

**A STUDY ON THE VARNAPRASADANA EFFECT OF KESARA
[CROCUS SATIVUS LINN.] DURING INTRA-UTERINE LIFE OF A
CHILD.**

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ABSTRACT

The aspiration for fair complexion is pronounced in a greater number of people in the present times. Colour complexion also indicates immunity and health. With natural products for complex promotion being more in demand than their synthetic counterparts. Research in the area of skin- complexion agents is an expanding field with the knowledge being updated regularly. In Ayurveda, varnya, raktaprasadhana, tvachya are few terms specifying skin complexion. The present review is undertaken for screening herb “KESARA” (*Crocus sativus* Linn.) to evaluate it’s probable modes of action through which the skin complexion is effected as per both Ayurveda

and biomedical concepts. In this study 30 pregnant women between 22weeks to 34 weeks of gestational period who desires more complexion and more colour to their baby were selected after taking due consent. Kesara was made in to fine powder in khalwa yantra and mixed with raw sugar (ratio of Kesara: Raw sugar-1:44). 1gram of medicine has been given with navanita per day. This study is seldom seen. We found Kesara (*Crocus sativus*) a miraculous herb evaluated here to act as *varnya* directly or indirectly as per Ayurveda. Hence they can be potentially employed as effective skin-whitening agents, if it is administered in intra uterine life of baby then there will be no need of attention on cosmetics in future. This study has shown better result (94%) in colour enhancement of babies than colour of parents.

KEYWORDS: Kesara, Varnya, Colour complexion, Colour enhancement.

INTRODUCTION

Everyone give more stress and priority for colour and complexion. These colour and complexion are formed during the fetal life and cannot be changed after the birth. *Varna* is of vital importance, as it represents the equilibrium of the body elements. Any minute change in colour of the skin especially of the face disbeautifies the person's external appearance, thus affecting the person psychologically, as skin is the expressions of social and biological transaction in daily life. In society particularly in this era, we see that the young generation giving more stress and priority for colour and complexion. This is just to illustrate the social aspect of preference attitude of the present day society.

Acharya Charaka has said that,

uÉhÉipÉâSâlÉasÉÉÈÈWûwÉiUÉææRÉxIÉâWûurÉÉZrÉÉiÉÉÈ (cÉ0C01/11)

So, *Varna* word is used in a broader aspect which includes most of the parameters which are necessary for healthy skin. In this way, Ayurveda has its own detail and deeper sense regarding the subject. *Varna* of a person is only perceived by the other person. So *Varna* is that kind of *Sarirasrita Bhava* which needs another person for the perception.^[1]

Any unhealthy state of physique or the psyche would be reflected by the skin disbeautifies the person, as beauty manifests through the appearance of the complexion of the skin. Such type of conditions does not cause a painful manifestation, but it affects the person psychologically. Less colour & complexion is the condition, That the persons who are affected thus become more restless as soon as they realize about the onset of such problems and they suffers from various inferiority complexes and keep themselves isolated from the society. So there is need to overcome this condition. But only few modern medicines are available and they are incomplete to cure the condition totally. Moreover, those available medicines show many side effects.

Therefore, there is a high need for proper understanding of such **problems** of the society through the Ayurvedic perspectives and to find out some effective steps of management.

- *Acharya Charaka* while describing the *masanumasika vikasa* of the foetus, mentions that the complexion in the foetus is formed particularly in 6th month of pregnancy.^[2]
- In India most of the places, people are using *Kesara* during pregnancy.

- Hence, the drug *Kesara* is selected to study on *Varnaprasadana karma* in pregnant women after obtaining consent.

AIMS AND OBJECTIVES OF THE STUDY

The study is aimed at:

- To study the *Varnaprasadana* (attribution of good colour to skin of baby) effect of *Kesara*.
- To evolve a standard method of *Kesara* internal administration during pregnancy to provide good colour and complexion to the skin of new born.

IMPORTANCE OF PRESENT STUDY

- Colour and complexion are formed during the foetal life and cannot be changed after the birth. Many places in India given *Kesara* during pregnancy.
- But till date no work has been reported in evaluating the process of *Varnaprasadana karma* of *Kesara* and no references are found in classics regarding such application during pregnancy. It is recorded as a folklore practice.

Chief reference

The drug chosen for the present study was *Kesara* (*Crocus sativus*). The reference has been taken from Ayurveda Vanoushadi vijnanam.^[4]

PLAN OF STUDY

- Purchased good quality *Kesara* [*Crocus sativus* Linn.] procured from Jammu market, India.
- *Kesara* made in to fine powder in kalwa yantra and added 1:44 ratio raw sugar.
- This powder has given with navanita.
- For the clinical study selected at random 30 pregnant women (between 22 weeks to 34 weeks gestational period who desires more complexion and more colour to their baby after due consent) from OPD of P.G department of Dravyaguna and Prasuti & Striroga, S.V Ayurvedic Hospital, Tirupati.
- Result collected and assessed on the basis of parameters.

