearance. All facial angles and contours used the eyebrows as reference [21]. The concept of the ideal eyebrow has been argued over the years and is influenced by various cultural trends, as well as differences in race, age, and sex [22-24]. Our results showed that Malay and Chinese women preferred straight eyebrows, whereas Indian women preferred eyebrows that peaked at the LL, which is indicative of the traditional South Asian aesthetic, where curved eyebrows are considered more attractive.

The absence or presence of an upper eyelid crease distinguishes individuals of Asian and Western descent [25,26]. The three types of Asian eyelids are single, low/incomplete eyelid creases, and double eyelids. Most of the studies have focused on the morphology of eyelids in native Chinese population and people of Chinese descent. Moreover, studies have reported that the absence of an upper eyelid crease is more common in Chinese ethnic groups [26,27]. Therefore, the current study sought to investigate eyelid preferences among Malaysian women from Malay, Chinese, and Indian ethnic groups. Previous anthropometric studies have shown that the absence of an upper eyelid crease is common in the Chinese ethnic group [26,28]. However, our study revealed that ethnicity does not play a significant role in determining the preference for eyelid creases.

The epicanthal fold, which gives the eye a narrow appearance, distinguishes Asian upper eyelids from those of Caucasians [29]. Preechawai [30] observed similar results in their study including Thai, Chinese, Thai-Malay, and Thai-Chinese ethnic groups. The absence of an epicanthal fold was significantly higher in the Chinese group than in the other ethnic groups. In our study, women from Malay, Chinese, and Indian

ethnic groups in Malaysia expressed a preference for having an epicanthal fold. However, no significant association was found between ethnicity and the preference of an epicanthal fold. Although the convex chin shape emerged as the preferred choice among all ethnicities, no significant association was observed between ethnicity and the preferences for chin shape.

Conclusion

In conclusion, this study demonstrated that women from Malay, Chinese, and Indian ethnic groups in Malaysia have different perceptions of beauty. While certain facial features such as epicanthic folds, eyelid creases, lip thickness, and chin shape were universally preferred regardless of ethnicity, other factors such as face shape and nasal width-to-length ratio were significantly associated with ethnicity. These findings highlight the importance for practitioners in the field of aesthetics to be aware of the diversity of ethnic identities and the individual attitudes, concerns, and complexities of each patient. Recognizing and respecting these differences can ensure that aesthetic treatments and procedures are tailored to meet the specific needs and preferences of individuals from different ethnic backgrounds.

Limitations of the study

This study has a few limitations. First, the participants had a limited choice of facial preferences from the photos provided, and the photos might not precisely reflect how they perceived human faces in actual life. However, the addition of arrows and sketches to the image assisted participants in making correct decisions based on the survey questions. Second, the recruitment method could have led to a biased sample as not everyone had access to or used social media. This method can lead to a less diverse sample, with individuals within the authors' networks potentially sharing similar preferences or viewpoints. Additionally, participants who were not active on social media or who lacked connections with the authors were excluded from the study. Therefore, the results may not be generalizable or may be skewed toward specific demographics or beliefs. Consequently, there was an unequal distribution of participants among the different ethnicities in the study, which could potentially impact the generalizability of the findings or affect the reliability of the conclusions drawn regarding specific ethnic perspectives on beauty perceptions. However, this approach facilitated random selection of respondents from various social classes and cultural backgrounds. Finally, this survey-based research lacks longitudinal data and carries the risk of inconsis-

tent participant responses.

Acknowledgments

The authors would like to thank the entire Esthetic Medical Solution team and Dr. Siti Nur Hanis Mamood from USMARI for contributing to this study.

Conflicts of interest

The authors have nothing to disclose.

References

- Berneburg M, Dietz K, Niederle C, Göz G. Changes in esthetic standards since 1940. *Am J Orthod Dentofacial Orthop* 2010;137:450.e1-9; discussion 450-1.
- Nomura M, Motegi E, Hatch JP, Gakunga PT, Ng'ang'a PM, Rugh JD, et al. Esthetic preferences of European American, Hispanic American, Japanese, and African judges for soft-tissue profiles. *Am J Orthod Dentofacial Orthop* 2009;135(4 Suppl):S87-95.
- Borelli C, Berneburg M. "Beauty lies in the eye of the beholder"? Aspects of beauty and attractiveness. *J Dtsch Dermatol Ges* 2010;8:326-30.
- Biller JA, Kim DW. A contemporary assessment of facial aesthetic preferences. *Arch Facial Plast Surg* 2009;11:91-7.
- Germine L, Russell R, Bronstad PM, Blokland GA, Smoller JW, Kwok H, et al. Individual aesthetic preferences for faces are shaped mostly by environments, not genes. *Curr Biol* 2015;25:2684-9.
- Husein OF, Sepehr A, Garg R, Sina-Khadiv M, Gattu S, Waltzman J, et al. Anthropometric and aesthetic analysis of the Indian American woman's face. *J Plast Reconstr Aesthet Surg* 2010;63:1825-31.
- Cunningham MR, Roberts AR, Barbee AP, Druen PB, Wu CH. "Their ideas of beauty are, on the whole, the same as ours": consistency and variability in the cross-cultural perception of female physical attractiveness. *J Pers Soc Psychol* 1995;68:261-79.
- Dobke M, Chung C, Takabe K. Facial aesthetic preferences among Asian women: are all oriental Asians the same? *Aesthetic Plast Surg* 2006;30:342-7.
- Liew S, Wu WTL, Chan HH, Ho WWS, Kim HJ, Goodman GJ, et al. Consensus on changing trends, attitudes, and concepts of Asian beauty. *Aesthetic Plast Surg* 2020;44:1186-94.

