

Perception on diastema medialis (Mwanya) among dental patients attending Muhimbili National Hospital. Athumani AP¹, Mugonzibwa EA²

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Abstract

The aim of this study was to investigate the perception on maxillary and mandibular diastema medialis among patients attending Muhimbili National Hospital Dental Clinic. A total of 200 males and females adult patients attending Muhimbili National Hospital Dental Clinic, were randomly selected. A pre-structured questionnaire in Kiswahili language was used to collect data. Of the 200 respondents, 26%, 11% and 8% reported to have maxillary, mandibular and both arches diastema medialis, respectively. Only a few respondents did perceive and consider diastema medialis as a sign of beauty (10% maxillary, 3% mandibular and 3% both maxillary and mandibular diastema medialis. More than one third of the respondents (31%-37%) preferred maxillary and mandibular diastema medialis for both females and males. For those who reported that mandibular diastema medialis is better for males, (90.9%) were females ($P < 0.05$, $x = 19.22$). In conclusion, since only 10% of the respondents regarded diastema medialis as a sign of beauty, oral health personnel have to be aware in case some individuals may demand closure of diastema medialis.

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Introduction

Spacing especially median diastema is significantly disapproved in Caucasian cultures (Helm et al., 1986; Kerosuo et al, 1995). This condition is disliked and individuals demand for its correction from the aesthetic point of view. However, there is untested belief that in African societies, diastema medialis is considered as sign of beauty. It is generally understood that in many African cultures it is considered a desirable sign of beauty. It is not certain whether it is liked because of its abundance in the referred societies leading to people being used to it or people really adore the condition. However, in a recent Tanzanian study involving school children and their parents, photographs showing spacing and diastema medialis were most preferred for a girl by children; whereas parents proffered them for both sexes (Mugonzibwa et al., 2004a).

At the society level, there are no exact rules governing why an occlusion or a face is beautiful. Although professionals have tried to define and recreate dental and facial appearances, the beauty objective standards are difficult to define (Shaw et al., 1985; Kerri, et al., 1990; Phillips, et al., 1992; Johnston et al., 1999; Anderson et al, 2000). Kiyaki (1981) showed that pacific Asians were more tolerant to skeletal facial disproportional and tooth spacing than Caucasians. Equally societal aesthetic

factors and cultural traditions related to individual or personal psychological factors and norms for dental attractiveness influence perception of malocclusion. Prah-Andesen et al., (1979) reported that dental aesthetics was the most important feature describing the acceptability of occlusion. While dissatisfaction with dental appearance is broad related to the severity of the occlusal irregularities (Shaw, 1981; Tedesco et al, 1983), there are differences in the recognition and evaluation of the dental features (Shaw et al., 1975; Prah-Andersen et al., 1979; Albino et al., 1979). In the majority of individuals, diastema medialis occurs congenitally but artificial creation using wood sticks is said to be common among Tanzanian tribes (personal communication). On the other hand, diastema medialis is not an uncommon occlusal feature among Tanzanian study samples occurring in 16-32% of the subjects (Mugonzibwa et al., 1990; Mugonzibwa, 1992; Mugonzibwa, 1993).

With globalization trends, increased uses of the information and technology in our society, perception from elsewhere are likely to flow into our country. Since diastema medialis is a condition, which can be corrected on demand, it is important for oral health personnel in Tanzania to investigate the perception on diastema medialis in the Tanzanian Society

Subjects and Methods

Subjects

The study involved a total of 200 randomly selected respondents aged 18+ years attending MNH dental clinic of whom 72 (36%) and 128 (64%) were males and females, respectively. Inclusion criteria for the respondents were age at the time of the study (18+ years), only African Tanzanian origin, and willingness to participate in the study. Consent was obtained from the study subjects. Distribution of the respondents is presented in table 1.

Methods

This was a cross sectional study. A pre-structured questionnaire with both closed and opened ended questions (appendix 1) in Kiswahili language was administered to all 200-study respondents. The questionnaire consisted items and was divided into two sections. The first section of the questionnaire referred to the demographic characteristics of the respondents with particular attention to age and gender, education and employment status. The second section was dealing with the respondent's perception on diastema medialis (Mwanya) as a sign of beauty and consisted of questions related to maxillary and mandibular central diastema. Respondents were also asked to determine their gender preference for diastema medialis in the maxillary, mandibular and both arches.

Investigator (AA) administered the questionnaires to the respondents on the scheduled study days before dental examination and treatment were carried out. The investigator gave a brief introduction on giving the questionnaire to the respondent. The respondents filled the questionnaire independently. In situations where, the respondent had questions, the investigator gave clarifications. In case the respondent could not read and/or write, the investigator carried out a face-to-face interview. The diastema medialis in this study was not clinically determined by the investigator but self reported by the respondent.