MATERIAL AND METHODS

- *Kesara*
- Raw sugar

- Navanita

Drug administration

Advised to the pregnant women half gram drug (Kesara + raw sugar) with Navanita twice in a day.

Dose: 24mg Kesara powder per day.

Anupana: Navanita

Duration: 3months.

Inclusion Criteria

- Couple who desires more complexion and more colour to their baby after due consent.
- The women selected for the study with gestational age of 22 weeks to 34 weeks.

EXCLUSION CRITERIA

- Diabetes Mellitus.
- History of threatened abortion.
- Hypertension.
- Oedema.

PARAMETERS

Criteria for Assessment

1. Photographs of the mother

Photographs of the father

Photographs of the previous baby

Photographs of the newborn baby

2. Fitzpatrick scale



Image No. 33 Fitzpatrick Scale.

Fitzpatrick prototyping scale is a numerical classification schema for human skin color. It was developed in 1975 by Thomas B. Fitzpatrick. The Fitzpatrick scale remains a recognized tool for dermatological research into human skin colour.^[62]

Clinical study

OBSERVATIONS

Collected data, with parents and baby photos to compare the colour grade with the help of Fitzpatrick Scale. Colour grade of 30 cases data, who were taken for the present study, is given as below –

Table No. 22: Showing data of 30 cases colour grade of parents & babies.

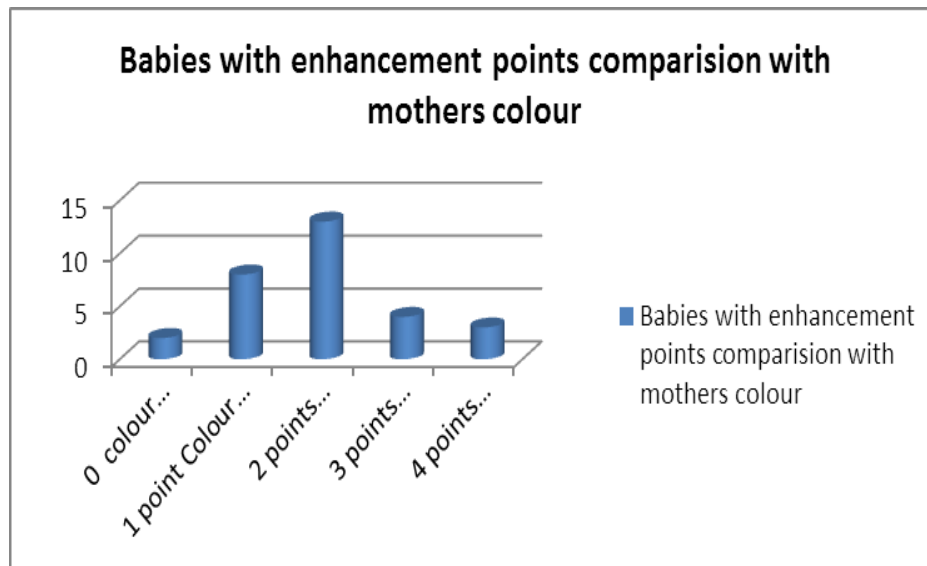
S. NO	NAME OF MOTHER	MOTHER COLOUR GRADE	FATHER COLOUR GRADE	BABY COLOUR GRADE
1.	S. Subhashini	4	6	2
2.	S. Sharmila	3	4	1
3.	P. Usha rani	4	5	1
4.	P. Navya Keerthana	3	2	2
5.	K. Sudha	4	5	2
6.	M. Sirisha	2	3	1
7.	M. Meenakshi	5	5	2
8.	B. Bhavani sri	2	6	1
9.	O. Naga madhavi	3	3	3
10.	M. Madhulika	3	4	1
11.	S. Ujjayini	3	2	2
12.	K. Hema Durga Bhavani	2	3	1
13.	E. Swarna	3	2	1
14.	N. Banu Priya	3	5	1
15.	B. Radhika	4	5	2
16.	K. Susmitha vandhana	4	3	2
17.	J. Jayanthi	5	3	2
18.	M.V .Bhargavi	4	3	2
19.	V. Keerthana	6	5	2
20.	V. Gnana Prasanna	4	5	1
21.	C. Nandhini	4	5	3
22.	R. Iswarya	5	4	1
23.	SK. Shameem	3	4	1
24.	V. Syamala	4	6	2
25.	S. Revathi	3	2	1
26.	G. Mamatha	6	5	3
27.	B. Divya Sree	3	4	2
28.	P. Satya Rajinikumari	4	2	2
29.	J. Kalyani Yadav	3	4	3
30.	Y. Lakshmi Devi	4	4	3

Table No. 23: Colour enhancement of babies than corresponding mothers.

