



Assessment of smile line and gingival display in a group of Thai young adults

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Introduction

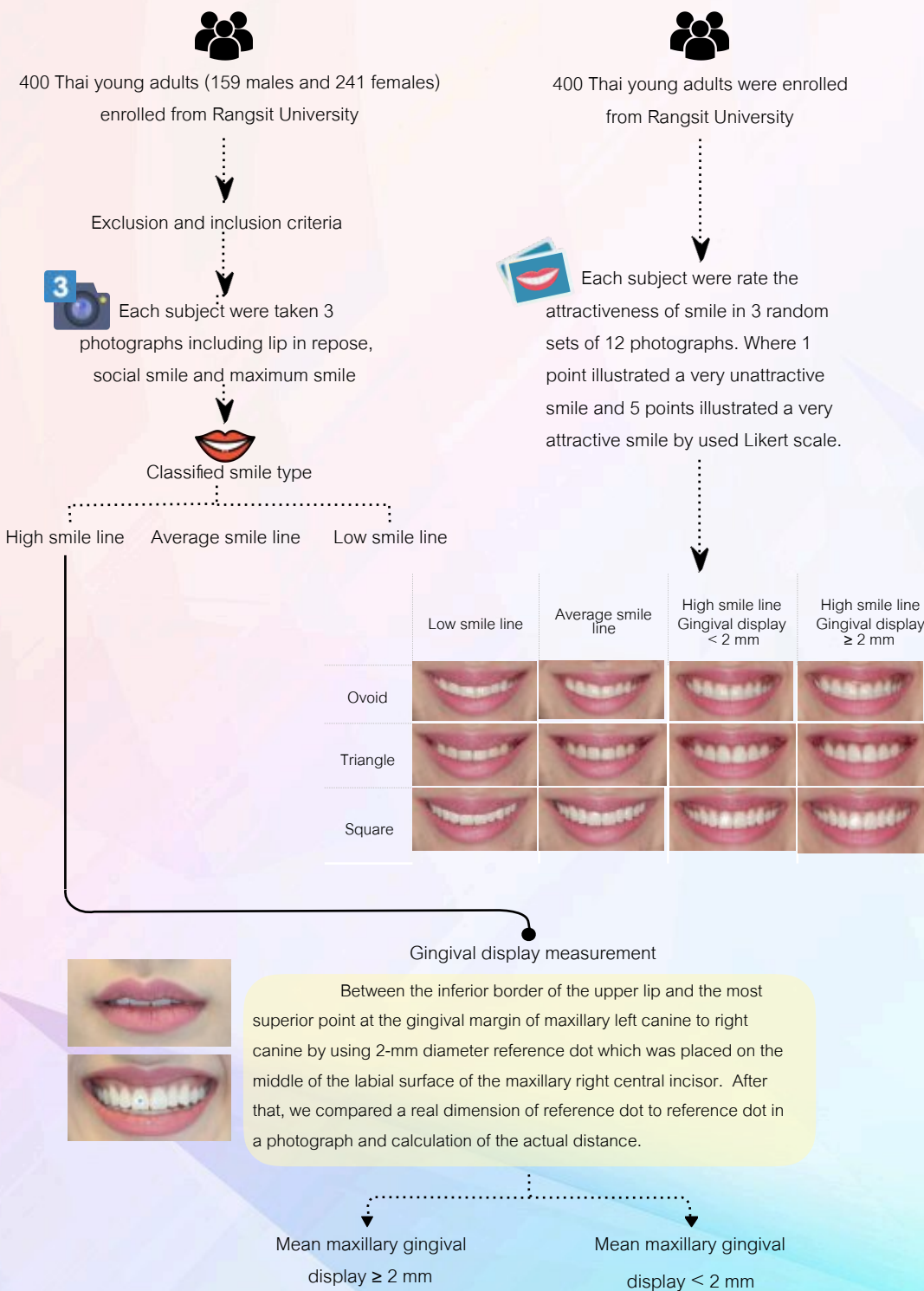
In social interaction, the mouth is the center of communication and smile plays an important role in facial expression. It's also represent sincerity, gladness, personality and attractiveness. Smile line divided into three categories which are high smile line, average smile line and low smile line which high smile line is more critical situation than low smile because the restoration and gingival tissues completely display in high smile line but low smile line is a less critical situation. Hence, the esthetic smile is increasingly important in practice of restorative dentistry because the facial and smile attractiveness appears strongly connected to each other.

