

**THE GINGIVAL SMILE
SMILE AND EXPOSED GINGIVA RANKINGS**

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**SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR A CERTIFICATE IN ORTHODONTICS
THE OREGON HEALTH SCIENCES UNIVERSITY
DEPARTMENT OF ORTHODONTICS
JUNE 1993**

Introduction

The American Heritage dictionary defines the smile as a facial expression characterized by the upward turning by the corners of the mouth. With the smile approaching laughter the teeth become exposed. The importance of the smile can not be understated. The facial expression is essential in expressing friendliness, agreement and appreciation. An attractive or pleasing smile clearly enhances the acceptance of an individual in our society by improving the initial impression in interpersonal relationships.¹

As more of the dentition becomes exposed the wider the smile becomes. Some people expose only maxillary teeth while others only mandibular teeth. As the mouth extends and the lips separate, the mesial half of the maxillary first molars and the mandibular second premolars may become exposed. People with dental deformities such as irregularities, poor restorations, or missing teeth often avoid smiling or make an effort to conceal an unsightly smile by covering their mouths.

One entity that this investigation will concentrate on is the smile that exposes the maxillary gingiva. The varied nomenclature for this anatomical smile variation include: gummy smile, high lip line, short upper lip and full denture smile². While most people do not expose the gingival tissues, those with a short upper lip usually do, especially when smiling. Those with hypermobile lips, or massive alveolar processes do the same in a broad smile.

Because the dental patient is often motivated to seek dental treatment for esthetic reasons Tjan, Miller and The¹ performed a study to determine some average desirable characteristic features of smiles to help achieve optimum results in esthetic oral rehabilitation. In this paper the smile line is described as the intersection of the upper lip with the dentition in a full smile. Peck, Peck and Kataja² focused research on the smile line that exposes gingiva superior to the maxillary anterior teeth and call this a 'gingival smile line.' Many patients and Orthodontists consider the gingival smile line or 'gummy' smile as undesirable and seek to correct it.

The purpose of this study is to determine the incidence of the gingival smile line in the Oregon Health Sciences University Department of Orthodontics retention records, and to determine if orthodontics improves this smile line, and thirdly to determine if orthodontic treatment improves the appearance of the smile in general.

Jansen⁴ in his "Balanced smile - A most important treatment objective" article, points out how the balanced smile is a most important treatment objective and how full face smile photographs are an invaluable additional clinical tool in assessing the patient's smile before treatment and how they are the only means by which favorable or unfavorable changes can be permanently registered. A head film does not register the lips in action.

OHSU pretreatment and posttreatment records include a full frontal smiling photo. All smiles will be ranked by esthetic value and the gingival smile line will be determined. Pretreatment and

posttreatment rankings will be compared to determine improvement or not. The incidence of gingival smile lines and their treatment effect will be determined from the photos as well.

Literature Review

The nasolabial fold is the keystone of the smiling mechanism. Robin and Mishriki studied cadaver dissections to help determine the smiling mechanism. They formulate the smile as having two stages. First the upper lip is raised to the nasolabial fold by contraction of the levator muscle originating from the nasolabial fold to the upper lip. Lateral muscle bundles raise the lip at the posterior teeth while the medial muscle bundles raise the lip at the anterior teeth. The lip then meets resistance at the nasolabial fold due to cheek fat. The second stage involves the further raising of the lip by three muscle groups; the levator labii superior muscles of the upper lip, originating from the infraorbital rim, zygomatic major muscles, and the superior fibers of the buccinator. Squinting often accompanies the final stages of smiling. It represents the contraction of the periocular musculature to support the maximum lip elevation through the fold. A theory can be proposed linking the elevator muscles at the nasolabial fold with the ability of some individuals to project a gummy smile.⁵ A Peck study⁵ shows that the high gingival smile line group have the muscular capacity to raise the upper lip when smiling 1mm or 20% more than a reference group.

Wyllie in 1959 stated that the objective of orthodontists are as follows: 1) establishing the best possible functioning unit, considering not merely the teeth but also supporting tissues, muscles, and structures of the joint. 2) Establishment of the best possible outlook for health and longevity of these tissues. 3) Attainment of the best possible esthetic results, dental and facial, judged not only in repose but in animation as well.⁶ The smile is the expression that frames and completes the dental composition. If the smile is impaired, then we see the person as sad, unhappy, dour, or austere. Esthetic dentistry strives to create harmony between the incisal edges of the maxillary anterior teeth and the superior curvature of the lower lip. Lack of harmony is seen as disturbing to the eye.⁷

Tjan² wished to find what esthetic factors motivated the patient to seek treatment. He realized that beauty is not absolute and that it is extremely subjective and is often dictated by cultural or ethnic factors and individual preferences. He formulated a study to establish a standard of normalcy in an esthetic smile relative to smile type (high, average, low), parallelism of the maxillary incisal curve with the lower lip, position of the incisal curve relative to touching the lower lip, and the number of teeth displayed in a smile. Of the 454 subjects studied 10.5% revealed a high smile showing the total cervicoincisal length of the maxillary anterior teeth and a continuous band of gingiva. 68.9% of the subjects revealed an average smile showing 75-100% of the maxillary anterior teeth and the interproximal gingiva only. A low smile displaying less than 75% of the maxillary anterior teeth was found in 20.4% of the

subjects. A statistical difference was found between males and females, with the females having a higher smile line.

Table 1. Smile lines of males and females

	high	average	low
male	6.76	63.28	29.95
female	13.79	73.71	12.50
total	10.57	68.94	20.48

The results of number of teeth displayed showed 7% revealing the six anterior only, 48% with the six anterior plus first premolars, 40% including the second premolar, and 4% also revealing the first molars.

Hulsey⁸ analyzed the components of the smile to better understand the composition of an attractive smile. His panel of 'smile judges' included ten men and ten women of different vocations and of similar ages to the subjects investigated. He found that the height of the upper lip in relation to the gingival margin of the upper incisor teeth was a important factor affecting the judgment of the panel members as to the attractiveness of a smile. The judges found that subjects who had orthodontic treatment had poorer smiles than 'normal' occlusions. Good smiles had harmony between the arcs of curvature of the incisal edges of the upper incisors and the upper boarder of the lower lip. Smile symmetry is important, since no smiles that were asymmetric had attractive smile ratings. The amount of buccal corridor space revealed during a

smile appeared to have no significance to an attractive smile. The most attractive smiles have the upper lip at the height of the gingival margin of the upper central incisor. The upper lip curvature was most desirable when the corners of the smile were above the midline of the upper lip. The study suggests that positioning the anterior teeth in harmony with the upper boarder of the lower lip and careful attention to midline relationships which exist between the denture and the surrounding soft tissue may enable the orthodontist to give his patient a more attractive smile. Also, that a more esthetic smile would result if orthodontics could change the vertical relationship between a short or long upper lip to a position even with the gingivocervical margin of the central incisors.

Janzen⁴ states the primary treatment goal as to providing maximum stability together with a well balanced functional occlusion. However, a well balanced smile should also be an additional important treatment objective. He pointed out how few current cephalometric analyses include soft-tissue considerations with little or no mention of the smile line. Janzen feels that if the occlusal plane is too low compared to the lip embrasure that too much gingival tissue is seen. If it is too high, the maxillary incisors are not seen at all. But he also points out considerable occlusal plane-lip embrasure variability from patient to patient where 'gummy' display may be seen in an ideal relationship. There are some factors involving gingival display and facial harmony that may be cephalometricly analyzed. These include lip thickness and lip length. Other factors that cannot be assessed cephalometricly include arch form, width of the stomodeum, and neuromuscular factors, such as,

muscle tone, innervation of the corners of the mouth, and total facial expression as a result of the combined action of all mimetic musculature of the face. Because of these muscular factors Ackerman and Proffit⁴ recommend using a three quarter smiling photograph to reveal a short upper lip if present, and it may demonstrate that the patient shows a great deal of gingiva while smiling. This finding can very much affect the treatment plan and the mechanics that are ultimately used to correct the malocclusion. Full face smiles photographs should be considered as a standard clinical tool since asymmetries as found in many patients are not revealed by the three quarter facial photograph.

Tweed⁹ felt that there was a definite correlation between facial lines and the position of the mandibular incisors in relation to basal bone. He felt that the lower incisors have a definite relationship to facial esthetics, as is seen when there is compensation of the lower incisors with steepening Frankfort-mandibular plane angle to maintain good facial esthetics. The soft tissue changes that could be expected with treatment include: downward movement of the chin pad about the same degree as the hard tissues and downward movement of the upper lip in the majority of cases. Treatment improves the soft tissue relationships by reducing lip prominence, reducing the curl of the lower lip, vertical opening of the chin and in some a more forward position of the chin.¹⁰

Root⁴ described an "orthodontic look" that is often the result of standard mechanics. This includes a subtle but definite longer nose, flattened upper lip, and a strong tendency to have excess gum

tissue showing when smiling. Of all the factors related to a balanced smile, two can be orthodontically controlled: 1) position of the maxillary incisor and 2) arch form. A smile may be improved by a reduction in ANB difference, improving the maxillary incisor angulation, intrusion of the maxillary incisor, improvement of the mandibular incisor angulation and proper positioning of the maxillary and mandibular incisors relative to the A-Po plane. It is important to avoid class II elastics, which tend to extrude maxillary incisors. Instead, concentrate on incisor intrusion. Janzen suggests intrusion mechanics that include Boman torquing springs reinforced with directional high-pull head gear to soldered hooks on the arch wire in the anterior segment. He also strongly advises avoiding "round tripping".

Bloom¹¹ showed that a relationship exists between the changes in the dentoskeletal framework and the soft tissue profile around the mouth. Movement of the maxillary incisor effects the superior sulcus, upper lip, and lower lip. Positional changes of the mandibular incisor effects the inferior sulcus and lower lip. As overbite and overjet are modified, both upper and lower lip are affected. Bloom feels that knowing these changes that it is possible to predict the perioral soft-tissue changes in relation to anterior tooth movement. Neger¹² indicates that a proportionate change or improvement in the soft tissue profile does not necessarily accompany extensive dentition changes. Hence, we cannot rely on a dento-skeletal analysis for accurate information on the soft-tissue profile changes which have occurred during orthodontic treatment.

Jackson¹³ in 1962 studied 1,040 twelve year old children and 249 adults to determine lip position and incisor relationships focusing on lip competency. He found that as over-bite increases there is less coverage of the central incisors by the upper lip, and a greater coverage of these teeth by the lower lip. He suggested that incisal over-bite is largely determined by growth of the upper dento-alveolar structures in the incisal region. The reduction in over-bite with age agrees with Bjork (1959), the change being due to greater forward and downward movement of the lower incisor relative to the upper incisor dento-alveolar structures. Ideal incisor relationships were found with both competent and incompetent lip positions. Jackson felt that intrinsic incisor positioning and hence incisor relationships are determined by growth of the eruptive pathways and that lip posture and function are only secondary factors. This posture may not create an over-jet, but may exaggerate one which exists either by virtue of intrinsic incisor positioning or habit circumstances which are not dependent on whether the lips are competent or not. Degree of over-bite did not influence the number of competent or incompetent lip postures. There was no sex difference in the distribution of lip positions. Changes in the position of the lips relative to the upper central incisor from childhood and adulthood were only slightly observed. Adults have slightly more coverage of the upper central incisors by the upper lip and slightly less coverage by the lower lip. As age increases, over-bite decreases. No difference was found between incompetent and competent lip relationships in Angle Class I molar relationships.

A study of anterior tooth display was undertaken by Vig and Brundo¹⁴ in 1978 to survey natural dentitions to serve as a guide to denture tooth placement under various conditions. They measured the amount of exposed gingiva with the mouth at rest and the lips gently parted. In males they found on average 1.91mm of exposed maxillary incisor and 1.23mm of mandibular incisors. In females they found 3.4mm of exposed maxillary incisor and .49mm of mandibular incisor. They found no significance between Caucasian, Black, and Asian races. Short upper lips displayed more maxillary tooth structure than long upper lips, which showed more mandibular teeth. They also showed a gradual decrease in exposure of the maxillary central incisors and increase of mandibular incisor exposure with increasing age. They found the principal exception to this pattern is the moderate to severe class II malocclusions.

Table 2. Mean amount of tooth exposed(mm)

upper lip length	max. centrals incisors	mand. central incisors
10-15	3.92	0.69
16-20	3.44	0.77
21-25	2.18	0.98
26-30	0.93	1.95
31-35	0.25	2.25

Peck, Peck, and Kataja² studied lip positions in 42 males and 46 females in orthodontic treatment or in post-treatment retention. They measured upper lip length from the alar base of the nose, soft

tissue septum(subnasale), to the inferior boarder of the upper lip at rest and while smiling. They found that males have a 2.2mm longer upper lip and 2.2mm higher vertical maxillary skeletal height than females. They studied the smile line which they defined as the lip position at maximum smile. At maximum smile females positioned their upper lip 1.5mm more superior relative to the gingival margin of the maxillary central incisors than males. Males on average showed a clinical crown height 0.8mm longer than females. This crown height was found to be negatively correlated with the upper lip smile line (-0.38). Maxillary height was strongly correlated with upper lip length. Females on average show 1mm of gingival exposure while males average a low lip line of 1mm below the gingivocervical junction. They found that high smile lines exposing ≥ 1 mm of gingiva was a female lineament while low smile lines covering ≥ 2 mm of incisor crown was a male lineament. Twice as many females had high smile lines than males, 25 of 46 females verses 11 of 42 males. Twice as many males showed low smile lines than females, 14 of 42 males and 7 of 46 females.