S. No.	NAME OF MOTHER	MOTHER COLOUR GRADE	BABY COLOUR GRADE	COLOUR ENHANCEMENT IN NEW BORN
1.	S. Subhashini	4	2	2
2.	S. Sharmila	3	1	2
3.	P. Usha rani	4	1	3
4.	P. Navya Keerthana	3	2	1
5.	K. Sudha	4	2	2
6.	M. Sirisha	2	1	1
7.	M. Meenakshi	5	2	3
8.	B. Bhavani sri	2	1	1
9.	O. Naga madhavi	3	3	0
10.	M. Madhulika	3	1	2
11.	S. Ujjayini	3	2	1
12.	K. Hema Durga Bhavani	2	1	1
13.	E. Swarna	3	1	2
14.	N. Banu Priya	3	1	2
15.	B. Radhika	4	2	2
16.	K. Susmitha vandhana	4	2	2
17.	J. Jayanthi	5	2	3
18.	M.V .Bhargavi	4	2	2
19.	V. Keerthana	6	2	4
20.	V. Gnana Prasanna	4	1	3
21.	C. Nandhini	4	3	1
22.	R. Iswarya	5	1	4
23.	SK. Shameem	3	1	2
24.	V. Syamala	4	2	2
25.	S. Revathi	3	1	2
26.	G. Mamatha	6	3	3
27.	B. Divya Sree	3	2	1
28.	P. Satya Rajinikumari	4	2	2
29.	J. Kalyani Yadav	3	3	0
30.	Y. Lakshmi Devi	4	3	1

Table No. 24: Babies with enhancement of colour points (with mother) and their percentage.

S. No.	Points of Colour enhancement in babies	No .of babies in each point of colour enhancement	% of babies with Colour enhancement
a.	0 colour Enhancement	2	6.66 %
b.	1 point Colour enhancement	8	26.66 %
c.	2 point Colour enhancement	13	43.33 %
d.	3 point Colour enhancement	5	16.66%
e.	4 point Colour enhancement	2	6.66 %
f.	Total	30	100%



Graph no. 2: Babies with enhancement of colour points with mother and their percentage.

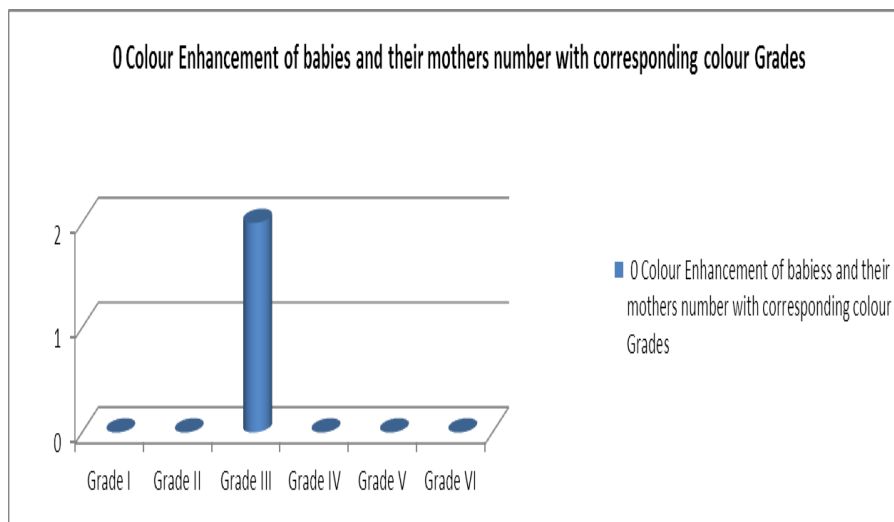
Grading of skin colour

Grade I- Very Fair; Grade II-Fair, White; Grade III- Medium White Grade; IV-Moderate Brown; Grade V –Brown; Grade VI Black -Very dark Brown.

Observation: In this present study out of 30 babies 2 babies (6.66%) were born in same colour grade that means 0 enhancement, 8 babies (26.66%) with 1 point enhancement, 13 babies (43.33%) with 2 points enhancement, 5 babies (16.66%) with 3 points enhancement & 2 babies (6.66%) with 4 points enhancement than mothers colour Grade.

Table No. 25: 0 Colour Enhancement of babies and their mothers number with corresponding colour grades.

S. No.	NO. OF MOTHERS	COLOUR GRADES OF MOTHERS
a.	0	I
b.	0	II
c.	2	III
d.	0	IV
e.	0	V
f.	0	VI



Graph No. 3: 0 Colour Enhancement of babies and their mothers' number with corresponding colour grades.