Keyword : smile line, gingival display, attractiveness

Objective

- To determine prevalence of smile type in a group of Thai young adults 20-35 years of age and compare different of smile type between male and female.
- To evaluate the type of smile in combined with tooth shape which is most attractiveness in the opinion of Thai young adults 20-35 years of age.

Material and method



Statistics Analysis

Chi-square test was used to compare proportions of each smile line type between male and female. Descriptive statistics were used for explanation among age, gender and type of smile line. Furthermore, the attractiveness score collection was tested normal distribution by using Kolmogorov-Smirnov. The results reveal scores were not normally distributed. Hence, this data set will be tested by using Wilcoxon sign-rank test.

Results

Gender	Low Smile		Average Smile		High Smile	
	Number	%	Number	%	Number	%
Male	20	12.42%	101	62.73%	38	23.90%
Female	13	5.44%	129	53.97%	99	41.08%
Total	33	8.25%	230	57.50%	137	34.25%

Table 1: Numbers and percentage of each smile line type by gender

Gender	Mean maxillary gingival in high smile line			
	< 2 mm		≥ 2 mm	
	Number	%	Number	%
Male	17	44.74%	21	55.26%
Female	48	48.48%	51	51.52%
Total	65	47.45%	72	52.55%

Table 2: Numbers and percentage of mean maxillary gingival in high smile line type by gender

Smile Line	Tooth Shape	Mean ± S.D.		Smile Line	Tooth Shape	Mean ± S.D.	
		High < 2 mm gingival display	High ≥ 2 mm gingival display			High < 2 mm gingival display	High ≥ 2 mm gingival display
Low smile line	Ovoid	2.54 ± 1	High < 2 mm gingival display	Ovoid	2.87 ± 1.01		
	Triangle	2.58 ± 1.05		Triangle	3.03 ± 1.01		
	Square	2.6 ± 1.09		Square	2.99 ± 1.02		
Average smile line	Ovoid	2.78 ± 0.98	High ≥ 2 mm gingival display	Ovoid	2.79 ± 1.03		
	Triangle	2.74 ± 0.86		Triangle	2.8 ± 0.94		
	Square	3.68 ± 1.22		Square	3.08 ± 1.11		

Table 3: Descriptive statistics of attractiveness score of each smile type

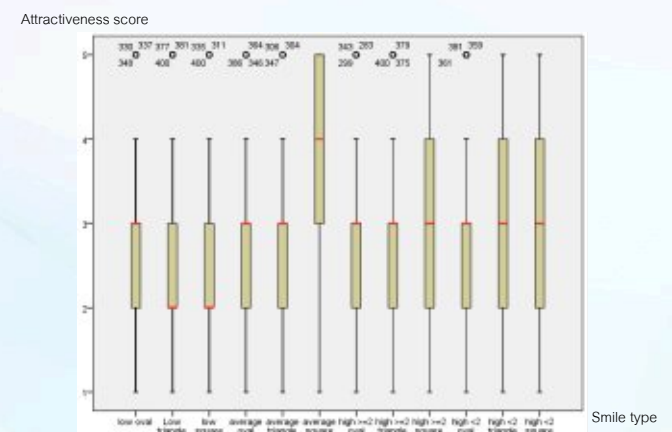


Figure 1: Boxplot of 12 smile types (red color as median of each smile)

The most attractiveness tooth shape of average and high ≥ 2 mm smile line were square tooth shape while the attractiveness of oval and triangle tooth shape were not different. In high < 2 mm smile line, triangle tooth shape was more attractive than oval tooth shape and the attractiveness of square tooth shape was equal to that of triangle and oval tooth shape. Meanwhile the attractiveness of square, triangle and oval tooth shape were not different in low smile line.

Discussion and Conclusion

Average smile line is the most common smile line in a group of Thai young adults. Additionally, the average smile line with square tooth shape has the highest attractiveness score.

In our study, most subjects have average smile line which is in accordance to a study reported by Tjan, et al. in 1984. Puppin, et al. report shows women tend to have average and high smile line and men tend to have average and low smile line. Another report by Peck, et al. concluded that average (52.2%) and high (32.5%) smile line in women but male usually feature average and low smile line (48% and 33% respectively). Both of the report is similar to our results. In our study of attractiveness of smile show that average smile line with square tooth shaped were the most attractive. However, Anderson, et al reported restorative dentists preferred round incisors for the female images. Orthodontists preferred round and square-round incisors for the female images. Laypeople did not significantly discriminate between any of the female incisor shapes.