Singer¹⁵ studied 110 orthodontically treated Caucasian females to help determine characteristic patterns of morphologic relationships associated with gingival display. The traits he found included an upward tilted palate, high mandibular plane angulation, excessive maxillary height, a comparatively short maxillary incisor length, and a relatively short upper lip. Research by Peck, Peck, and Kataja³ describes several causes for the gingival display. These include 2-3mm of maxillary alveolar overdevelopment, greater muscular capacity to raise the lip greater than 1mm in smiling, and

supplemental associated factors such as greater over-jet and over-bite, and excessive interlabial gap at rest. Factors that they felt were not associated with the gingival smile line included upper lip length, incisor clinical crown height, mandibular plane angle, or palatal plane angle.

Treatment options to reduce the gingival display, as suggested by Singer,¹⁵ include alteration of the maxillary incisor vertical position and the maintenance or reduction of mandibular plane angle, which both will effect the skeletal incisor height and gingival display. Peck and Peck² list treatment options as follows: intrusion of the incisors to reduce over-bite and over-jet, periodontal crown lengthening, silicone implants that provide a mechanism to restrict the upper lip elevation¹⁶ , and the most effective, the Lafort I osteotomy.

Materials and Methods

Pretreatment and posttreatment smiling photos were collected from the active retention files of the Oregon Health Sciences University Department of Orthodontics. The only subjects accepted were nonsurgical treatment patients who initiated treatment between the ages of 10 and 18 and whose records were complete. 203 subjects qualified. The pretreatment distribution of the subjects according to Angle's classification of malocclusions is as follows: males, Class I(37), Class II(40), and Class III(2); females, Class I(54), Class II(67), and Class III(3). The age distribution is

age 10(14), 11(34), 12(46), 13(40), 14(31), 15(15), 16(6), 17(5), 18(2).

Color 8 x 10 photocopies were generated from color slides taken by a Nikkormat 35mm camera f5.6 at 1/60 sec. with five feet subject - film distance. The slides were photocopied with a Cannon CLC-100 color laser copier with 400 dots per inch.

The judges consisted of seven first and second year orthodontic residents and seven nondental profession judges of the same age group. Each subject was analyzed and ranked by careful visual inspection rather than mathematical measurements, since no standardization could be assured throughout the records. The questions posed were to be answered on each of the photocopies which were randomly ordered. For each picture the following responses were required. First rank the smile as poor(1), average(2), or excellent(3). Secondly rank the amount of exposed gingiva at full smile: smile line exposing no gingiva(1), smile line at the cervicogingival junction exposing papilla only or up to 1mm. of gingiva(2), or greater than 1mm of exposed gingiva in a continuous band(3).

Means of the smile rankings and gingival smile line were compared for the entire sample, each Angle classification, each age group, female verses male and dental aware verses nondental aware judges.

Results

The 203 subjects studied showed a mean improvement of smile ranking of 0.55. The pretreatment mean was 1.57 and the

posttreatment mean 2.13. The mean smile line score increased by 0.08. The pretreatment mean was 2.02 and the posttreatment mean was 2.09.

Similar changes were found in breaking the subjects down into Angle classifications. Class I, 91 subjects, smile ranked improved 0.53 from a pretreatment mean of 1.58 to a posttreatment mean of 2.11. The Class I smile line increased 0.09 from 1.96 pretreatment to 2.04 posttreatment. The Class II group, 107 subjects, improved their smile ranking by 0.59 from 1.57 to 2.16. The smile line of the Class II group increased by 0.05. The Class III group had five subjects and showed a smile score improvement of 0.43 from 1.62 pretreatment to 2.04 posttreatment. Smile line increased 0.5 in the Class III group from 1.9 to 2.4 posttreatment.

The subjects were broken down into the different age groups. The 10 year old group of 14 subjects improved their smile score 0.39 from 1.62 to 2.01 posttreatment. The smile line score decreased 0.03 from 2.08 to 2.05 posttreatment. The 11 year old group of 34 subjects improved their smile score 0.54 from 1.5 to 2.04. The smile line also went down 0.11 from 2.13 pretreatment to 2.02 posttreatment. The 12 year olds had 46 in their sample. Their smile score increased 0.55 from 1.61 pretreatment to 2.16 posttreatment. Smile line score went up 0.17 from 2.0 to 2.17 posttreatment. The 14 year old group of 31 subjects increased their smile score 0.68 from 1.52 to 2.2 posttreatment. The mean smile line score for this group went up by 0.25 from 1.91 pretreatment to 2.16 posttreatment. The 15 year old group of 15 subjects improved their smile scores 0.75 from 1.46 pretreatment to 2.22

posttreatment. The mean smile line score for this group went up by 0.20 from 1.98 to 2.18. The 16 year old group had 6 subjects. Their mean smile score improved 0.33 from 1.68 to 2.01. The mean smile line went up by 0.08 from 1.72 to 1.8. The 17 year old group had 5 subjects and a mean improvement of smile score of 0.47 from a pretreatment of 1.83 to 2.3. The smile line score went up 0.5 from 1.63 to 2.13 posttreatment. The 18 year old group had 2 subjects. The smile score improved 0.32 from 1.5 to 1.82. The smile line score in this group went up 0.14 from 2.33 to 2.47 posttreatment.

The treatment effects on males verses females were also recorded. The 127 females had a before treatment smile score of 1.59, after treatment 2.16 for a mean change improvement of 0.57. Their gingival smile score changed from a mean of 2.03 to 2.16 for a treatment mean change of increasing by 0.13. The 76 males started with a mean smile score of 1.54 and ended treatment with a score of 2.09 for an improvement of 0.56. The gingival smile score for the men started with a pretreatment score of 2.0 and ended with 1.97 for a mean gingival smile line decrease of 0.03.

The dental aware group ratings were compared to the nondental aware group of raters for the smile scores. Before treatment smile scores for the dental aware mean was 1.53 and the nondental aware mean was 1.62. After treatment means were 2.10 for the dental aware group and 2.17 for the nondental aware group.

Gingival smile rankings that at the beginning of treatment were greater than 2.0 were grouped together. 93 subjects qualified or 45.8% of the entire pool. The mean pretreatment gingival smile line was 2.57. The mean posttreatment gingival smile line was 2.30

for a mean change decrease of 0.24. The smile score mean for this group pretreatment was 1.55. The posttreatment mean was 2.13 for a treatment increase of 0.58.

Discussion

When comparing the orthodontic residents smile ranking to the nondental profession rankers, a difference of .09 before treatment and .07 for after treatment exists and indicates that residents are more critical than the general public in ranking smiles. This is most likely due to the level of training and the goals of idealism and perfection. Another factor that might be causative in the results is that all the orthodontic residents were males where all but one of the nondental aware group were women. Male judges verses female judges is how this may be interpreted and maybe accurately so and is worth further evaluation. Gingival display does not effect the smile rankings of the nondental aware group of judges, where it does for orthodontic residents. Eliminating gingival display is often a treatment goal of many orthodontic practices. The mechanics of orthodontics is generally extrusive in nature and as shown by this study gingival display often increases with treatment. despite this, the smile rankings improved in every group of patients studied.

Today's fashion magazines are full of women that display smiles that would be ranked as showing excessive amounts of gingiva by this study. Yet, these women are regarded as societies ideal in today's culture. No gross malocclusions exist with these

models, but often slight irregularities are present that add individuality to the models.

The smile rankings between the different Angle classifications was found to be negligible. Class I and II smile scores before treatment means were only 0.01 apart. After treatment means were 0.06 apart. Both showed a smile score improvement roughly the same +0.53 for the Class I, +0.59 for the Class II, and +0.43 for the Class III. These results would indicate that Angle classification does not effect the smile appearance from the frontal view.

The gingival smile line does appear to be affected by Angle classification. The patients who started treatment Class II had a mean gingival smile line score 0.11 higher than the Class I and finished treatment with a score 0.08 higher than the Class I. Class III scores before treatment were 0.06 lower than the Class I, but resulted after treatment with the highest gingival smile lines and increase in smile line after treatment.

Orthodontic treatment does improve the smile substantially, as shown by the mean change of +0.55 in all the patients studied. The mean smile score ranking before treatment was 1.57 and the after treatment mean was 2.13. The "orthodontic" look as described in many articles is not perceived as negative by the judges of this study. The initial smile scores may be low because the patients who came in for treatment did so because of perceived poor smiles. This is not an uncommon reason to desire treatment. The results of this study would help to reassure these patients that treatment can in fact help improve a patients smile.

The extrusive mechanics often employed with orthodontic treatment often are blamed for raising the gingival smile line to a higher and less attractive level. This study shows an overall increase of gingival smile line ranking of only +0.08. When broken down into the individual ages, the 10, 11, and 13 year old groups showed a decrease in gingival smile line score. These groups are among the most actively growing during treatment. With growth the extrusive nature of orthodontic treatment seems to be negated. The 12 year olds and 15 through 18 year old groups did show an increase in gingival smile line. Growth is less in these older groups and this may be responsible for the increase in gingival smile line with the mechanics employed.

The differential growth exhibited by the patients and resulting gingival smile lines may also be demonstrated by the comparison of males and females. The females showed an overall increase in the gingival smile line of 0.13 during treatment. The males, on the other hand, showed an overall decrease of 0.03 during treatment. This may be due to the fact that the males are growing in all age groups studied where the females are not. Studies by Vig and Brundo¹⁵ show that the smile line does decrease with age. But these studies were for older age groups and may not pertain to this study.

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The following tables show the results obtained and breakdowns into the specific ages, classifications, sexes, and different judging groups.

- Table 3) Introduction of the survey.
- Table 4) Comparison of means between classifications.
- Table 5) Comparison of means between age groups.
- Table 6) Smile score comparison of before and after treatment.
- Table 7) Gingival smile line comparison of before and after treatment.
- Table 8) Age comparison of different scores.
- Table 9) Male gingival smile line.
- Table 10) Female gingival smile line.
- Table 11) Male Smile score.
- Table 12) Female smile score.
- Table 13) Smile Angle Class I.
- Table 14) Smile Angle Class II.
- Table 15) Smile Angle Class III.
- Table 16) Gingival smile line Angle Class I.
- Table 17) Gingival smile line Angle Class II.
- Table 18) Gingival smile line Angle Class III.
- Table 19) Gingival smile line group score >2.0.
- Table 20) G.S.L. group score > 2.0 smile scores.

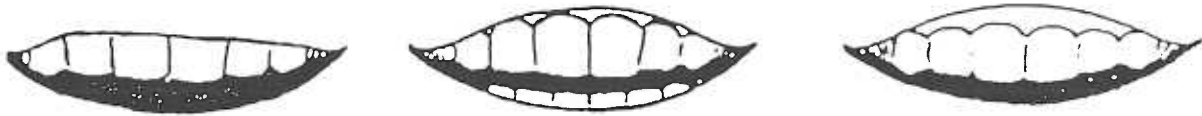
Table 3) Introduction to the Survey

THE GINGIVAL SMILE LINE: INCIDENCE AND TREATMENT EFFECTS

This survey is part of the certificate program research project at the Oregon Health Sciences University Department of Orthodontics. Your effort in ranking smiles is greatly appreciated.

You are first asked to rank the smile as poor, average, or excellent. This is a very subjective question, so just do your best.

The second question refers to ranking the amount of exposed gingiva at full smile. The photocopy prints vary in quality, but in most cases a delineation between the border of the upper lip with the dentition can be clearly seen. This junction is referred to as the smile line. Magnification is slightly different between each photocopy; therefore, the definition of an average smile line exposing no more than 1mm. of gingival tissue will have to be estimated.



NO GINGIVA

AVERAGE

SEVERE

You will be making your rankings on before and after orthodontic treatment photos. The order of how the patients appear will be random. Please be sure that the column you are entering your ranking on corresponds to the name and number on the photocopy.

Thank you for your time and help.