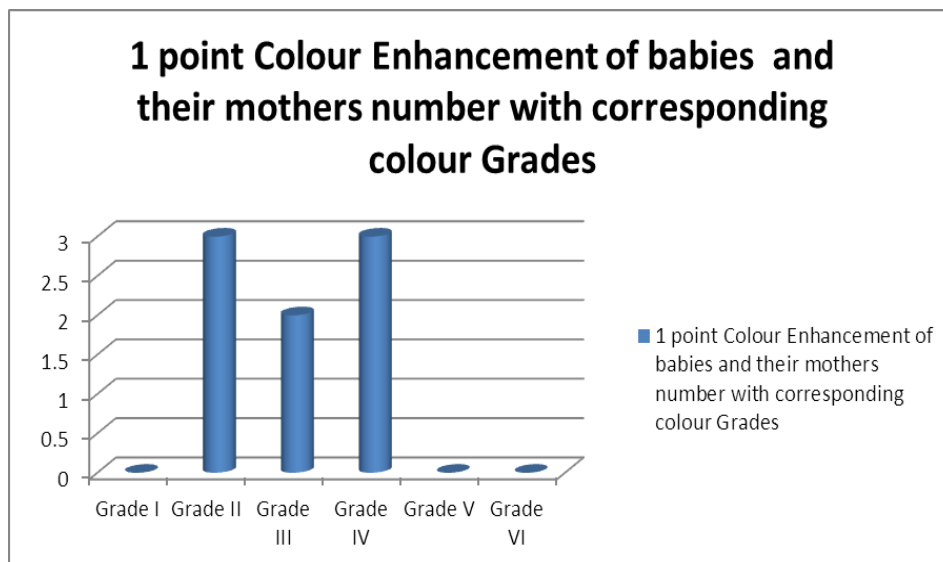
Grading of skin colour

Grade I- Very Fair; Grade II-Fair, White; Grade III- Medium White Grade; IV-Moderate Brown; Grade V –Brown; Grade VI Black -Very dark Brown.

Observation: 2 mothers of “0 colour enhancement babies” fall in grade III. It indicates that the colour change of babies in grade III mothers is not seen.

Table No. 26: 1 point Colour Enhancement of babies and their mothers number with corresponding colour grades.

S. No.	NO. OF MOTHERS	COLOUR GRADES OF MOTHERS
a.	0	I
b.	3	II
c.	2	III
d.	3	IV
e.	0	V
f.	0	VI



Graph No.4: 1 Point Colour Enhancement of babies and their mothers' number with corresponding colour grades.

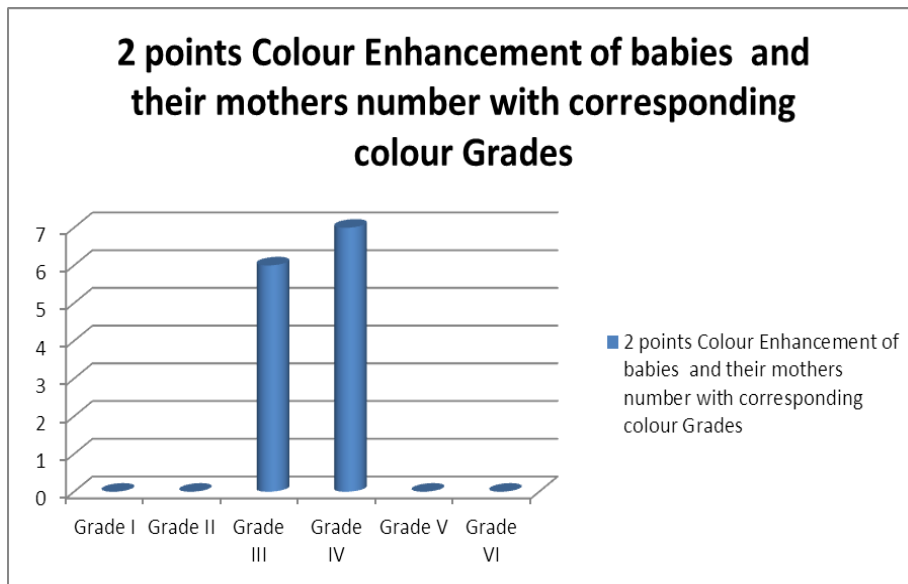
Grading of skin colour

Grade I- Very Fair; Grade II-Fair, White; Grade III- Medium White Grade; IV-Moderate Brown; Grade V –Brown; Grade VI Black -Very dark Brown.

Observation: 8mothers of “1 point colour enhancement babies” fall in grade II, III & IV. Out of 8, 3 mothers in grade II, 2 mothers in grade III & 3 mothers in grade IV. That means colour grade II, III & IV mothers giving birth to babies of I, II & III colour grade respectively. It indicates that the colour enhancement 1 in babies is seen more in grade II & IV mothers.

Table No. 27: 2 Points Colour Enhancement of babies and their mothers number with corresponding colour grades.

S. No	NO. OF MOTHERS	COLOUR GRADES OF MOTHERS
a.	0	I
b.	0	II
c.	6	III
d.	7	IV
e.	0	V
f.	0	VI



Graph No. 5: 2 Points Colour Enhancement of babies and their mothers’ number with corresponding colour grades.