Data processing and analysis was carried out using EPI INFO 2002. Descriptive statistics was analyzed. Chi-square and student t- tests analysis was used to test for various significant differences statistically between different subgroups

Results

Table 1 shows distribution of the study population by age and gender. Among the study sample, 36.0% were males and 64.0% were females. More than half of the respondents (57%) were aged between 18 and 29 years.

Table 1. Distribution of the respondents according to age and gender.

Age group (years)	Males		Females		Total	
	n	%	n	%	n	%
18-29	40	35.1	74	64.9	114	57
30-39	18	32.7	87	67.3	55	27
40-49	5	29.4	12	70.6	17	8.5
50-59	6	54.5	5	45.5	11	5.5
60-70	3	100	-	-	3	1.5
Total	72	36	128	64	200	100

Demographic characteristics of the respondents are shown in table 2. More than half of the respondents (59%) came from Kinondoni Municipal. While about half of the respondents (53%) had primary school level of education, very few (5%) of them were university graduates. About one third of the respondents (31%) were self-employed while 25% reported to be engaged in house work as housewives/husbands.

Table 3 shows the type of self reported diastema medialis according to gender. Of the 200 respondents, 26%, 11% and 8% reported to have maxillary, mandibular and both arches diastema medialis, respectively. Surprisingly, diastema medialis was equally distributed between both sexes. General spacing in the dentition was reported by 25% of the respondents.

Perception on Diastema Mediale

Table 2. The Respondents' demographic characteristics.

Characteristic	n	%
Area of residence		
Ilala	38	19
Kinondoni	119	59
Temeke	43	22
Total	200	100
Educational status		
No formal education	10	5
Primary school	105	53
Secondary school	73	36
University graduate	10	5
Others	2	1
Total	200	100
Employment status		
Public employment	23	17
Self employment	61	31
House employment	51	25
Unemployed	25	12
Peasants	5	3
Students	25	12
Total	200	100

Frequencies of responses to questions on the perception of diastema mediale as a sign of beauty is shown in table 4. Only a few respondents did perceive and consider diastema mediale as a sign of beauty (10% maxillary, 3%

mandibular and 3% both maxillary and mandibular diastema mediale.

Table 5 shows types of diastema mediale and respondents' gender preference. More than one third of the respondents (31%-37%) preferred maxillary and mandibular diastema mediale for both females and males. While females reported to prefer maxillary and mandibular diastema mediale for males, males preferred mandibular diastema mediale for females ($p < 0.05$).

Discussion

The study sample was hospital based which may not represent the Tanzanian general population. Most of the respondents came to the MNH dental clinic with pain, which might have affected their concentration while responding to the questionnaire. On the other hand, the study sample comprised only dental patients, who may be more conscious about dental issues including the diastema mediale than the general population. Furthermore, the study was conducted in the urban settings; therefore the findings may not apply to the rural settings. However, this study gives an overview and baseline data on the perception and association of diastema mediale and beauty in a hospital based sample of Tanzanian adults.

Table 3. Types of respondents' self-reported diastema mediale according to gender

Type of diastema mediale	Males		Females		Total	
	n	%	n	%	n	%
Maxillary	18	25	33	28.5	51	26
Mandibular	8	11.1	13	10.2	21	11
Maxillary and mandibular	6	8.3	10	7.8	16	8
Spacing in general	19	26.4	30	23.4	49	25

Most of the respondents were females compared to males. This finding could be attributed to the fact that females have been reported to experience more caries than males (Kikwilu, 1989; Kutesa et al., 2005) and dental caries is reported to be the most frequent cause of dental pain and tooth extraction (van Palenstein Helderman and Nathoo, 1990; Mosha and Scheutz, 1993; Christensen et al., 1997; Ntabaye et al., 1998). While in Tanzania, most dental patients report to the oral health facilities for relief of pain from caries and associated complications (Mosha and Scheutz, 1993; Ntabaye et al., 1998).

About two thirds of the respondents came from Kinondoni Municipal compared to Ilala and Temeke Municipalities being the agreement with two studies conducted at MNH dental clinic which reported that about half of the respondents came from Kinondoni Municipal (Mugonzibwa et al., 2004); Fadhili and Mugonzibwa, 2005). Most Kinondoni residents are likely to go to MNH oral health facility just for convenience due to proximity geographically. The respondents comprised of unemployed, businessmen/women of varying degree, scholars, public and private employees may be reflecting heterogeneous characteristics of the urban population.