Table 4 Comparisons of Means Between Classifications

		BEFORE	AFTER	DIFFERENCE	SAMPLE #
SMILE	CLASS I	1.58	2.11	+0.53	91
	CLASS II	1.57	2.16	+0.59	107
	CLASS III	1.62	2.04	+0.43	5
GINGIVAL	CLASS I	1.96	2.04	+0.09	91
SMILE	CLASS II	2.07	2.12	+0.05	107
LINE	CLASS III	1.9	2.40	+0.50	5
SMILE		1.57	2.13	+0.55	203
G. S. L.		2.02	2.09	+0.08	203
G.S.L	FEMALE	2.03	2.16	+0.13	128
	MALE	2.0	1.97	-0.03	75
SMILE	FEMALE	1.59	2.16	+0.57	128
	MALE	1.54	2.09	+0.56	75
SMILE	RESIDENTS	1.52	2.10	+0.58	203
	NONRES.	1.61	2.17	+0.56	203

Table 5. Age Comparisons

		BEFORE	AFTER	DIFFERENCE	SAMPLE
10 YR OLDS	SMILE	1.62	2.01	+0.39	14
	G.S.L.	2.08	2.05	-0.03	14
11 YR OLDS	SMILE	1.50	2.04	+0.54	34
	G.S.L.	2.13	2.02	-0.11	34
12 YR OLDS	SMILE	1.61	2.16	+0.55	46
	G.S.L.	2.00	2.17	+0.17	46
13 YR OLDS	SMILE	1.62	2.15	+0.53	40
	G.S.L.	2.13	2.09	-0.04	40
14 YR OLDS	SMILE	1.52	2.20	+0.68	31
	G.S.L.	1.91	2.16	+0.25	31
15 YR OLDS	SMILE	1.46	2.22	+0.75	15
	G.S.L.	1.98	2.18	+0.20	15
16 YR OLDS	SMILE	1.68	2.01	+0.33	6
	G.S.L.	1.72	1.80	+0.08	6
17 YR OLDS	SMILE	1.83	2.30	+0.47	5
	G.S.L.	1.63	2.13	+0.50	5

18 YR OLDS	SMILE	1.50	1.82	+0.32	2
	G.S.L.	2.33	2.47	+0.14	2

Table 6) Smile Score Comparison Of Before and After Treatment

Patient #	before	after	difference		
1	2.29	1.64	-0.65	before tx	
2	1.93	2.29	0.36		
3	1.07	1.07	0	Mean	1.57275862
4	1.71	2.93	1.22	Standard Error	0.02211043
5	1.36	2.64	1.28	Median	1.57
6	1.36	2.21	0.85	Mode	1.57
7	1.5	2.14	0.64	Standard Devia	0.31502519
8	1.64	2.86	1.22	Variance	0.09924087
9	1.71	2.29	0.58	Kurtosis	-0.1182321
10	2.57	2.86	0.29	Skewness	0.5622284
11	2	2.64	0.64	Range	1.57
12	1.29	2.07	0.78	Minimum	1
13	1.93	2.07	0.14	Maximum	2.57
14	1.14	2.21	1.07	Sum	319.27
15	1.43	1.64	0.21	Count	203
16	2.21	2.14	-0.07		
17	1.29	2.14	0.85	after tx	
18	1.79	1.79	0		
19	1.57	2.5	0.93	Mean	2.13211823
20	1.64	1.71	0.07	Standard Error	0.02755431
21	1.79	2.36	0.57	Median	2.14
22	1.21	1.57	0.36	Mode	2.14
23	1.93	2.5	0.57	Standard Devia	0.39258845
24	1.36	2.07	0.71	Variance	0.15412569
25	1.29	2.21	0.92	Kurtosis	-0.3321146
26	1.36	2	0.64	Skewness	-0.1811325
27	1.14	1.71	0.57	Range	1.86
28	1.93	2.79	0.86	Minimum	1.07
29	1.43	1.93	0.5	Maximum	2.93
30	1.43	2.29	0.86	Sum	432.82
31	1.5	2	0.5	Count	203
32	1.64	2.29	0.65		
33	1.21	2.36	1.15		
34	1.57	2.64	1.07	difference	
35	1.36	2.36	1		
36	1.29	2.29	1	Mean	0.55935961
37	1.29	1.86	0.57	Standard Error	0.03101496
38	2.07	2.71	0.64	Median	0.58
39	1.64	2.57	0.93	Mode	0.5
40	1	1.86	0.86	Standard Devia	0.4418952
41	1.86	1.79	-0.07	Variance	0.19527137
42	1.71	2.71	1	Kurtosis	0.29797325
43	2.5	2.29	-0.21	Skewness	-0.4300637
44	1.79	2.57	0.78	Range	2.5
45	1.57	1.71	0.14	Minimum	-0.93
46	1.14	2.07	0.93	Maximum	1.57

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47	1.43	1.93	0.5	Sum	113.55
48	1.57	2.36	0.79	Count	203
49	2.29	1.36	-0.93		
50	1.71	2.57	0.86		
51	1.5	2.21	0.71		
52	1.93	1.21	-0.72		
53	1.57	2.29	0.72		
54	1.86	2.29	0.43		
55	1.36	2.57	1.21		
56	1.43	2.93	1.5		
57	1.43	1.36	-0.07		
58	1.57	1.64	0.07		
59	1.64	2.43	0.79		
60	1.71	2.64	0.93		
61	1.57	2.21	0.64		
62	1.36	2.14	0.78		
63	1.57	2.57	1		
64	1.86	2.21	0.35		
65	1.07	2.64	1.57		
66	1.36	2.29	0.93		
67	1.21	1.79	0.58		
68	1.21	1.14	-0.07		
69	1.43	2.14	0.71		
70	1.36	1.79	0.43		
71	1.21	1.71	0.5		
72	1.86	2.07	0.21		
73	1.93	2.14	0.21		
74	1.07	2	0.93		
75	1.86	2.36	0.5		
76	1.71	1.86	0.15		
77	2.07	2.43	0.36		
78	1.71	2.43	0.72		
79	1.57	2.64	1.07		
80	1.14	1.29	0.15		
81	1.57	1.86	0.29		
82	1.57	1.57	0		
83	1.36	1.71	0.35		
84	2.07	2.07	0		
85	2	2.71	0.71		
86	1.43	2.07	0.64		
87	2.36	1.86	-0.5		
88	1.5	2.5	1		
89	1.14	2.5	1.36		
90	1.43	1.5	0.07		
91	1.43	2.36	0.93		
92	2	1.86	-0.14		

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93	1.71	1.93	0.22		
94	1.57	1.71	0.14		
95	1.5	2.43	0.93		
96	1.21	1.79	0.58		
97	1.5	1.5	0		
98	1.71	2.5	0.79		
99	1.79	2.07	0.28		
100	1.29	2.36	1.07		
101	1.36	2.29	0.93		
102	1.36	2	0.64		
104	1.29	2.14	0.85		
105	1.71	2.07	0.36		
106	1.21	2.07	0.86		
107	1.71	1.93	0.22		
108	1.57	2.14	0.57		
109	1.5	2.29	0.79		
110	1.14	1.36	0.22		
111	1.57	2.36	0.79		
112	1.71	2.43	0.72		
113	1.5	2	0.5		
114	1.5	2	0.5		
115	1.43	2.71	1.28		
116	1.43	1.79	0.36		
117	2.14	2.07	-0.07		
118	1.5	2	0.5		
119	1.43	1.93	0.5		
120	1.93	1.71	-0.22		
121	1.71	2.36	0.65		
122	1.71	2.57	0.86		
123	1.57	2.14	0.57		
124	1.36	2.07	0.71		
125	1.43	2.36	0.93		
126	1.86	2.5	0.64		
127	2	1.93	-0.07		
128	1.07	2.21	1.14		
129	1.29	1.64	0.35		
130	1.79	1.86	0.07		
131	1.29	1.64	0.35		
132	1.93	2.71	0.78		
133	1.71	2.71	1		
134	1.5	1.64	0.14		
135	1.14	1.57	0.43		
136	1.29	1.36	0.07		
137	1.86	2.14	0.28		
138	1.07	2.07	1		
139	1.36	2.14	0.78		

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140	1.14	1.64	0.5		
141	1.14	1.93	0.79		
142	1.43	2.43	1		
143	1.86	2.21	0.35		
144	1.57	2.14	0.57		
145	1.29	2.57	1.28		
146	1.07	2	0.93		
147	1.21	2.14	0.93		
148	1.36	2.29	0.93		
149	1.36	1.86	0.5		
150	1.29	1.43	0.14		
151	2.14	2.64	0.5		
152	1.21	1.86	0.65		
153	2	1.71	-0.29		
154	1.57	2.14	0.57		
155	2.14	2.64	0.5		
156	1.5	1.71	0.21		
157	1.21	2.36	1.15		
158	1.57	2.07	0.5		
159	1.57	2.86	1.29		
160	1.36	2.5	1.14		
161	1.29	2.14	0.85		
162	1.57	2.14	0.57		
163	1.29	2	0.71		
164	1.64	2.36	0.72		
165	1.64	1.64	0		
166	2.21	2.43	0.22		
167	1.29	1.86	0.57		
168	1.43	2.93	1.5		
169	1.79	2.07	0.28		
170	2.14	2.57	0.43		
171	1.93	2.29	0.36		
172	1.86	2.29	0.43		
173	1.79	2.14	0.35		
174	1.36	1.36	0		
175	1.29	1.93	0.64		
176	1.64	1.57	-0.07		
177	1.64	2.57	0.93		
178	1.71	1.71	0		
179	2.07	2.07	0		
180	2	2.07	0.07		
181	1.79	2.93	1.14		
182	1.14	2.36	1.22		
183	1.5	2.07	0.57		
184	1.14	1.86	0.72		
185	1.29	2.14	0.85		

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186	1.21	1.93	0.72		
187	1.36	2.64	1.28		
188	1.57	2.21	0.64		
189	2.14	2.21	0.07		
190	2	2.71	0.71		
191	1.36	2.14	0.78		
192	1.71	2.29	0.58		
193	1.21	2.07	0.86		
194	2	1.93	-0.07		
195	2.14	2.36	0.22		
196	1.57	2.64	1.07		
197	1.21	1.57	0.36		
198	1.57	2.79	1.22		
199	1.93	1.57	-0.36		
200	1.64	2	0.36		
201	1.5	2.79	1.29		
202	1.79	2.29	0.5		
203	2	1.43	-0.57		
204	1.29	1.86	0.57		

Table 7) Gingival Smile Line Comparison of Before and After Treatment

before	after	diff.	pt. #		
2	1.86	-0.1	1	<i>gummy before</i>	
1.86	2	-0.2	2		
1	1.07	-0.1	3	Mean	2.02
1.72	1.72	0	4	Standard Error	0.04
1.72	1.86	-0.1	5	Median	1.93
1.29	2	-0.7	6	Mode	3.00
2.43	2.86	-0.4	7	Standard Deviation	0.61
1.65	2	-0.4	8	Variance	0.38
1.07	1.79	-0.7	9	Kurtosis	-1.11
2.57	2.22	0.36	10	Skewness	0.09
2.5	2.36	0.14	11	Range	2.00
1.07	1.65	-0.6	12	Minimum	1.00
1.43	1.43	0	13	Maximum	3.00
1.72	1.79	-0.1	14	Sum	409.66
2	2.93	-0.9	15	Count	203.00
3	3	0	16		
1.86	1.93	-0.1	17	<i>gummy after</i>	
1.93	1.86	0.07	18		
2.07	2.57	-0.5	19	Mean	2.09
2	1.71	0.29	20	Standard Error	0.04
1.86	1.93	-0.1	21	Median	2.00
2.79	1.71	1.08	22	Mode	2.00
1.86	2.29	-0.4	23	Standard Deviation	0.55
3	2.43	0.57	24	Variance	0.31
3	1.79	1.22	25	Kurtosis	-0.90
1.22	1.71	-0.5	26	Skewness	-0.03
3	2.86	0.15	27	Range	1.93
2.79	2.29	0.5	28	Minimum	1.07
3	3	0	29	Maximum	3.00
3	3	0	30	Sum	424.60
3	2.93	0.07	31	Count	203.00
2.07	1.93	0.14	32		
1.36	1.64	-0.3	33		
2.86	2	0.86	34		
2.15	2.72	-0.6	35	<i>difference</i>	
2.36	2.86	-0.5	36		
3	2.43	0.57	37	Mean	-0.08
1.36	2.57	-1.2	38	Standard Error	0.04
2.93	2.93	0	39	Median	-0.07
2.43	1.5	0.93	40	Mode	0.00
2.14	1.07	1.07	41	Standard Deviation	0.60
2.14	1.58	0.57	42	Variance	0.37
1.93	2.43	-0.5	43	Kurtosis	0.32
2.86	2.93	-0.1	44	Skewness	0.16
2.43	2.86	-0.4	45	Range	3.72
1.29	1.5	-0.2	46	Minimum	-1.93