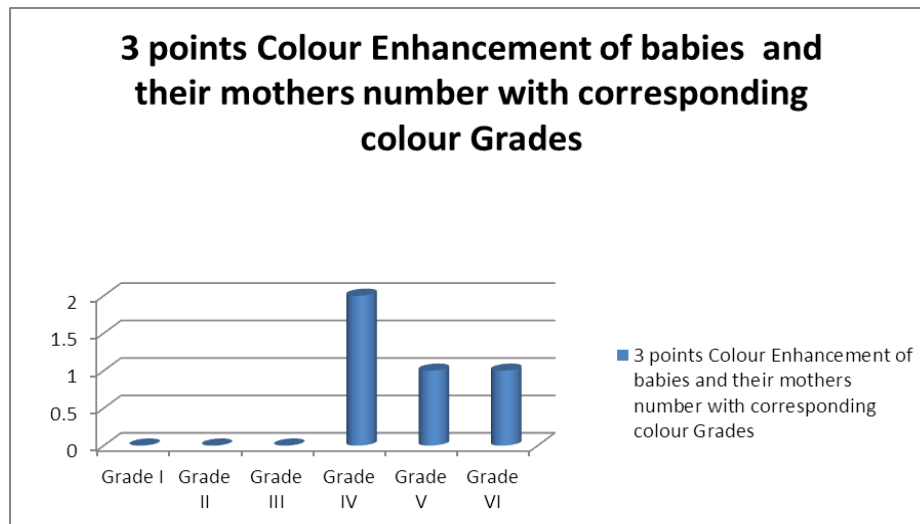
Grading of skin colour

Grade I- Very Fair; Grade II-Fair, White; Grade III- Medium White Grade; IV-Moderate Brown; Grade V –Brown; Grade VI Black -Very dark Brown.

Observations: 13 mothers of “2 points colour enhancement babies” fall in grade III & IV colour. Out of 13, 6 mothers in grade III & 7 mothers in grade IV. That means colour grade III & IV mothers giving birth to babies of I & II colour grade respectively. It indicates that the colour enhancement 2 in babies is seen more in grade IV mothers.

Table No. 28: 3 Points Colour Enhancement of babies and their mothers number with corresponding colour grades.

S. No	NO. OF MOTHERS	COLOUR GRADES OF MOTHERS
a.	0	I
b.	0	II
c.	0	III
d.	2	IV
e.	2	V
f.	1	VI



Graph No. 6: 3 Points Colour Enhancement of babies and their mothers' number with corresponding colour grades.

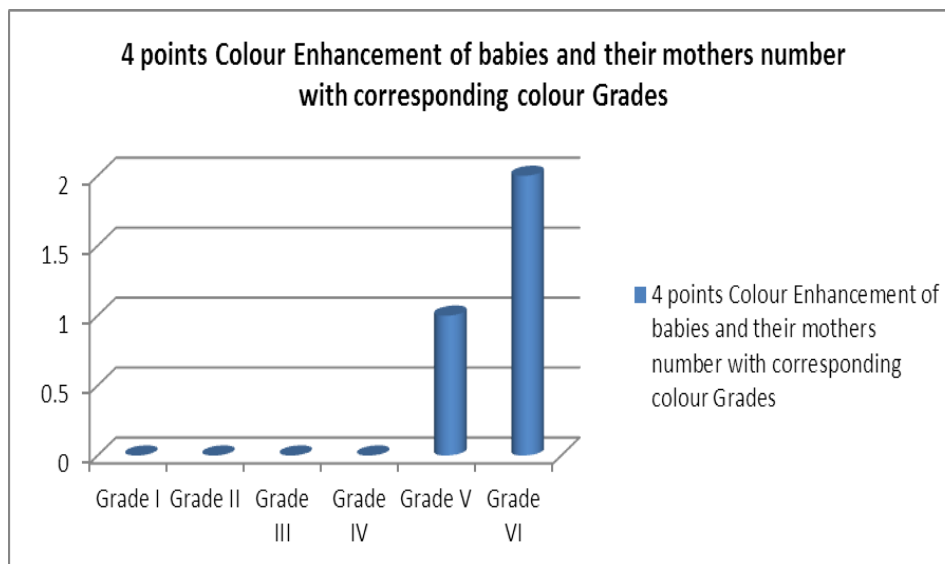
Grading of skin colour

Grade I- Very Fair; Grade II-Fair, White; Grade III- Medium White Grade; IV-Moderate Brown; Grade V –Brown; Grade VI Black -Very dark Brown.

Observation: 5 mothers of “3 points colour enhancement babies” fall in grade IV, V & VI colour. Out of 5, 2 mothers in grade IV, 2 mothers in grade V & 1 mother in grade VI. That means colour grade IV, V & VI mothers giving birth to babies of I, II & III colour grade respectively. It indicates that the colour enhancement 3 in babies is seen more in grade IV & V mothers.

Table No. 29: 4 Points Colour Enhancement of babies and their mothers number with corresponding colour grades.

S. No	NO. OF MOTHERS	COLOUR GRADES OF MOTHERS
a.	0	I
b.	0	II
c.	0	III
d.	0	IV
e.	1	V
f.	1	VI



Graph No. 7: 4 Points Colour Enhancement of babies and their mother's number with corresponding colour grades.

Grading of skin colour

Grade I- Very Fair; Grade II-Fair, White; Grade III- Medium White Grade; IV-Moderate Brown; Grade V –Brown; Grade VI Black -Very dark Brown.