Respondents self-reported diastema mediale in 26% in the maxilla, 11% in the mandible and 8% in both arches of both arches, respectively. For the maxilla and both arches, these findings are within the limits of the previous Tanzania studies (Mugonzibwa et al., 1990; Mugonzibwa, 1992, 1993), which reported diastema mediale occurrence in 16-38% in the maxilla, 1-5% in the mandible and 3-12% in both arches. However, the frequency of self reported diastema mediale in the mandible in the present study is higher compared to previous Tanzanian studies (Mugonzibwa et al., 1990; Mugonzibwa, 1992, 1993), which reported diastema mediale occurrence of 1-5% in the mandible. The difference could be attributed to methodological differences between the studies.

Respondents perceived diastema mediale as a sign of beauty in 9.5% in the maxilla, 3% in the mandible, and 2.5% in both arches, respectively. These findings imply that the majority of the respondents did not consider diastema mediale as a sign of beauty being in agreement with a recent Tanzania report (Mugonzibwa et al., 2004a) where children and parents did not consider spaced dentition attractive.

Table 4. Frequency of responses of questions on diastema mediale as a sign of beauty

Diastema mediale	Perception on diastema Mediale as a sign of beauty	
	n	%
Maxillary		
Yes	19	10
No	54	27
Do not know	127	63
Total	200	100
Mandibular		
Yes	6	3
No	38	19
Do not know	156	78
Total	200	100
Both		
Yes	5	3
No	42	21
Do not know	153	76
Total	200	100

Maxillary central diastema was preferred for both males and females in 37% of the respondents. Mandibular central diastema was preferred for both males and females in 31% of the respondents. It is surprising that less than 10% of the respondents perceive and consider diastema mediale as a sign of beauty but 11-37% preferred the condition for males, females and both sexes, respectively. The majority of the respondents did not perceive and consider

Table 5. Distribution of the respondents according to the gender preference for the types of diastema mediale.

Diastema mediale	Gender preference							
	Males		Females		Both		Do not know	
	n	%	n	%	n	%	n	%
Maxillary								
Males	7	9.7	22	30.5	27	37.5	16	22.2
Females	22	17.2	41	32	36	28.1	29	22.7
Total	29	14.5	63	31.5	63	36.5	45	22.5
Mandibular								
Males	2	2.8	20	27.8	19	26.4	31	43.1
Females	20	15.6	12	9.4	43	33.6	53	41.4
Total	22	11	32	16	62	31	84	42

diastema medialle as a sign of beauty, while more than one third preferred maxillary and mandibular diastema medialle for both sexes

In conclusion, contrary to the general unpublished understanding and belief respondents in the present study did not consider diastema medialle as a sign of beauty. On the other hand, in view of the fact that some of the respondents regarded diastema medialle as a sign of beauty, oral health personnel have to be aware of such scenario in their routine clinical practice. Further studies to investigate the perception on diastema medialle in the Tanzanian regional and rural settings are recommended.

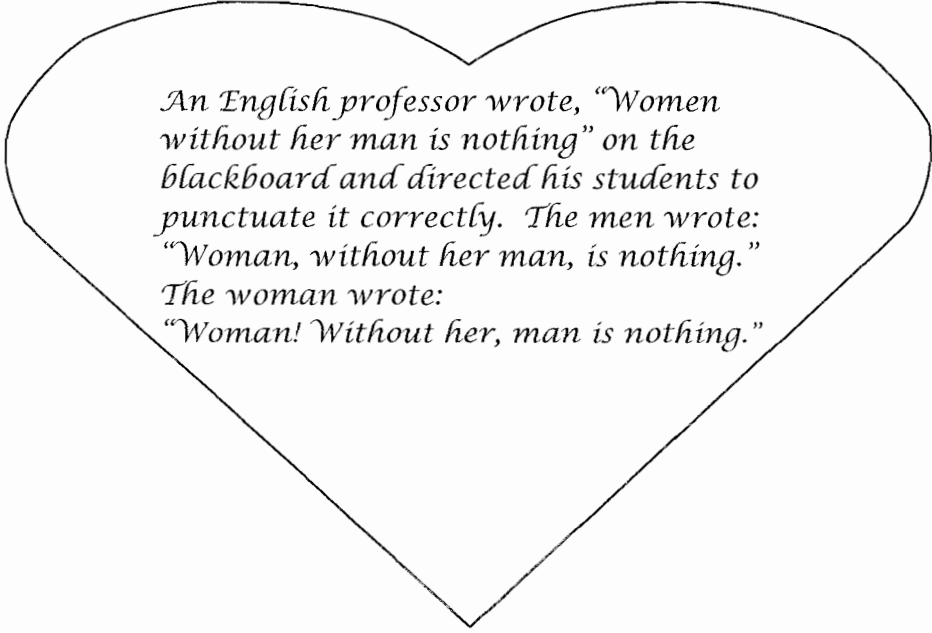
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An English professor wrote, "Women without her man is nothing" on the blackboard and directed his students to punctuate it correctly. The men wrote: "Woman, without her man, is nothing." The woman wrote: "Woman! Without her, man is nothing."