2.22	1.29	0.93	47	Maximum	1.79
1.07	1.22	-0.2	48	Sum	-15.33
2.93	1.86	1.07	49	Count	203.00
2.22	2.65	-0.4	50		
3	2.57	0.43	51		
1.65	1.07	0.58	52		
1.93	2.5	-0.6	53		
1.15	1.71	-0.6	54		
2.29	2.71	-0.4	55		
2.57	2.86	-0.3	56		
2.93	2.86	0.07	57		
2	2.43	-0.4	58		
1.79	1.22	0.57	59		
2.64	2.5	0.14	60		
2.5	1.72	0.79	61		
1.22	1.86	-0.6	62		
1.86	1.93	-0.1	63		
1.93	1.64	0.29	64		
1.72	2	-0.3	65		
2.15	1.93	0.22	66		
2.93	1.72	1.22	67		
1.86	1.07	0.79	68		
1.15	1.79	-0.6	69		
1.07	1.79	-0.7	70		
2.93	3	-0.1	71		
1.72	2	-0.3	72		
1.65	1.29	0.36	73		
1.29	2.86	-1.6	74		
2	2.64	-0.6	75		
3	1.64	1.36	76		
1.43	1.79	-0.4	77		
1.93	1.93	0	78		
2.43	2	0.43	79		
1.86	1.15	0.71	80		
1.86	1.57	0.29	81		
3	1.79	1.22	82		
2.86	3	-0.2	83		
1.86	2.79	-0.9	84		
1.57	1.93	-0.4	85		
3	2.43	0.57	86		
1.22	1.72	-0.5	87		
1.79	1.86	-0.1	88		
1.07	1.57	-0.5	89		
2.21	2	0.21	90		
2.22	1.72	0.5	91		
1.86	1.72	0.14	92		

1.22	1.72	-0.5	93
1.79	3	-1.2	94
1.79	2.36	-0.6	95
2.93	2.5	0.43	96
2.5	2.43	0.07	97
1.29	1.43	-0.2	98
2	1.86	0.15	99
1.79	1.64	0.15	100
1.79	1.29	0.5	101
2.93	2.07	0.86	102
2.23	2	0.23	104
1.14	2.5	-1.4	105
2.86	1.71	1.15	106
2.14	2.64	-0.5	107
1.29	1.14	0.15	108
1.65	2.22	-0.6	109
2.57	2.93	-0.4	110
2.79	2.71	0.08	111
1.93	2.93	-1	112
2.08	2.86	-0.8	113
1.57	1.5	0.07	114
1.43	2.15	-0.7	115
1.86	2.29	-0.4	116
3	1.79	1.22	117
1.29	1.22	0.07	118
2.71	2.86	-0.2	119
1.71	1.07	0.64	120
1.93	2.43	-0.5	121
1.29	2.5	-1.2	122
2.93	3	-0.1	123
2.64	1.86	0.78	124
1.43	2.07	-0.6	125
1.79	2.07	-0.3	126
2.22	1.14	1.08	127
1.14	2.07	-0.9	128
1.72	1.64	0.08	129
1.57	1.64	-0.1	130
1.07	3	-1.9	131
1	1.72	-0.7	132
1.07	1.5	-0.4	133
1.14	1.07	0.07	134
2.93	2.93	0	135
1.72	1.07	0.65	136
1.86	2.79	-0.9	137
1.93	2.22	-0.3	138
1.22	2	-0.8	139

2.93	2.86	0.07	140		
1.14	1.93	-0.8	141		
2.86	2.79	0.07	142		
2.5	2.86	-0.4	143		
2.57	2.45	0.12	144		
2.22	2.14	0.07	145		
1.43	1.72	-0.3	146		
1.22	2.5	-1.3	147		
1.22	2.08	-0.9	148		
1.72	2.36	-0.7	149		
2	2.08	-0.1	150		
2.14	2.29	-0.2	151		
2.79	2.64	0.15	152		
2.07	2.08	0	153		
2.43	2.36	0.07	154		
1.43	1.79	-0.4	155		
1.72	1.29	0.43	156		
3	2.65	0.36	157		
2.36	2.36	0	158		
2.07	2.36	-0.3	159		
1.93	2	-0.1	160		
1.29	1.93	-0.7	161		
2.29	2.15	0.14	162		
1.15	1.93	-0.8	163		
1.36	2.07	-0.7	164		
2.79	3	-0.2	165		
2.14	2	0.14	166		
2.5	2.71	-0.2	167		
1	2.22	-1.2	168		
1.22	1.72	-0.5	169		
2.22	1.86	0.36	170		
1.29	2	-0.7	171		
1.65	1.5	0.15	172		
2.14	1.07	1.07	173		
1.79	2.93	-1.2	174		
2.07	2.93	-0.9	175		
2.15	1.07	1.08	176		
2.36	1.93	0.43	177		
1.07	1.07	0	178		
1.79	1.79	0	179		
1.64	2.14	-0.5	180		
2.72	2.22	0.5	181		
1.07	1.14	-0.1	182		
1.07	1.72	-0.7	183		
2.15	2.93	-0.8	184		
1.07	1.14	-0.1	185		

2.57	2.22	0.36	186		
2.43	2.43	0	187		
2.72	2.43	0.29	188		
1.86	1.58	0.29	189		
2.79	2.07	0.72	190		
2.22	1.86	0.36	191		
1.22	1.65	-0.4	192		
2.79	2.65	0.14	193		
3	2.86	0.15	194		
2.36	2.29	0.08	195		
2.22	2.22	0	196		
2.5	2.65	-0.2	197		
2.72	2.29	0.43	198		
1.58	2.64	-1.1	199		
1.72	2	-0.3	200		
1.5	2.29	-0.8	201		
1.29	1.22	0.07	202		
2.29	2.93	-0.6	203		
3	1.22	1.79	204		

Table 8) Age Comparison Of Different Scores

pt #	smile before	smile after	difference	gummy before	gummy after	difference
10 yr olds						
70	1.36	1.79	0.43	1.07	1.79	-0.7
90	1.43	1.5	0.07	2.21	2	0.21
107	1.71	1.93	0.22	2.14	2.64	-0.5
117	2.14	2.07	-0.07	3	1.79	1.22
118	1.5	2	0.5	1.29	1.22	0.07
131	1.29	1.64	0.35	1.07	3	-1.9
61	1.57	2.21	0.64	2.5	1.72	0.79
63	1.57	2.57	1	1.86	1.93	-0.1
64	1.86	2.21	0.35	1.93	1.64	0.29
194	2	1.93	-0.07	3	2.86	0.15
195	2.14	2.36	0.22	2.36	2.29	0.08
144	1.57	2.14	0.57	2.57	2.45	0.12
26	1.36	2	0.64	1.22	1.71	-0.5
67	1.21	1.79	0.58	2.93	1.72	1.22

pt #	smile before	smile after	difference	gummy before	gummy after	difference
11 yr olds						
5	1.36	2.64	1.28	1.72	1.86	-0.1
6	1.36	2.21	0.85	1.29	2	-0.7
7	1.5	2.14	0.64	2.43	1.79	-0.4
14	1.14	2.21	1.07	1.72	1.79	-0.1
15	1.43	1.64	0.21	2	2.93	-0.9
17	1.29	2.14	0.85	1.86	1.93	-0.1
19	1.57	2.5	0.93	2.07	2.57	-0.5
20	1.64	1.71	0.07	2	1.71	0.29
25	1.29	2.21	0.92	3	1.79	1.22
30	1.43	2.29	0.86	3	3	0
18	1.79	1.79	0	1.93	1.86	0.07
81	1.57	1.86	0.29	1.86	1.57	0.71
86	1.43	2.07	0.64	3	2.43	0.57
88	1.5	2.5	1	1.79	1.86	-0.1
89	1.14	2.5	1.36	1.07	1.57	-0.5
91	1.43	2.36	0.93	2.22	1.72	0.5
95	1.5	2.43	0.93	1.79	2.36	-0.6
106	1.21	2.07	0.86	2.86	1.71	1.15
114	1.5	2	0.5	1.57	1.5	0.07
116	1.43	1.79	0.36	1.86	2.29	-0.4
128	1.07	2.21	1.14	1.14	2.07	-0.9
129	1.79	1.86	0.35	1.72	1.64	0.08
37	1.29	1.86	0.57	3	2.43	0.57

diff. ages

41	1.86	1.79	-0.07	2.14	1.07	1.07
52	1.93	1.21	-0.72	1.65	1.07	0.58
58	1.57	1.64	0.07	2	2.43	-0.4
190	2	2.71	0.71	2.79	2.07	0.72
203	2	1.43	-0.57	2.29	2.93	-0.6
173	1.79	2.14	0.35	2.14	1.07	1.07
176	1.64	1.57	-0.07	2.15	1.07	1.08
180	2	2.07	0.07	1.64	2.14	-0.5
140	1.14	1.64	0.5	2.93	2.86	0.07
142	1.43	2.43	1	2.86	2.79	0.07
152	1.21	1.86	0.65	2.79	2.64	0.15

pt #	smile 12 yr olds before	smile after	difference	gummy before	gummy after	difference
66	1.36	2.29	0.93	2.15	1.93	0.22
73	1.93	2.14	0.21	1.65	1.29	0.36
77	2.07	2.43	0.36	1.43	1.79	-0.4
78	1.71	2.43	0.72	1.93	1.93	0
92	2	1.86	-0.14	1.86	1.72	0.14
94	1.57	1.71	0.14	1.79	3	-1.2
98	1.71	2.5	0.79	1.29	1.43	-0.2
99	1.79	2.07	0.28	2	1.86	0.15
101	1.36	2.29	0.93	1.79	1.29	0.5
105	1.71	2.07	0.36	1.14	2.5	-1.4
112	1.71	2.43	0.72	1.93	2.93	-1
113	1.5	2	0.5	2.08	2.86	-0.8
121	1.71	2.36	0.65	1.93	2.43	-0.5
120	1.93	1.71	-0.22	1.71	1.07	0.64
134	1.5	1.64	0.14	1.14	1.07	0.07
35	1.36	2.36	1	2.15	2.72	-0.6
47	1.43	1.93	0.5	2.22	1.29	0.93
50	1.71	2.57	0.86	2.22	2.65	-0.4
59	1.64	2.43	0.79	1.79	1.22	0.57
60	1.71	2.64	0.93	2.64	2.5	0.14
61	1.57	2.21	0.64	2.5	1.72	0.79
188	1.57	2.21	1.28	2.72	2.43	0.29
193	1.21	2.07	0.86	2.79	2.65	0.14
199	1.93	1.57	-0.36	1.58	2.64	-1.1
201	1.5	2.79	1.29	1.5	2.29	-0.8
157	1.21	2.36	1.15	3	2.65	0.36
159	1.57	2.86	1.29	2.07	2.36	-0.3
162	1.57	2.14	0.57	2.29	2.15	0.14
163	1.29	2	0.71	1.15	1.93	-0.8

diff. ages

165	1.64	1.64	0	2.79	3	-0.2
172	1.86	2.29	0.43	1.65	1.5	0.15
174	1.36	1.36	0	1.79	2.93	-1.2
175	1.29	1.93	0.64	2.07	2.93	-0.9
182	1.14	2.36	1.22	1.07	1.14	-0.1
183	1.5	2.07	0.57	1.07	1.72	-0.7
186	1.21	1.93	0.72	2.57	2.22	0.36
137	1.86	2.14	0.28	1.86	2.79	-0.9
138	1.07	2.07	1	1.93	2.22	-0.3
147	1.21	2.14	0.93	1.22	2.08	-0.9
151	2.14	2.64	0.5	2.14	2.29	-0.2
1	2.29	1.64	-0.65	2	1.86	-0.1
16	2.21	2.14	-0.07	3	3	0
21	1.79	2.36	0.57	1.86	1.93	-0.1
24	1.36	2.07	0.71	3	2.43	0.57
29	1.43	1.93	0.5	3	3	0
11	2	2.64	0.64	2.5	2.36	0.14

pt #	smile before	smile after	difference	gummy before	gummy after	difference
13 yr olds						
69	1.43	2.14	0.71	1.15	1.79	-0.6
74	1.07	2	0.93	1.29	2.86	-1.6
75	1.86	2.36	0.5	2	2.64	-0.6
76	1.71	1.86	0.15	3	1.64	1.36
179	2.07	2.07	0	1.79	1.79	0
80	1.14	1.29	0.15	1.86	1.15	0.71
87	2.36	1.86	-0.5	1.22	1.72	-0.5
97	1.5	1.5	0	2.5	2.43	-0.07
100	1.29	2.36	1.07	1.79	1.64	0.15
102	1.36	2	0.64	2.93	2.07	0.86
104	1.29	2.14	0.86	2.23	2	0.23
119	1.43	1.93	0.5	2.71	2.86	-0.2
122	1.71	2.57	0.86	1.29	2.5	-1.2
123	1.57	2.14	0.57	2.93	3	-0.1
124	1.36	2.07	0.71	2.64	1.86	0.78
126	1.86	2.5	0.64	1.79	2.07	-0.3
127	2	1.93	-0.07	2.22	1.14	1.08
130	1.79	1.86	0.07	1.57	1.64	-0.1
133	1.71	2.71	1	1.07	1.5	-0.4
33	1.21	2.36	1.15	1.36	1.64	-0.3
34	1.57	2.64	1.07	2.86	2	0.86
42	1.71	2.71	1	2.14	1.58	0.57
44	1.79	2.57	0.78	2.86	2.93	-0.1

diff. ages

49	2.29	1.36	-0.93	2.93	1.86	1.07
55	1.36	2.57	1.21	2.29	2.71	-0.4
57	1.43	1.36	-0.07	2.93	2.86	0.07
159	1.57	2.86	1.29	2.07	2.36	-0.3
161	1.29	2.14	0.85	1.29	1.93	-0.7
164	1.64	2.36	0.72	1.36	2.07	-0.7
166	2.21	2.43	0.22	2.14	2	0.14
178	1.71	1.71	0	1.07	1.07	0
181	1.79	2.93	1.14	2.72	2.22	0.5
150	1.29	1.43	0.14	2	2.08	-0.1
154	1.57	2.14	0.57	2.43	2.36	0.07
2	1.93	2.29	0.36	1.86	2	-0.2
4	1.71	2.93	1.22	1.72	1.72	0
22	1.21	1.57	0.36	2.79	1.71	1.08
28	1.93	2.79	0.86	2.79	2.29	0.5
31	1.5	2	0.5	3	2.93	0.07
45	1.57	1.71	0.14	2.43	2.86	-0.4