Observation: 2 mothers of “4 points colour enhancement babies” fall in grade V & VI colour. Out of 2, 1mother in grade V & 1 mother in grade VI. That means colour grade V & VI mothers giving birth to babies of I & II colour grade respectively. It indicates that the colour enhancement 4 in babies is seen more in grade V & VI mothers.

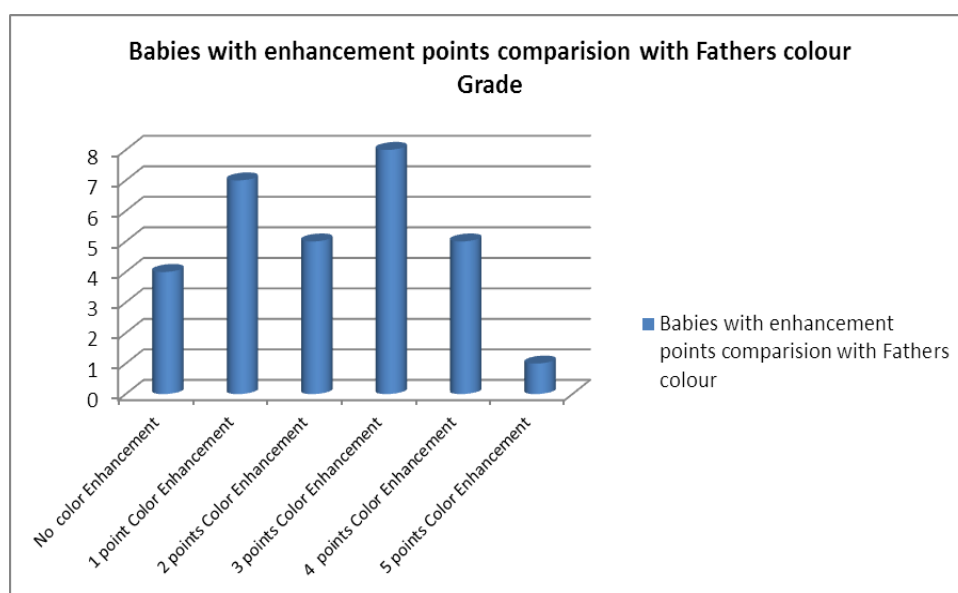
Table No. 30: Colour enhancement of babies than corresponding fathers.

S. No	NAME OF THE FATHER	FATHER COLOUR GRADE	BABY COLOUR GRADE	COLOUR ENHANCEMENT IN NEW BORN
1.	S. Ranjith	6	2	4
2.	S. Riyaz	4	1	3
3.	P. Kishore kumar	5	1	4
4.	P.Chakradhar	2	2	0
5.	K.Raghu ramudu	5	2	3
6.	M. shiva kumar	3	1	2
7.	M. Eswar kumar	5	2	3
8.	B. Shiva ramakrishna	6	1	5
9.	O.Srikanth	3	3	0
10.	M.Ramu	4	1	3
11.	S.Ashok	2	2	0
12.	K.Sai sundhar	3	1	2
13.	E. Vijay Bhaskar	2	1	1

14.	N. Shiva kumar	5	1	4
15.	B. Chandra shekar	5	2	3
16.	K. Prasad	3	2	1
17.	J. Prabhakar	3	2	1
18.	M. Narasimhulu	3	2	1
19.	V. Anandh	5	2	3
20.	V. Venkata Ramana	5	1	4
21.	C. JanardhanaRao	5	3	2
22.	R. Venkata Krishna	4	1	3
23.	SK. Mudhif	4	1	3
24.	K.Raja Shekar	6	2	4
25.	Siva naik	2	1	1
26.	G. Guna shear	5	3	2
27.	B. Nageswara rao	4	2	2
28.	P. Parusharam Shiva prasad	2	2	0
29.	J. Srikar reddy	4	3	1
30.	Y. Ravi kumar	4	3	1

Table No. 31: Babies with enhancement of colour points (with father) and their percentage.

Points of Colour enhancement in babies	No .of babies in each point of colour enhancement	% of babies with Colour Enhancement
No colour Enhancement	4	13.33 %
1 point Colour Enhancement	7	23.33 %
2 point Colour Enhancement	5	16.66 %
3 point Colour Enhancement	8	26.66 %
4 point Colour Enhancement	5	16.66 %
5 point Colour Enhancement	1	3.33 %
Total	30	100%



Graph No. 8: Infants with enhancement points comparison with Fathers colour.