DODOSO KUHUSU UTAMBUZI WA MWANYA

Namba ya kujiandikisha.....

Namba ya uchunguzi.....

Maelekezo:

Kwa swali la 1,2,3 na 4, jaza nafasi zilizo wazi.

Kwa swali la 5 hadi zunguushia jibu unalodhani kuwa ni linafaa

1. Tarehe.....
2. Umri.....
3. *Jinsia 1. Mme 2. Mke.....*
4. *Unaishi wapi katika mji huu wa Dar es salaam?*
5. Elimu yako
 - (a) Sijasoma
 - a) *Elimu ya msingi*
 - b) *Elimu ya sekondari*
 - c) *Elimu ya chuo kikuu*
 - d) *Nyinginezo (taja)*
6. Kazi yako
 - a) *Mwajiriwa serikalini*
 - b) *Nimejiajiri mwenyewe (mfanyabiashara)*
 - c) *Mama wa nyumbani*
 - d) *Sina kazi*
 - e) *Mkulima*
7. *Je una mwanya katikati ya meno yako?*
 - (a) Ndiyo (b) Hapana (c) Sijui
8. *Kama hapana, je ungependa kuwa nao?*
 - a) *Ndiyo (b) Hapana (c) Sijui*
9. *Je una mwanya katikati ya meno ya mbele kwenye taya la juu?*
 - a) *Ndiyo (b) Hapana (c) Sijui*
10. *Kama hapana, je ungependa kuwa nao?*
 - (a) Ndiyo (b) Hapana (c) Sijui
11. *Je una mwanya katikati ya meno ya mbele kwenye taya la chini?*
 - a) *Ndiyo (b) Hapana (c) Sijui*
12. *Kama hapana, je ungependa kuwa nao?*
 - a) *Ndiyo (b) Hapana (c) Sijui*
13. *Je una mwanya katikati ya meno ya mbele kwenye taya la juu na la chini?*
 - a) *Ndiyo (b) Hapana (c) Sijui*

14. *Kama hapana, ungependa kuwa nao kwenye taya zote mbili?*
a) *Ndiyo (b) Hapana (c) Sijui*
15. *Kuwepo kwa mwanya katikati ya meno ya mbele taya la juu ni ishara ya uzuri/mvuto*
a) *Nakubali kabisa (b) Nakubali (c) Sijui (d) Sikubali (e) Sikubali kabisa*
16. *Kuwepo kwa mwanya katikati ya meno ya mbele kwenye taya la chini ni ishara ya uzuri/mvuto*
a) *Nakubali kabisa (b) Nakubali (c) Sijui (d) Sikubali (e) Sikubali kabisa*
17. *Kuwepo kwa mwanya katikati ya meno ya mbele kwenye taya la juu na la chini ni ishara ya uzuri/mvuto*
a) *Nakubali kabisa (b) Nakubali (c) Sijui (d) Sikubali (e) Sikubali kabisa*
18. *Kuwepo kwa mwanya , katikati ya meno ya mbele kwenye taya la juu ni muhimu zaidi kama ishara ya uzuri/mvuto*
a) *Nakubali kabisa (b) Nakubali (c) Sijui (d) Sikubali (e) Sikubali kabisa*
19. *Kuwepo kwa mwanya katikati ya meno ya mbele kwenye taya la juu na la chini ina umuhimu sawasawa katika kuonyesha uzuri au mvuto*
a) *Nakubali kabisa (b) Nakubali (c) Sijui (d) Sikubali (e) Sikubali kabisa*
20. *Kuwepo kwa mwanya katikati ya meno ya mbele unakubalika zaidi kwa wanawake kuliko wanaume kama ishara ya uzuri*
a) *Nakubali kabisa (b) Nakubali (c) Sijui (d) Sikubali (e) Sikubali kabisa*
21. *Kuwepo kwa mwanya katikati ya meno ya mbele unakubalika sawasawa katika jinsia zote kama ishara ya uzuri/mvuto*
a) *Nakubali kabisa (b) Nakubali (c) Sijui (d) Sikubali kabisa (e) Sikubali kabisa*
22. *Kuwepo kwa mwanya katikati ya meno ya mbele kwenye taya la juu ni bora kwa*
a) *Mwanaume (b) Mwanamke (c) Jinsia zote (d) Sijui*
23. *Kuwepo kwa mwanya katikati ya meno ya mbele kwenye taya chini ni bora kwa*
a) *Mwanaume (b) Mwanamke (c) Jinsia zote (d) Sijui*

When a woman is 18, she is a football. 20 men (reserve) going after her.

When she is 28, she is a hockey ball. 8 men after her (Forward players).

When she is 38, she is a golf ball. One man hitting her.

When she is 48, she is a Ping-Pong ball, two men pushing her to each other.