PT#	smile 14 yr olds before	smile after	difference	gummy before	gummy after	difference
83	1.36	1.71	0.35	2.86	3	-0.2
93	1.71	1.93	0.22	1.22	1.72	-0.5
96	1.21	1.79	0.58	2.93	2.5	0.43
110	1.14	1.36	0.22	2.57	2.93	-0.4
125	1.43	2.36	0.93	1.43	2.07	-0.6
38	2.07	2.71	0.64	1.36	2.57	-1.2
39	1.64	2.57	0.93	2.93	2.93	0
46	1.14	2.07	0.93	1.29	1.5	-0.2
51	1.5	2.21	0.71	3	2.57	0.43
56	1.43	2.93	1.5	2.57	2.86	-0.3
187	1.36	2.64	1.28	2.43	2.43	0
189	2.14	2.21	0.07	1.86	1.56	0.29
191	1.36	2.14	0.78	2.22	1.86	0.36
196	1.57	2.64	1.07	2.22	2.22	0
197	1.21	1.57	0.36	2.5	2.65	-0.2
200	1.64	2	0.36	1.72	2	-0.3
202	1.79	2.29	0.5	1.29	1.22	0.07
167	1.29	1.86	0.57	2.5	2.71	-0.2
168	1.43	2.93	1.5	1	2.22	-1.2
169	1.79	2.07	0.28	1.22	1.72	-0.5
170	2.14	2.57	0.43	2.22	1.86	0.36

diff. ages

184	1.14	1.86	0.72	2.15	2.93	-0.8
139	1.36	2.14	0.78	1.22	2	-0.8
141	1.14	1.93	0.79	1.14	1.93	-0.8
32	1.64	2.29	0.65	2.07	1.93	0.14
9	1.71	2.29	0.58	1.07	1.79	-0.7
10	2.57	2.86	0.29	2.57	2.22	0.36
12	1.29	2.07	0.78	1.07	1.65	-0.6
23	1.93	2.5	0.57	1.86	2.29	-0.4
65	1.07	2.64	1.57	1.72	2	-0.3
3	1.07	1.07	0	1	1.07	-0.1

pt# 15 yr olds	smile before	smile after	difference	gummy before	gummy after	difference
71	1.21	1.71	0.5	2.93	3	-0.1
79	1.57	2.64	1.07	2.43	2	0.43
111	1.52	2.36	0.79	2.79	2.71	0.08
115	1.43	2.71	1.28	1.43	2.15	-0.7
132	1.93	2.71	0.78	1	1.72	-0.4
40	1	1.86	0.86	2.43	1.5	0.93
53	1.57	2.29	0.72	1.93	2.5	-0.6
192	1.71	2.29	0.58	1.22	1.65	-0.4
143	1.86	2.21	0.35	2.5	2.86	-0.4
145	1.29	2.57	1.28	2.22	2.14	0.07
146	1.07	2	0.93	1.43	1.72	-0.3
148	1.36	2.29	0.93	1.22	2.08	-0.9
149	1.36	1.86	0.5	1.72	2.36	-0.7
13	1.93	2.07	0.14	1.43	1.43	0
27	1.14	1.71	0.57	3	2.86	0.15

pt # 16 yr olds	smile before	smile after	difference	gummy before	gummy after	difference
108	1.57	2.14	0.57	1.29	1.14	0.15
36	1.29	2.29	1	2.36	2.86	-0.5
43	2.5	2.29	-0.21	1.93	2.43	-0.5
156	1.5	1.71	0.21	1.72	1.29	0.43
171	1.93	2.29	0.36	1.29	2	-0.7
136	1.29	1.36	0.07	1.72	1.07	0.65

diff. ages

pt #	smile before	smile after	difference	gummy before	gummy after	difference
17 yr olds						
109	1.5	2.29	0.79	1.65	2.22	-0.6
54	1.86	2.29	0.43	1.15	1.71	-0.6
203	2	1.43	-0.57	2.29	2.93	-0.6
155	2.14	2.64	0.5	1.43	1.79	-0.4
8	1.64	2.86	1.22	1.65	2	-0.4

pt #	smile before	smile after	difference	gummy before	gummy after	difference
18 yr olds						
72	1.86	2.07	0.21	1.72	2	-0.3
135	1.14	1.57	0.43	2.93	2.93	0

Table 9) Male Gingival Smile Line

before	after	diff.	pt. #		
1	1.07	-0.1	3		
				<i>male before</i>	
1.72	1.72	0	4		
1.72	1.86	-0.1	5	Mean	2
2.5	2.36	0.14	11	Standard Error	0.07
1.72	1.79	-0.1	14	Median	1.93
1.86	1.93	-0.1	21	Mode	1.86
2.79	1.71	1.08	22	Standard Deviation	0.63
1.86	2.29	-0.4	23	Variance	0.4
3	2.43	0.57	24	Kurtosis	-1.2
3	1.79	1.22	25	Skewness	0.11
1.22	1.71	-0.5	26	Range	2
1.93	2.43	-0.5	43	Minimum	1
1.29	1.5	-0.2	46	Maximum	3
2.93	1.86	1.07	49	Sum	150
1.65	1.07	0.58	52	Count	75
2.93	2.86	0.07	57		
2.5	1.72	0.79	61	<i>male after</i>	
1.22	1.86	-0.6	62		
1.93	1.64	0.29	64	Mean	1.97
2.15	1.93	0.22	66	Standard Error	0.06
1.86	1.07	0.79	68	Median	1.93
2.93	3	-0.1	71	Mode	1.07
1.65	1.29	0.36	73	Standard Deviation	0.55
1.93	1.93	0	78	Variance	0.3
2.43	2	0.43	79	Kurtosis	-0.72
1.86	1.15	0.71	80	Skewness	0.07
3	1.79	1.22	82	Range	1.93
1.57	1.93	-0.4	85	Minimum	1.07
3	2.43	0.57	86	Maximum	3
1.22	1.72	-0.5	87	Sum	148
1.79	1.86	-0.1	88	Count	75
1.86	1.72	0.14	92		
1.79	1.64	0.15	100	<i>difference</i>	
1.79	1.29	0.5	101		
1.14	2.5	-1.4	105	Mean	0.03
2.86	1.71	1.15	106	Standard Error	0.08
1.29	1.14	0.15	108	Median	0
2.57	2.93	-0.4	110	Mode	-0.07
2.79	2.71	0.08	111	Standard Deviation	0.68
2.71	2.86	-0.2	119	Variance	0.47
1.71	1.07	0.64	120	Kurtosis	0.38
1.29	2.5	-1.2	122	Skewness	-0.17
2.64	1.86	0.78	124	Range	3.72
1.14	2.07	-0.9	128	Minimum	-1.93
1.57	1.64	-0.1	130	Maximum	1.79
1.07	3	-1.9	131	Sum	2.23

1.72	1.07	0.65	136	Count	75
1.14	1.93	-0.8	141		
2.86	2.79	0.07	142		
2.22	2.14	0.07	145		
1.43	1.72	-0.3	146		
1.22	2.5	-1.3	147		
1.22	2.08	-0.9	148		
2.14	2.29	-0.2	151		
2.07	2.08	0	153		
2.43	2.36	0.07	154		
3	2.65	0.36	157		
1.93	2	-0.1	160		
1.36	2.07	-0.7	164		
2.14	2	0.14	166		
2.5	2.71	-0.2	167		
1	2.22	-1.2	168		
1.22	1.72	-0.5	169		
2.14	1.07	1.07	173		
2.07	2.93	-0.9	175		
2.15	1.07	1.08	176		
1.07	1.07	0	178		
2.72	2.22	0.5	181		
1.07	1.72	-0.7	183		
2.15	2.93	-0.8	184		
2.57	2.22	0.36	186		
2.72	2.43	0.29	188		
1.86	1.58	0.29	189		
2.5	2.65	-0.2	197		
3	1.22	1.79	204		

Table 10) Female Gingival Smile Line

before	after	diff.	pt. #		
2	1.86	-0.1	1		<i>female before</i>
1.86	2	-0.2	2		
1.29	2	-0.7	6	Mean	2.03441
2.43	2.86	-0.4	7	Standard Error	0.05351
1.65	2	-0.4	8	Median	2
1.07	1.79	-0.7	9	Mode	3
2.57	2.22	0.36	10	Standard Deviation	0.60303
1.07	1.65	-0.6	12	Variance	0.36365
1.43	1.43	0	13	Kurtosis	-1.04505
2	2.93	-0.9	15	Skewness	0.06619
3	3	0	16	Range	2
1.86	1.93	-0.1	17	Minimum	1
1.93	1.86	0.07	18	Maximum	3
2.07	2.57	-0.5	19	Sum	258.37
2	1.71	0.29	20	Count	127
3	2.86	0.15	27		
2.79	2.29	0.5	28		<i>female after</i>
3	3	0	29		
3	3	0	30	Mean	2.16449
3	2.93	0.07	31	Standard Error	0.04863
2.07	1.93	0.14	32	Median	2.08
1.36	1.64	-0.3	33	Mode	2
2.86	2	0.86	34	Standard Deviation	0.54802
2.15	2.72	-0.6	35	Variance	0.30033
2.36	2.86	-0.5	36	Kurtosis	-0.99358
3	2.43	0.57	37	Skewness	-0.09912
1.36	2.57	-1.2	38	Range	1.93
2.93	2.93	0	39	Minimum	1.07
2.43	1.5	0.93	40	Maximum	3
2.14	1.07	1.07	41	Sum	274.89
2.14	1.58	0.57	42	Count	127
2.86	2.93	-0.1	44		
2.43	2.86	-0.4	45		<i>difference</i>
2.22	1.29	0.93	47		
1.07	1.22	-0.2	48	Mean	-0.13315
2.22	2.65	-0.4	50	Standard Error	0.04851
3	2.57	0.43	51	Median	-0.08
1.93	2.5	-0.6	53	Mode	0
1.15	1.71	-0.6	54	Standard Deviation	0.54669
2.29	2.71	-0.4	55	Variance	0.29887
2.57	2.86	-0.3	56	Kurtosis	0.25635
2	2.43	-0.4	58	Skewness	0.31878
1.79	1.22	0.57	59	Range	2.93
2.64	2.5	0.14	60	Minimum	-1.57
1.86	1.93	-0.1	63	Maximum	1.36
1.72	2	-0.3	65	Sum	-16.91

female

2.93	1.72	1.22	67	Count	127
1.15	1.79	-0.6	69		
1.07	1.79	-0.7	70		
1.72	2	-0.3	72		
1.29	2.86	-1.6	74		
2	2.64	-0.6	75		
3	1.64	1.36	76		
1.43	1.79	-0.4	77		
1.86	1.57	0.29	81		
2.86	3	-0.2	83		
1.86	2.79	-0.9	84		
1.07	1.57	-0.5	89		
2.21	2	0.21	90		
2.22	1.72	0.5	91		
1.22	1.72	-0.5	93		
1.79	3	-1.2	94		
1.79	2.36	-0.6	95		
2.93	2.5	0.43	96		
2.5	2.43	0.07	97		
1.29	1.43	-0.2	98		
2	1.86	0.15	99		
2.93	2.07	0.86	102		
2.23	2	0.23	104		
2.14	2.64	-0.5	107		
1.65	2.22	-0.6	109		
1.93	2.93	-1	112		
2.08	2.86	-0.8	113		
1.57	1.5	0.07	114		
1.43	2.15	-0.7	115		
1.86	2.29	-0.4	116		
3	1.79	1.22	117		
1.29	1.22	0.07	118		
1.93	2.43	-0.5	121		
2.93	3	-0.1	123		
1.43	2.07	-0.6	125		
1.79	2.07	-0.3	126		
2.22	1.14	1.08	127		
1.72	1.64	0.08	129		
1	1.72	-0.7	132		
1.07	1.5	-0.4	133		
1.14	1.07	0.07	134		
2.93	2.93	0	135		
1.86	2.79	-0.9	137		
1.93	2.22	-0.3	138		
1.22	2	-0.8	139		
2.93	2.86	0.07	140		

female

2.5	2.86	-0.4	143		
2.57	2.45	0.12	144		
1.72	2.36	-0.7	149		
2	2.08	-0.1	150		
2.79	2.64	0.15	152		
1.43	1.79	-0.4	155		
1.72	1.29	0.43	156		
2.36	2.36	0	158		
2.07	2.36	-0.3	159		
2.29	2.15	0.14	162		
1.15	1.93	-0.8	163		
2.79	3	-0.2	165		
2.22	1.86	0.36	170		
1.29	2	-0.7	171		
1.65	1.5	0.15	172		
1.79	2.93	-1.2	174		
2.36	1.93	0.43	177		
1.79	1.79	0	179		
1.64	2.14	-0.5	180		
1.07	1.14	-0.1	182		
1.07	1.14	-0.1	185		
2.43	2.43	0	187		
2.79	2.07	0.72	190		
2.22	1.86	0.36	191		
1.22	1.65	-0.4	192		
2.79	2.65	0.14	193		
3	2.86	0.15	194		
2.36	2.29	0.08	195		
2.22	2.22	0	196		
2.72	2.29	0.43	198		
1.58	2.64	-1.1	199		
1.72	2	-0.3	200		
1.5	2.29	-0.8	201		
1.29	1.22	0.07	202		
2.29	2.93	-0.6	203		