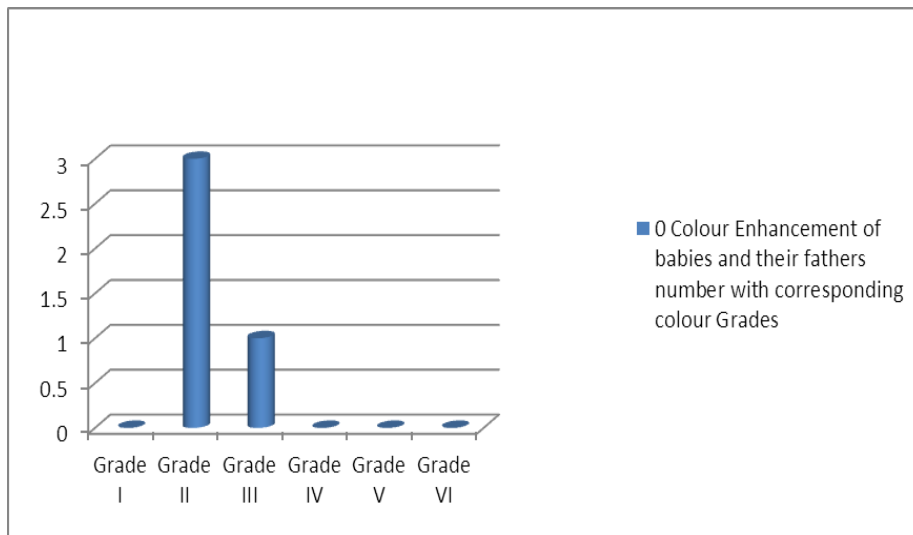
Grading of skin colour

Grade I- Very Fair; Grade II-Fair, White; Grade III- Medium White; Grade IV-Moderate Brown; Grade V –Brown; Grade VI Black -Very dark Brown.

Observation: In this present study out of 30 babies 4 babies (13.33%) were born in same colour grade that means 0 enhancement, 7 babies (23.33%) with 1 point enhancement, 5 babies (16.66%) with 2 points enhancement, 8 babies (26.66%) with 3 points enhancement, 5 babies (6.66%) with 4 points enhancement & 1 baby (3.33%) with 5 points enhancement than fathers colour Grade.

Table No. 32: 0 Colour Enhancement of babies and their fathers number with corresponding colour grades.

S. No	NO. OF FATHERS	COLOUR GRADES OF FATHERS
a.	0	I
b.	3	II
c.	1	III
d.	0	IV
e.	0	V
f.	0	VI



Graph No. 9: 0 Colour Enhancement of babies and their fathers number with corresponding colour grades.

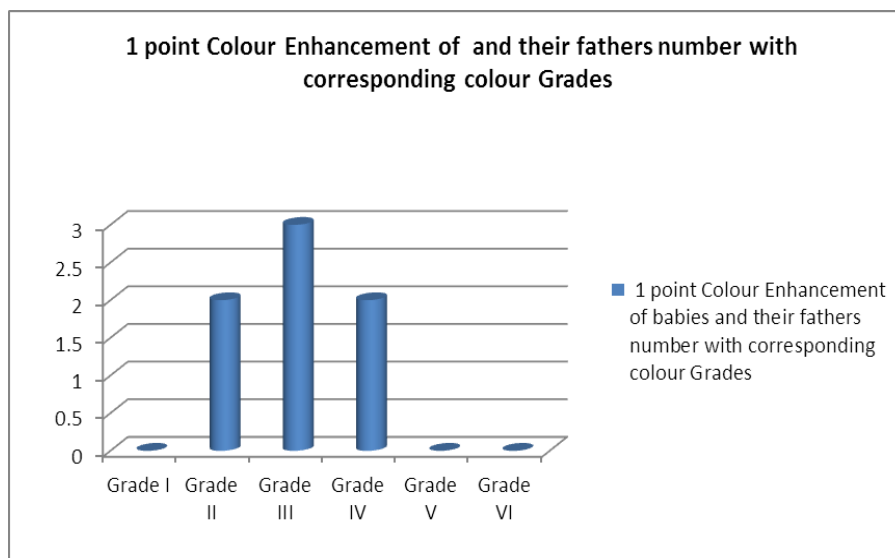
Grading of skin colour

Grade I- Very Fair; Grade II-Fair, White; Grade III- Medium White; Grade IV-Moderate Brown; Grade V –Brown; Grade VI Black -Very dark Brown.

Observation: 4 fathers of “0 colour enhancement babies” fall in grade II & III. It indicates that the colour change of babies in grade II fathers is not seen.

Table No. 33: 1 Point Colour Enhancement of babies and their fathers number with corresponding colour grades.

S. No	NO. OF FATHERS	COLOUR GRADES OF FATHERS
a.	0	I
b.	2	II
c.	3	III
d.	2	IV
e.	0	V
f.	0	VI



Graph No. 10: 1 Point Colour Enhancement of babies and their fathers' number with corresponding colour grades.