10. Fang F, Clapham PJ, Chung KC. A systematic review of inter-ethnic variability in facial dimensions. *Plast Reconstr Surg* 2011;127:874-81.
11. Le TT, Farkas LG, Ngim RC, Levin LS, Forrest CR. Proportionality in Asian and North American Caucasian faces using neoclassical facial canons as criteria. *Aesthetic Plast Surg* 2002;26:64-9.
12. Goodman GJ. The oval female facial shape--a study in beauty. *Dermatol Surg* 2015;41:1375-83.
13. Wu WT, Liew S, Chan HH, Ho WW, Supapannachart N, Lee HK, et al.; Asian Facial Aesthetics Expert Consensus Group. Consensus on current injectable treatment strategies in the Asian face. *Aesthetic Plast Surg* 2016;40:202-14.
14. Park MY, Ahn KY, Jung DS. Botulinum toxin type A treatment for contouring of the lower face. *Dermatol Surg* 2003;29:477-83; discussion 483.
15. Ahn J, Horn C, Blitzer A. Botulinum toxin for masseter reduction in Asian patients. *Arch Facial Plast Surg* 2004;6:188-91.
16. Leong SC, Eccles R. A systematic review of the nasal index and the significance of the shape and size of the nose in rhinology. *Clin Otolaryngol* 2009;34:191-8.
17. Jang YJ, Yu MS. Rhinoplasty for the Asian nose. *Facial Plast Surg* 2010;26:93-101.
18. Kim P, Ahn JT. Structured nonsurgical Asian rhinoplasty. *Aesthetic Plast Surg* 2012;36:698-703.
19. Shah R, Frank-Ito DO. The role of normal nasal morphological variations from race and gender differences on respiratory physiology. *Respir Physiol Neurobiol* 2022;297:103823.
20. Broer PN, Buonocore S, Morillas A, Liu J, Tanna N, Walker M, et al. Nasal aesthetics: a cross-cultural analysis. *Plast Reconstr Surg* 2012;130:843e-50e. Erratum in: *Plast Reconstr Surg* 2013;131:1208.
21. Cole EA, Winn BJ, Putterman AM. Measurement of eyebrow position from inferior corneal limbus to brow: a new technique. *Ophthalmic Plast Reconstr Surg* 2010;26:443-7.
22. Ding A. The ideal eyebrow: lessons learnt from the literature. *Aesthetic Plast Surg* 2021;45:536-43.
23. Yalçinkaya E, Cingi C, Söken H, Ulusoy S, Muluk NB. Aesthetic analysis of the ideal eyebrow shape and position. *Eur Arch Otorhinolaryngol* 2016;273:305-10.
24. Price KM, Gupta PK, Woodward JA, Stinnett SS, Murchison AP. Eyebrow and eyelid dimensions: an anthropometric analysis of African Americans and Caucasians. *Plast Reconstr Surg* 2009;124:615-23.
25. Jeong S, Lemke BN, Dortzbach RK, Park YG, Kang HK. The Asian upper eyelid: an anatomical study with comparison to the Caucasian eyelid. *Arch Ophthalmol* 1999;117:907-12.
26. Lu TY, Kadir K, Ngeow WC, Othman SA. The prevalence of double eyelid and the 3D measurement of orbital soft tissue in Malays and Chinese. *Sci Rep* 2017;7:14819.
27. Hwang HS, Spiegel JH. The effect of "single" vs "double" eyelids on the perceived attractiveness of Chinese women. *Aesthet Surg J* 2014;34:374-82.
28. Dharap AS, Reddy SC. Upper eyelid and eyebrow dimensions in Malays. *Med J Malaysia* 1995;50:377-81.
29. Nguyen MQ, Hsu PW, Dinh TA. Asian blepharoplasty. *Semin Plast Surg* 2009;23:185-97.
30. Preechawai P. Anthropometry of eyelid and orbit in four southern Thailand ethnic groups. *J Med Assoc Thai* 2011;94:193-9.