Table 11) Male Smile Score

pt. #	before	after	diff.		
3	1.07	1.07	0	male before	
4	1.71	2.93	1.22		
5	1.36	2.64	1.28	Mean	1.54
11	2	2.64	0.64	Standard Error	0.04
14	1.14	2.21	1.07	Median	1.43
21	1.79	2.36	0.57	Mode	1.36
22	1.21	1.57	0.36	Standard Deviation	0.34
23	1.93	2.5	0.57	Variance	0.12
24	1.36	2.07	0.71	Kurtosis	-0.1
25	1.29	2.21	0.92	Skewness	0.76
26	1.36	2	0.64	Range	1.43
43	2.5	2.29	-0.21	Minimum	1.07
46	1.14	2.07	0.93	Maximum	2.5
49	2.29	1.36	-0.93	Sum	117
52	1.93	1.21	-0.72	Count	76
57	1.43	1.36	-0.07		
61	1.57	2.21	0.64	male after	
62	1.36	2.14	0.78		
64	1.86	2.21	0.35	Mean	2.09
66	1.36	2.29	0.93	Standard Error	0.05
68	1.21	1.14	-0.07	Median	2.14
71	1.21	1.71	0.5	Mode	2.07
73	1.93	2.14	0.21	Standard Deviation	0.42
78	1.71	2.43	0.72	Variance	0.18
79	1.57	2.64	1.07	Kurtosis	-0.1
80	1.14	1.29	0.15	Skewness	-0.3
82	1.57	1.57	0	Range	1.86
85	2	2.71	0.71	Minimum	1.07
86	1.43	2.07	0.64	Maximum	2.93
87	2.36	1.86	-0.5	Sum	159
88	1.5	2.5	1	Count	76
92	2	1.86	-0.14		
100	1.29	2.36	1.07	difference	
101	1.36	2.29	0.93		
105	1.71	2.07	0.36	Mean	0.56
106	1.21	2.07	0.86	Standard Error	0.06
108	1.57	2.14	0.57	Median	0.64
110	1.14	1.36	0.22	Mode	0.57
111	1.57	2.36	0.79	Standard Deviation	0.49
119	1.43	1.93	0.5	Variance	0.24
120	1.93	1.71	-0.22	Kurtosis	0.43
122	1.71	2.57	0.86	Skewness	-0.7
124	1.36	2.07	0.71	Range	2.43
128	1.07	2.21	1.14	Minimum	-0.9
130	1.79	1.86	0.07	Maximum	1.5
131	1.29	1.64	0.35	Sum	42.2

male smile

				Count	
141	1.14	1.93	0.79		76
142	1.43	2.43	1		
145	1.29	2.57	1.28		
146	1.07	2	0.93		
147	1.21	2.14	0.93		
148	1.36	2.29	0.93		
151	2.14	2.64	0.5		
153	2	1.71	-0.29		
154	1.57	2.14	0.57		
157	1.21	2.36	1.15		
160	1.36	2.5	1.14		
161	1.29	2.14	0.85		
164	1.64	2.36	0.72		
166	2.21	2.43	0.22		
167	1.29	1.86	0.57		
168	1.43	2.93	1.5		
169	1.79	2.07	0.28		
173	1.79	2.14	0.35		
175	1.29	1.93	0.64		
176	1.64	1.57	-0.07		
178	1.71	1.71	0		
181	1.79	2.93	1.14		
183	1.5	2.07	0.57		
184	1.14	1.86	0.72		
186	1.21	1.93	0.72		
188	1.57	2.21	0.64		
189	2.14	2.21	0.07		
197	1.21	1.57	0.36		
198	1.57	2.79	1.22		
204	1.29	1.86	0.57		

Table 12) Female Smile Score

pt. #	before	after	difference		
1	2.29	1.64	-0.65		
2	1.93	2.29	0.36	female before	
6	1.36	2.21	0.85		
7	1.5	2.14	0.64	Mean	1.59
8	1.64	2.86	1.22	Standard Error	0.03
9	1.71	2.29	0.58	Median	1.57
10	2.57	2.86	0.29	Mode	1.57
12	1.29	2.07	0.78	Standard Deviation	0.3
13	1.93	2.07	0.14	Variance	0.09
15	1.43	1.64	0.21	Kurtosis	0.03
16	2.21	2.14	-0.07	Skewness	0.47
17	1.29	2.14	0.85	Range	1.57
18	1.79	1.79	0	Minimum	1
19	1.57	2.5	0.93	Maximum	2.57
20	1.64	1.71	0.07	Sum	202
27	1.14	1.71	0.57	Count	127
28	1.93	2.79	0.86		
29	1.43	1.93	0.5	female after	
30	1.43	2.29	0.86		
31	1.5	2	0.5	Mean	2.16
32	1.64	2.29	0.65	Standard Error	0.03
33	1.21	2.36	1.15	Median	2.14
34	1.57	2.64	1.07	Mode	2.29
35	1.36	2.36	1	Standard Deviation	0.37
36	1.29	2.29	1	Variance	0.14
37	1.29	1.86	0.57	Kurtosis	-0.7
38	2.07	2.71	0.64	Skewness	0.01
39	1.64	2.57	0.93	Range	1.57
40	1	1.86	0.86	Minimum	1.36
41	1.86	1.79	-0.07	Maximum	2.93
42	1.71	2.71	1	Sum	275
44	1.79	2.57	0.78	Count	127
45	1.57	1.71	0.14		
47	1.43	1.93	0.5	difference	
48	1.57	2.36	0.79		
50	1.71	2.57	0.86	Mean	0.57
51	1.5	2.21	0.71	Standard Error	0.04
53	1.57	2.29	0.72	Median	0.57
54	1.86	2.29	0.43	Mode	0.5
55	1.36	2.57	1.21	Standard Deviation	0.42
56	1.43	2.93	1.5	Variance	0.17
58	1.57	1.64	0.07	Kurtosis	0.07
59	1.64	2.43	0.79	Skewness	-0.2
60	1.36	2.21	0.64	Range	2.22
63	1.57	2.57	1	Minimum	-0.7
65	1.07	2.64	1.57	Maximum	1.57

female smile

67	1.21	1.79	0.58	Sum	72.2
69	1.43	2.14	0.71	Count	127
70	1.36	1.79	0.43		
72	1.86	2.07	0.21		
74	1.07	2	0.93		
75	1.86	2.36	0.5		
76	1.71	1.86	0.15		
77	2.07	2.43	0.36		
81	1.57	1.86	0.29		
83	1.36	1.71	0.35		
84	2.07	2.07	0		
89	1.14	2.5	1.36		
90	1.43	1.5	0.07		
91	1.43	2.36	0.93		
93	1.71	1.93	0.22		
94	1.57	1.71	0.14		
95	1.5	2.43	0.93		
96	1.21	1.79	0.58		
97	1.5	1.5	0		
98	1.71	2.5	0.79		
99	1.79	2.07	0.28		
102	1.36	2	0.64		
104	1.29	2.14	0.85		
107	1.71	1.93	0.22		
109	1.5	2.29	0.79		
112	1.71	2.43	0.72		
113	1.5	2	0.5		
114	1.5	2	0.5		
115	1.43	2.71	1.28		
116	1.43	1.79	0.36		
117	2.14	2.07	-0.07		
118	1.5	2	0.5		
121	1.71	2.36	0.65		
123	1.57	2.14	0.57		
125	1.43	2.36	0.93		
126	1.86	2.5	0.64		
127	2	1.93	-0.07		
129	1.29	1.64	0.35		
132	1.93	2.71	0.78		
133	1.71	2.71	1		
134	1.5	1.64	0.14		
135	1.14	1.57	0.43		
137	1.86	2.14	0.28		
138	1.07	2.07	1		
139	1.36	2.14	0.78		
140	1.14	1.64	0.5		

female smile

143	1.86	2.21	0.35		
144	1.57	2.14	0.57		
149	1.36	1.86	0.5		
150	1.29	1.43	0.14		
152	1.21	1.86	0.65		
155	2.14	2.64	0.5		
156	1.5	1.71	0.21		
158	1.57	2.07	0.5		
159	1.57	2.86	1.29		
162	1.57	2.14	0.57		
163	1.29	2	0.71		
165	1.64	1.64	0		
170	2.14	2.57	0.43		
171	1.93	2.29	0.36		
172	1.86	2.29	0.43		
174	1.36	1.36	0		
177	1.64	2.57	0.93		
179	2.07	2.07	0		
180	2	2.07	0.07		
182	1.14	2.36	1.22		
185	1.29	2.14	0.85		
187	1.36	2.64	1.28		
190	2	2.71	0.71		
191	1.36	2.14	0.78		
192	1.71	2.29	0.58		
193	1.21	2.07	0.86		
194	2	1.93	-0.07		
195	2.14	2.36	0.22		
196	1.57	2.64	1.07		
198	1.57	2.79	1.22		
199	1.93	1.57	-0.36		
200	1.64	2	0.36		
201	1.5	2.79	1.29		
202	1.79	2.29	0.5		
203	2	1.43	-0.57		

Table 13) Smile Score Angle Class I

Patient #	before	after	difference		
1	2.29	1.64	-0.65	smile before	
2	1.93	2.29	0.36		
3	1.07	1.07	0	Mean	1.58
6	1.36	2.21	0.85	Standard Error	0.04
7	1.5	2.14	0.64	Median	1.5
9	1.71	2.29	0.58	Mode	1.57
10	2.57	2.86	0.29	Standard Deviation	0.35
11	2	2.64	0.64	Variance	0.13
12	1.29	2.07	0.78	Kurtosis	0
16	2.21	2.14	-0.07	Skewness	0.67
17	1.29	2.14	0.85	Range	1.57
27	1.14	1.71	0.57	Minimum	1
29	1.43	1.93	0.5	Maximum	2.57
30	1.43	2.29	0.86	Sum	144
33	1.21	2.36	1.15	Count	91
34	1.57	2.64	1.07		
38	2.07	2.71	0.64	smile after	
39	1.64	2.57	0.93		
40	1	1.86	0.86	Mean	2.11
42	1.71	2.71	1	Standard Error	0.04
43	2.5	2.29	-0.21	Median	2.14
46	1.14	2.07	0.93	Mode	2.07
47	1.43	1.93	0.5	Standard Deviation	0.39
48	1.57	2.36	0.79	Variance	0.15
49	2.29	1.36	-0.93	Kurtosis	-0.1
51	1.5	2.21	0.71	Skewness	-0.3
52	1.93	1.21	-0.72	Range	1.86
54	1.86	2.29	0.43	Minimum	1.07
55	1.36	2.57	1.21	Maximum	2.93
57	1.43	1.36	-0.07	Sum	192
58	1.57	1.64	0.07	Count	91
59	1.64	2.43	0.79		
60	1.71	2.64	0.93	difference	
61	1.57	2.21	0.64		
63	1.57	2.57	1	Mean	0.53
66	1.36	2.29	0.93	Standard Error	0.05
70	1.36	1.79	0.43	Median	0.58
72	1.86	2.07	0.21	Mode	0.93
73	1.93	2.14	0.21	Standard Deviation	0.45
74	1.07	2	0.93	Variance	0.2
76	1.71	1.86	0.15	Kurtosis	0.92
77	2.07	2.43	0.36	Skewness	-0.8
78	1.71	2.43	0.72	Range	2.43
79	1.57	2.64	1.07	Minimum	-0.9
80	1.14	1.29	0.15	Maximum	1.5
81	1.57	1.86	0.29	Sum	48.4

smile CL 1

84	2.07	2.07	0	Count	91
87	2.36	1.86	-0.5		
90	1.43	1.5	0.07		
95	1.5	2.43	0.93		
96	1.21	1.79	0.58		
97	1.5	1.5	0		
101	1.36	2.29	0.93		
102	1.36	2	0.64		
104	1.29	2.14	0.85		
105	1.71	2.07	0.36		
111	1.57	2.36	0.79		
119	1.43	1.93	0.5		
122	1.71	2.57	0.86		
123	1.57	2.14	0.57		
124	1.36	2.07	0.71		
127	2	1.93	-0.07		
128	1.07	2.21	1.14		
130	1.79	1.86	0.07		
131	1.29	1.64	0.35		
132	1.93	2.71	0.78		
134	1.5	1.64	0.14		
135	1.14	1.57	0.43		
136	1.29	1.36	0.07		
137	1.86	2.14	0.28		
138	1.07	2.07	1		
139	1.36	2.14	0.78		
140	1.14	1.64	0.5		
146	1.07	2	0.93		
148	1.36	2.29	0.93		
151	2.14	2.64	0.5		
154	1.57	2.14	0.57		
163	1.29	2	0.71		
164	1.64	2.36	0.72		
168	1.43	2.93	1.5		
169	1.79	2.07	0.28		
170	2.14	2.57	0.43		
172	1.86	2.29	0.43		
178	1.71	1.71	0		
180	2	2.07	0.07		
182	1.14	2.36	1.22		
183	1.5	2.07	0.57		
186	1.21	1.93	0.72		
193	1.21	2.07	0.86		
201	1.5	2.79	1.29		
204	1.29	1.86	0.57		

