

**LIP PRINTS AS A METHOD
OF
IDENTIFICATION**

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CONTENTS

S.NO.	TITLE	PAGE NO.
1.	INTRODUCTION	1 - 6
2.	REVIEW OF LITERATURE	7 - 28
3.	AIMS AND OBJECTIVES	29
4.	MATERIALS AND METHODS	30 - 34
5.	OBSERVATIONS AND RESULTS	35 - 56
6.	DISCUSSION	57 - 68
7.	SUMMARY AND CONCLUSION	69 - 73
8.	BIBLIOGRAPHY	74 - 79
9.	ANNEXURES	

SUMMARY
&
CONCLUSION

SUMMARY AND CONCLUSIONS

Lips are two fleshy folds surrounding the oral orifice. It has many elevations and depressions forming a characteristic pattern called lip prints. The figure formed by these sulci was called "figura linearum labiorum", i.e. in general "lip prints". The examination of which is referred to as cheiloscropy. The present study was carried out over the lip prints as a means of identification since it differs from person to person and remains unchangeable throughout life.

Suzuki and Tsuchihashi (23) were the pioneers in the development of cheiloscropy and made a significant contribution to the field of crime investigation. Several studies over the years justified the importance and application of lip prints in identification of an individual. Fischer was the first anthropologist who described the furrows on the red part of human lips (3). Edmond Locard first recommended the use of lip prints for personal identification (22).

The present study was conducted on 300 male and female North Indian individuals in the age group between 18- 65 years. Subjects were divided into two groups. The first group consisted of 250 subjects (125 males and 125 females) in the age group between 18- 30 years. The second group consisted of 50 subjects comprising 25 males and 25 females in the age group between 31- 65 years. Impressions of their lips

were taken on the strip of paper by applying the lipstick. These prints were studied with the help of a magnifying lens using Suzuki's classification (44). Anthropometric measurements and morphological types were also noted. To investigate whether the lip print patterns remain unchanged or not 25 subjects were randomly selected from the study group and evaluated for any change in their lip patterns, width and height after a period of one year.

It was observed that in each Quadrant of the lip combinations of patterns were present and no two lip prints of an individual were identical to each other.

A. Lip print patterns:

Lip Prints	Males	Females	Remarks
1. Commonest pattern	II	II	Same
2. Least common pattern	III	III	Same
3. Order of frequency	II, I', I, IV, III	II, I', I, IV, III	Same
4. Most common single pattern			
a) 18- 30 years	II	II	Same
b) 31- 65 years	I'	I	Almost Same

The present study thereby concludes that the frequency of

- a) the commonest pattern (II)
 - b) least common pattern (III)
 - c) order of frequency (II, I', I, IV & III)
 - d) most common single pattern in the age group of 18- 30 years (II)
- remains the same in both sexes. However, in the age group of 31- 65 years the most common single pattern is almost similar in males (I') and females (I). This could be due to loss of elastic tissue in the connective tissue of the lips.

B. Patterns observed in each Quadrant:

Most predominant pattern.

Quadrants	Males		Females		Remarks
	18- 30 Years	31- 65 Years	18- 30 Years	31- 65 Years	
1	II	II	II	I	Same except females group of 31- 65 years
2	II	I, IV	II	I	Same
3	II	I'	I	I	Same
4	II	II	I	I	Same
Remarks	Same	Variable	Q1& Q2 Same Q3& Q4 Same	Same	

The following conclusions of the frequency of the most predominant pattern in the present study are thereby derived as:-

- a) Males (18- 30 years) shows type II as the predominant pattern in all Quadrants.

- b) Females (18- 30 years) shows type II as the predominant pattern in Q1& Q2 and type I in Q3& Q4.
- c) Males (31- 65 years) show variability of the predominant pattern in all Quadrants.
- d) Females (31- 65 years) show type I as the predominant pattern in all Quadrants.
- e) All males and females show almost similar pattern- II (except females 31- 65 years – I) in Q1.
- f) Males and females (18- 30 years) show same pattern- II in Q2 whereas, in age group of 31- 65 years shows mostly type I pattern.
- g) All females show same type I pattern in Q3 & Q4 of all age groups.

C. Observation of similar Quadrants:

Any two quadrants having a similar pattern was the most commonly occurring trend the incidence predominating in the females. Any three quadrants having similar patterns were least commonly observed. All the quadrants having similar patterns were less frequent though more commonly met in females than in males. However, all the quadrants having dissimilar patterns were more common in males than in females.

D. Measurements of lips:-

Measurements of width of mouth, height of upper and lower lips and total lip height was greater in males as compared to females. It was concluded that males have a larger mouth and bigger lips than female.

E. Morphological types of lips:

Medium types of lips were common in both sexes.

F. Permanence of lip prints:

No change in the lip prints patterns and the anthropometric measurements were observed during one year duration of the study.

Over the years many workers like Suzuki et al (8), Suzuki and Tsuchihashi (18), Suzuki and Tsuchihashi (23), Ebihara (24), Tsuchihashi (13), Kasprzak (3), William T (30) and Vahanwala and Parekh (6) worked extensively in the field of cheiloscopy and concluded that no two lip prints matched with each other. Similar results were obtained in the present study. Differences in the most common patterns and measurements of lips observed in the present study and the studies conducted in the past were due to difference in environmental or racial factors.

Further investigations in the field of cheiloscopy should be done for a longer duration of time or to record lip print patterns from birth till death to establish the permanence of the lip prints.