Table 14) Smile Score Angle Class II

pt. #	before	after	diff.		
4	1.71	2.93	1.22	smile before	
5	1.36	2.64	1.28		
8	1.64	2.86	1.22	Mean	1.57
13	1.93	2.07	0.14	Standard Error	0.03
14	1.14	2.21	1.07	Median	1.57
15	1.43	1.64	0.21	Mode	1.57
18	1.79	1.79	0	Standard Deviation	0.28
19	1.57	2.5	0.93	Variance	0.08
20	1.64	1.71	0.07	Kurtosis	-0.7
21	1.79	2.36	0.57	Skewness	0.34
22	1.21	1.57	0.36	Range	1.14
23	1.93	2.5	0.57	Minimum	1.07
24	1.36	2.07	0.71	Maximum	2.21
25	1.29	2.21	0.92	Sum	168
26	1.36	2	0.64	Count	107
28	1.93	2.79	0.86		
31	1.5	2	0.5	smile after	
32	1.64	2.29	0.65		
35	1.36	2.36	1	Mean	2.16
36	1.29	2.29	1	Standard Error	0.04
37	1.29	1.86	0.57	Median	2.14
41	1.86	1.79	-0.07	Mode	2.14
44	1.79	2.57	0.78	Standard Deviation	0.39
45	1.57	1.71	0.14	Variance	0.15
50	1.71	2.57	0.86	Kurtosis	-0.5
53	1.57	2.29	0.72	Skewness	-0.1
56	1.43	2.93	1.5	Range	1.79
62	1.36	2.14	0.78	Minimum	1.14
64	1.86	2.21	0.35	Maximum	2.93
65	1.07	2.64	1.57	Sum	231
67	1.21	1.79	0.58	Count	107
68	1.21	1.14	-0.07		
69	1.43	2.14	0.71	difference	
71	1.21	1.71	0.5		
75	1.86	2.36	0.5	Mean	0.59
82	1.57	1.57	0	Standard Error	0.04
83	1.36	1.71	0.35	Median	0.58
86	1.43	2.07	0.64	Mode	0.5
88	1.5	2.5	1	Standard Deviation	0.43
89	1.14	2.5	1.36	Variance	0.18
91	1.43	2.36	0.93	Kurtosis	-0.6
92	2	1.86	-0.14	Skewness	0.01
93	1.71	1.93	0.22	Range	1.93
94	1.57	1.71	0.14	Minimum	-0.4
98	1.71	2.5	0.79	Maximum	1.57
99	1.79	2.07	0.28	Sum	63

smile CL II

100	1.29	2.36	1.07	Count	107
106	1.21	2.07	0.86		
107	1.71	1.93	0.22		
108	1.57	2.14	0.57		
109	1.5	2.29	0.79		
110	1.14	1.36	0.22		
112	1.71	2.43	0.72		
113	1.5	2	0.5		
114	1.5	2	0.5		
115	1.43	2.71	1.28		
116	1.43	1.79	0.36		
117	2.14	2.07	-0.07		
118	1.5	2	0.5		
120	1.93	1.71	-0.22		
121	1.71	2.36	0.65		
126	1.86	2.5	0.64		
129	1.29	1.64	0.35		
133	1.71	2.71	1		
141	1.14	1.93	0.79		
142	1.43	2.43	1		
143	1.86	2.21	0.35		
144	1.57	2.14	0.57		
145	1.29	2.57	1.28		
147	1.21	2.14	0.93		
150	1.29	1.43	0.14		
152	1.21	1.86	0.65		
153	2	1.71	-0.29		
155	2.14	2.64	0.5		
156	1.5	1.71	0.21		
157	1.21	2.36	1.15		
158	1.57	2.07	0.5		
159	1.57	2.86	1.29		
160	1.36	2.5	1.14		
161	1.29	2.14	0.85		
162	1.57	2.14	0.57		
165	1.64	1.64	0		
166	2.21	2.43	0.22		
171	1.93	2.29	0.36		
173	1.79	2.14	0.35		
174	1.36	1.36	0		
175	1.29	1.93	0.64		
176	1.64	1.57	-0.07		
177	1.64	2.57	0.93		
179	2.07	2.07	0		
181	1.79	2.93	1.14		
184	1.14	1.86	0.72		

smile CL II

185	1.29	2.14	0.85		
187	1.36	2.64	1.28		
188	1.57	2.21	0.64		
189	2.14	2.21	0.07		
190	2	2.71	0.71		
191	1.36	2.14	0.78		
192	1.71	2.29	0.58		
194	2	1.93	-0.07		
195	2.14	2.36	0.22		
196	1.57	2.64	1.07		
197	1.21	1.57	0.36		
198	1.57	2.79	1.22		
199	1.93	1.57	-0.36		
200	1.64	2	0.36		
202	1.79	2.29	0.5		

Table 15) Smile Score Angle Class III

Patient #	before	after	difference		
85	2	2.71	0.71	smile before	
125	1.43	2.36	0.93		
149	1.36	1.86	0.5	Mean	1.62
167	1.29	1.86	0.57	Standard Error	0.16
203	2	1.43	-0.57	Median	1.43
				Mode	2
				Standard Deviation	0.35
				Variance	0.13
				Kurtosis	-3.2
				Skewness	0.52
				Range	0.71
				Minimum	1.29
				Maximum	2
				Sum	8.08
				Count	5
				smile after	
				Mean	2.04
				Standard Error	0.22
				Median	1.86
				Mode	1.86
				Standard Deviation	0.5
				Variance	0.25
				Kurtosis	-0.8
				Skewness	0.28
				Range	1.28
				Minimum	1.43
				Maximum	2.71
				Sum	10.2
				Count	5
				difference	
				Mean	0.43
				Standard Error	0.26
				Median	0.57
				Mode	#N/A
				Standard Deviation	0.58
				Variance	0.34
				Kurtosis	3.61
				Skewness	-1.8
				Range	1.5
				Minimum	-0.6
				Maximum	0.93
				Sum	2.14

Table 16) Gingival Smile Line Angle Class I

pt. #	before	after	diff.		
1	2	1.86	-0.07		<i>gummy before</i>
2	1.86	2	-0.15		
3	1	1.07	-0.07		Mean
6	1.29	2	-0.72		Standard Error
7	2.43	2.86	-0.44		Median
9	1.07	1.79	-0.72		Mode
10	2.57	2.22	0.36		Standard Deviation
11	2.5	2.36	0.14		Variance
12	1.07	1.65	-0.58		Kurtosis
16	3	3	0		Skewness
17	1.86	1.93	-0.08		Range
27	3	2.86	0.15		Minimum
29	3	3	0		Maximum
30	3	3	0		Sum
33	1.36	1.64	-0.28		Count
34	2.86	2	0.86		
38	1.36	2.57	-1.21		<i>gummy after</i>
39	2.93	2.93	0		
40	2.43	1.5	0.93		Mean
42	2.14	1.58	0.57		Standard Error
43	1.93	2.43	-0.5		Median
46	1.29	1.5	-0.22		Mode
47	2.22	1.29	0.93		Standard Deviation
48	1.07	1.22	-0.15		Variance
49	2.93	1.86	1.07		Kurtosis
51	3	2.57	0.43		Skewness
52	1.65	1.07	0.58		Range
54	1.15	1.71	-0.57		Minimum
55	2.29	2.71	-0.43		Maximum
57	2.93	2.86	0.07		Sum
58	2	2.43	-0.43		Count
59	1.79	1.22	0.57		
60	2.64	2.5	0.14		<i>difference</i>
61	2.5	1.72	0.79		
63	1.86	1.93	-0.08		Mean
66	2.15	1.93	0.22		Standard Error
70	1.07	1.79	-0.72		Median
72	1.72	2	-0.29		Mode
73	1.65	1.29	0.36		Standard Deviation
74	1.29	2.86	-1.57		Variance
76	3	1.64	1.36		Kurtosis
77	1.43	1.79	-0.36		Skewness
78	1.93	1.93	0		Range
79	2.43	2	0.43		Minimum
80	1.86	1.15	0.71		Maximum
81	1.86	1.57	0.29		Sum

84	1.86	2.79	-0.93		Count	91
87	1.22	1.72	-0.5			
90	2.21	2	0.21			
95	1.79	2.36	-0.58			
96	2.93	2.5	0.43			
97	2.5	2.43	0.07			
101	1.79	1.29	0.5			
102	2.93	2.07	0.86			
104	2.23	2	0.23			
105	1.14	2.5	-1.36			
111	2.79	2.71	0.08			
119	2.71	2.86	-0.15			
122	1.29	2.5	-1.21			
123	2.93	3	-0.07			
124	2.64	1.86	0.78			
127	2.22	1.14	1.08			
128	1.14	2.07	-0.93			
130	1.57	1.64	-0.07			
131	1.07	3	-1.93			
132	1	1.72	-0.72			
134	1.14	1.07	0.07			
135	2.93	2.93	0			
136	1.72	1.07	0.65			
137	1.86	2.79	-0.93			
138	1.93	2.22	-0.29			
139	1.22	2	-0.79			
140	2.93	2.86	0.07			
146	1.43	1.72	-0.29			
148	1.22	2.08	-0.86			
151	2.14	2.29	-0.15			
154	2.43	2.36	0.07			
163	1.15	1.93	-0.79			
164	1.36	2.07	-0.72			
168	1	2.22	-1.22			
169	1.22	1.72	-0.5			
170	2.22	1.86	0.36			
172	1.65	1.5	0.15			
178	1.07	1.07	0			
180	1.64	2.14	-0.5			
182	1.07	1.14	-0.07			
183	1.07	1.72	-0.65			
186	2.57	2.22	0.36			
193	2.79	2.65	0.14			
201	1.5	2.29	-0.79			
204	3	1.22	1.79			

Table 17) Gingival Smile Line Angle Class II

Pt. #	before	after	diff.		
4	1.72	1.72	0		
5	1.72	1.86	-0.14		
8	1.65	2	-0.36		
13	1.43	1.43	0	Mean	2.07
14	1.72	1.79	-0.07	Standard Error	0.05
15	2	2.93	-0.93	Median	2
18	1.93	1.86	0.07	Mode	3
19	2.07	2.57	-0.5	Standard Deviation	0.56
20	2	1.71	0.29	Variance	0.32
21	1.86	1.93	-0.07	Kurtosis	-0.9
22	2.79	1.71	1.08	Skewness	0.09
23	1.86	2.29	-0.43	Range	1.93
24	3	2.43	0.57	Minimum	1.07
25	3	1.79	1.22	Maximum	3
26	1.22	1.71	-0.5	Sum	222
28	2.79	2.29	0.5	Count	107
31	3	2.93	0.07		
32	2.07	1.93	0.14		
35	2.15	2.72	-0.57	Mean	2.12
36	2.36	2.86	-0.5	Standard Error	0.05
37	3	2.43	0.57	Median	2.07
41	2.14	1.07	1.07	Mode	2.93
44	2.86	2.93	-0.07	Standard Deviation	0.55
45	2.43	2.86	-0.43	Variance	0.3
50	2.22	2.65	-0.43	Kurtosis	-0.9
53	1.93	2.5	-0.57	Skewness	-0.1
56	2.57	2.86	-0.29	Range	1.93
62	1.22	1.86	-0.64	Minimum	1.07
64	1.93	1.64	0.29	Maximum	3
65	1.72	2	-0.29	Sum	227
67	2.93	1.72	1.22	Count	107
68	1.86	1.07	0.79		
69	1.15	1.79	-0.64		
71	2.93	3	-0.07	Mean	0
75	2	2.64	-0.64	Standard Error	0.05
82	3	1.79	1.22	Median	-0.1
83	2.86	3	-0.15	Mode	0.07
86	3	2.43	0.57	Standard Deviation	0.57
88	1.79	1.86	-0.07	Variance	0.32
89	1.07	1.57	-0.5	Kurtosis	0
91	2.22	1.72	0.5	Skewness	0.34
92	1.86	1.72	0.14	Range	2.51
93	1.22	1.72	-0.5	Minimum	-1.3
94	1.79	3	-1.22	Maximum	1.22
98	1.29	1.43	-0.15	Sum	-5.1
99	2	1.86	0.15	Count	107

100	1.79	1.64	0.15			
106	2.86	1.71	1.15			
107	2.14	2.64	-0.5			
108	1.29	1.14	0.15			
109	1.65	2.22	-0.57			
110	2.57	2.93	-0.36			
112	1.93	2.93	-1.01			
113	2.08	2.86	-0.78			
114	1.57	1.5	0.07			
115	1.43	2.15	-0.72			
116	1.86	2.29	-0.44			
117	3	1.79	1.22			
118	1.29	1.22	0.07			
120	1.71	1.07	0.64			
121	1.93	2.43	-0.51			
126	1.79	2.07	-0.29			
129	1.72	1.64	0.08			
133	1.07	1.5	-0.43			
141	1.14	1.93	-0.79			
142	2.86	2.79	0.07			
143	2.5	2.86	-0.36			
144	2.57	2.45	0.12			
145	2.22	2.14	0.07			
147	1.22	2.5	-1.29			
150	2	2.08	-0.08			
152	2.79	2.64	0.15			
153	2.07	2.08	0			
155	1.43	1.79	-0.36			
156	1.72	1.29	0.43			
157	3	2.65	0.36			
158	2.36	2.36	-0.01			
159	2.07	2.36	-0.29			
160	1.93	2	-0.08			
161	1.29	1.93	-0.65			
162	2.29	2.15	0.14			
165	2.79	3	-0.22			
166	2.14	2	0.14			
171	1.29	2	-0.71			
173	2.14	1.07	1.07			
174	1.79	2.93	-1.15			
175	2.07	2.93	-0.86			
176	2.15	1.07	1.08			
177	2.36	1.93	0.43			
179	1.79	1.79	0			
181	2.72	2.22	0.5			
184	2.15	2.93	-0.79			

185	1.07	1.14	-0.07			
187	2.43	2.43	0			
188	2.72	2.43	0.29			
189	1.86	1.58	0.29			
190	2.79	2.07	0.72			
191	2.22	1.86	0.36			
192	1.22	1.65	-0.43			
194	3	2.86	0.15			
195	2.36	2.29	0.08			
196	2.22	2.22	0			
197	2.5	2.65	-0.15			
198	2.72	2.29	0.43			
199	1.58	2.64	-1.07			
200	1.72	2	-0.29			
202	1.29	1.22	0.07			

Table 18) Gingival Smile Line Angle Class III

pt. # bef. after diff.

85	1.57	1.93	-0.36			<i>gummy before</i>	
125	1.43	2.07	-0.64				
149	1.72	2.36	-0.65				
167	2.5	2.71	-0.21			Mean	1.9
203	2.29	2.93	-0.64			Standard Error	0.21
						Median	1.72
						Mode	#N/A
						Standard Deviation	0.47
						Variance	0.22
						Kurtosis	-2.42
						Skewness	0.51
						Range	1.07
						Minimum	1.43
						Maximum	2.5
						Sum	9.51
						Count	5
						<i>gummy after</i>	
						Mean	2.4
						Standard Error	0.19
						Median	2.36
						Mode	#N/A
						Standard Deviation	0.42
						Variance	0.18
						Kurtosis	-2.07
						Skewness	0.22
						Range	1
						Minimum	1.93
						Maximum	2.93
						Sum	12
						Count	5
						<i>difference</i>	
						Mean	-0.5
						Standard Error	0.09
						Median	-0.64
						Mode	-0.64
						Standard Deviation	0.2
						Variance	0.04
						Kurtosis	-1.62
						Skewness	0.91
						Range	0.44
						Minimum	-0.65
						Maximum	-0.21
						Sum	-2.5
						Count	5

Table. 19) Gingival smile line scores > 2.0

pt. #	before	after	diff.		
7	2.43	2.86	-0.4		<i>gummy before</i>
10	2.57	2.22	0.36		
11	2.5	2.36	0.14		
19	2.07	2.57	-0.5	Mean	2.57086
22	2.79	1.71	1.08	Standard Error	0.03421
24	3	2.43	0.57	Median	2.57
25	3	1.79	1.22	Mode	3
27	3	2.86	0.15	Standard Deviation	0.32993
28	2.79	2.29	0.5	Variance	0.10885
29	3	3	0	Kurtosis	-1.52016
30	3	3	0	Skewness	-0.069
31	3	2.93	0.07	Range	0.93
32	2.07	1.93	0.14	Minimum	2.07
34	2.86	2	0.86	Maximum	3
35	2.15	2.72	-0.6	Sum	239.09
36	2.36	2.86	-0.5	Count	93
37	3	2.43	0.57		<i>gummy after</i>
39	2.93	2.93	0		
40	2.43	1.5	0.93		
41	2.14	1.07	1.07	Mean	2.30025
42	2.14	1.58	0.57	Standard Error	0.05941
44	2.86	2.93	-0.1	Median	2.36
45	2.43	2.86	-0.4	Mode	2.86
47	2.22	1.29	0.93	Standard Deviation	0.5347
49	2.93	1.86	1.07	Variance	0.28591
50	2.22	2.65	-0.4	Kurtosis	-0.47462
51	3	2.57	0.43	Skewness	-0.58255
55	2.29	2.71	-0.4	Range	1.93
56	2.57	2.86	-0.3	Minimum	1.07
57	2.93	2.86	0.07	Maximum	3
60	2.64	2.5	0.14	Sum	186.32
61	2.5	1.72	0.79	Count	81
66	2.15	1.93	0.22		<i>difference</i>
67	2.93	1.72	1.22		
71	2.93	3	-0.1		
76	3	1.64	1.36	Mean	0.24284
79	2.43	2	0.43	Standard Error	0.06152
82	3	1.79	1.22	Median	0.14
83	2.86	3	-0.2	Mode	0.07
86	3	2.43	0.57	Standard Deviation	0.55368
90	2.21	2	0.21	Variance	0.30656
91	2.22	1.72	0.5	Kurtosis	-0.1419
96	2.93	2.5	0.43	Skewness	0.40503
97	2.5	2.43	0.07	Range	2.65
102	2.93	2.07	0.86	Minimum	-0.86
104	2.23	2	0.23	Maximum	1.79

106	2.86	1.71	1.15	Sum	19.67
107	2.14	2.64	-0.5	Count	81
110	2.57	2.93	-0.4		
111	2.79	2.71	0.08		
113	2.08	2.86	-0.8		
117	3	1.79	1.22		
119	2.71	2.86	-0.2		
123	2.93	3	-0.1		
124	2.64	1.86	0.78		
127	2.22	1.14	1.08		
135	2.93	2.93	0		
140	2.93	2.86	0.07		
142	2.86	2.79	0.07		
143	2.5	2.86	-0.4		
144	2.57	2.45	0.12		
145	2.22	2.14	0.07		
151	2.14	2.29	-0.2		
152	2.79	2.64	0.15		
153	2.07	2.08	0		
154	2.43	2.36	0.07		
157	3	2.65	0.36		
158	2.36	2.36	0		
159	2.07	2.36	-0.3		
162	2.29	2.15	0.14		
165	2.79	3	-0.2		
166	2.14	2	0.14		
167	2.5	2.71	-0.2		
170	2.22	1.86	0.36		
173	2.14	1.07	1.07		
175	2.07	2.93	-0.9		
176	2.15	1.07	1.08		
177	2.36	1.93	0.43		
181	2.72	2.22	0.5		
184	2.15	2.93	-0.8		
186	2.57	2.22	0.36		
187	2.43	2.43	0		
188	2.72	2.43	0.29		
190	2.79	2.07	0.72		
191	2.22	1.86	0.36		
193	2.79	2.65	0.14		
194	3	2.86	0.15		
195	2.36	2.29	0.08		
196	2.22	2.22	0		
197	2.5	2.65	-0.2		
198	2.72	2.29	0.43		
203	2.29	2.93	-0.6		

204	3	1.22	1.79			
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Table 20) Smile scores for G.S.L. scores >2.0

Patient #	before	after	difference		
7	1.5	2.14	0.64		
10	2.57	2.86	0.29		
11	2	2.64	0.64		
19	1.57	2.5	0.93	Mean	1.54771739
22	1.21	1.57	0.36	Standard Error	0.03199159
25	1.29	2.21	0.92	Median	1.5
27	1.14	1.71	0.57	Mode	1.57
28	1.93	2.79	0.86	Standard Deviation	0.30685252
29	1.43	1.93	0.5	Variance	0.09415847
30	1.43	2.29	0.86	Kurtosis	0.5900278
31	1.5	2	0.5	Skewness	0.87647258
32	1.64	2.29	0.65	Range	1.57
34	1.57	2.64	1.07	Minimum	1
35	1.36	2.36	1	Maximum	2.57
36	1.29	2.29	1	Sum	142.39
37	1.29	1.86	0.57	Count	92
39	1.64	2.57	0.93		
40	1	1.86	0.86		
41	1.86	1.79	-0.07	Mean	2.1325
42	1.71	2.71	1	Standard Error	0.04226411
44	1.79	2.57	0.78	Median	2.14
45	1.57	1.71	0.14	Mode	2.14
47	1.43	1.93	0.5	Standard Deviation	0.40538308
49	2.29	1.36	-0.93	Variance	0.16433544
50	1.71	2.57	0.86	Kurtosis	-0.82630598
51	1.5	2.21	0.71	Skewness	0.06066087
55	1.36	2.57	1.21	Range	1.57
56	1.43	2.93	1.5	Minimum	1.36
57	1.43	1.36	-0.07	Maximum	2.93
60	1.71	2.64	0.93	Sum	196.19
61	1.57	2.21	0.64	Count	92
66	1.36	2.29	0.93		
67	1.21	1.79	0.58		
71	1.21	1.71	0.5		
76	1.71	1.86	0.15		
79	1.57	2.64	1.07	Mean	0.58478261
82	1.57	1.57	0	Standard Error	0.04420922
83	1.36	1.71	0.35	Median	0.64
86	1.43	2.07	0.64	Mode	0.5
90	1.43	1.5	0.07	Standard Deviation	0.42403991
91	1.43	2.36	0.93	Variance	0.17980984
96	1.21	1.79	0.58	Kurtosis	1.13883803
97	1.5	1.5	0	Skewness	-0.7120527
102	1.36	2	0.64	Range	2.43
104	1.29	2.14	0.85	Minimum	-0.93
106	1.21	2.07	0.86	Maximum	1.5

107	1.71	1.93	0.22	Sum	53.8
110	1.14	1.36	0.22	Count	92
111	1.57	2.36	0.79		
113	1.5	2	0.5		
117	2.14	2.07	-0.07		
119	1.43	1.93	0.5		
123	1.57	2.14	0.57		
124	1.36	2.07	0.71		
127	2	1.93	-0.07		
135	1.14	1.57	0.43		
140	1.14	1.64	0.5		
142	1.43	2.43	1		
143	1.86	2.21	0.35		
144	1.57	2.14	0.57		
145	1.29	2.57	1.28		
151	2.14	2.64	0.5		
152	1.21	1.86	0.65		
153	2	1.71	-0.29		
154	1.57	2.14	0.57		
157	1.21	2.36	1.15		
158	1.57	2.07	0.5		
159	1.57	2.86	1.29		
162	1.57	2.14	0.57		
165	1.64	1.64	0		
166	2.21	2.43	0.22		
167	1.29	1.86	0.57		
170	2.14	2.57	0.43		
173	1.79	2.14	0.35		
175	1.29	1.93	0.64		
176	1.64	1.57	-0.07		
177	1.64	2.57	0.93		
181	1.79	2.93	1.14		
184	1.14	1.86	0.72		
186	1.21	1.93	0.72		
187	1.36	2.64	1.28		
188	1.57	2.21	0.64		
190	2	2.71	0.71		
191	1.36	2.14	0.78		
193	1.21	2.07	0.86		
194	2	1.93	-0.07		
195	2.14	2.36	0.22		
196	1.57	2.64	1.07		
197	1.21	1.57	0.36		
198	1.57	2.79	1.22		
203	2	1.43	-0.57		
24	1.36	2.07	0.71		