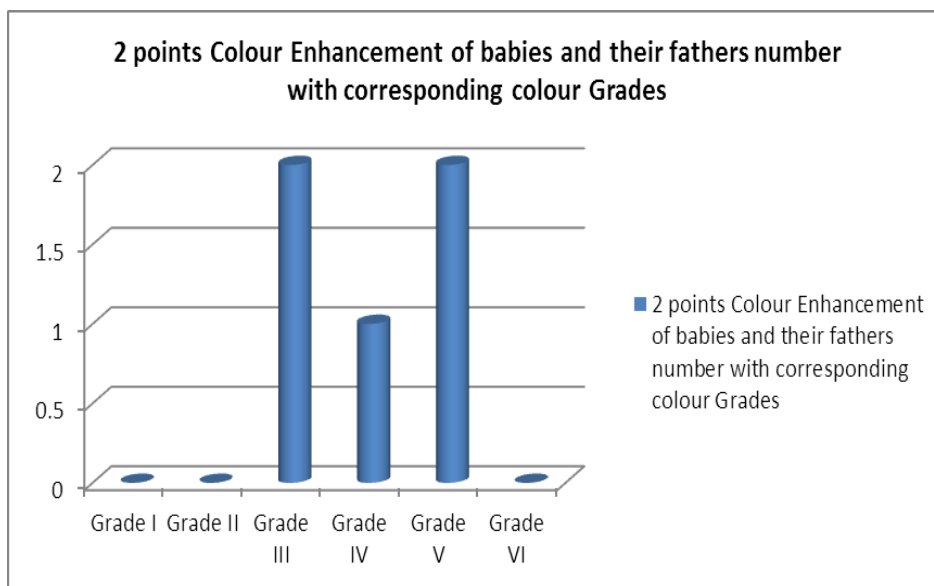
Grading of skin colour

Grade I- Very Fair; Grade II-Fair, White; Grade III- Medium White; Grade IV-Moderate Brown; Grade V –Brown; Grade VI Black -Very dark Brown.

Observation: 7 fathers of “1 point colour enhancement babies” fall in grade II, III & IV colour. Out of 7, 2 fathers in grade II, 3 fathers in grade III & 2 fathers in grade IV. That means colour grade II, III & IV fathers having babies of I, II & III colour grade respectively. It indicates that the colour enhancement 1 in babies is seen more in grade III fathers.

Table No. 34: 2 Points Colour Enhancement of babies and their fathers number with corresponding colour grades.

S. No	NO. OF FATHERS	COLOUR GRADES OF FATHERS
a.	0	I
b.	0	II
c.	2	III
d.	1	IV
e.	2	V
f.	0	VI



Graph No. 11: 2 Points Colour Enhancement of babies and their fathers’ number with corresponding colour grades.

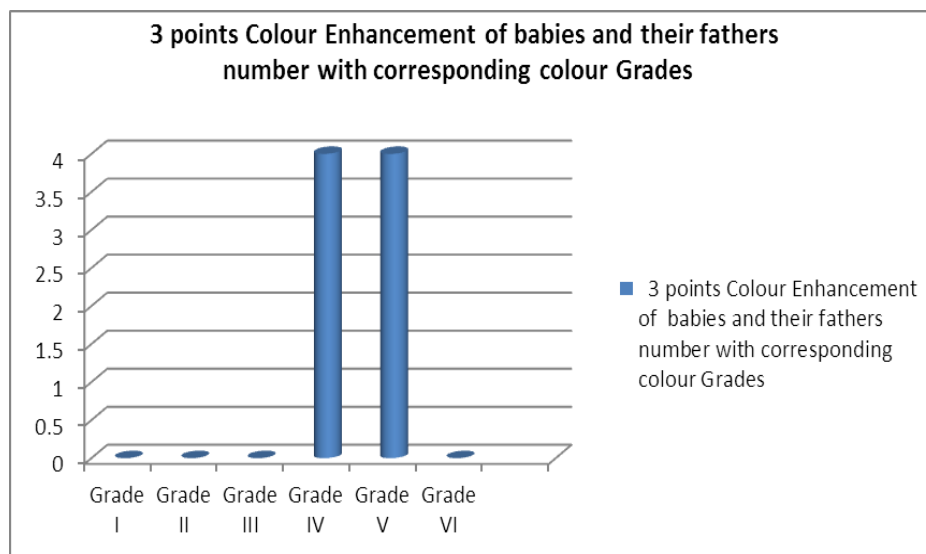
Grading of skin colour

Grade I- Very Fair; Grade II-Fair, White; Grade III- Medium White; Grade IV-Moderate Brown; Grade V –Brown; Grade VI Black -Very dark Brown.

Observation: 5 fathers of 2 points colour enhancement babies fall in grade III, IV & V colour. Out of 5, 2 fathers in grade III, 1 father in grade IV & 2 fathers in grade V. That means colour grade III, IV & V fathers having babies of I, II & III colour grade respectively. That means 2 points enhancement of colour was observed in babies.

Table No. 35: 3 Points Colour Enhancement of babies and their fathers number with corresponding colour grades.

S. No	NO. OF FATHERS	COLOUR GRADES OF FATHERS
a.	0	I
b.	0	II
c.	0	III
d.	4	IV
e.	4	V
f.	0	VI



Graph No. 12: 3 Points Colour Enhancement of babies and their fathers' number with corresponding colour grades.

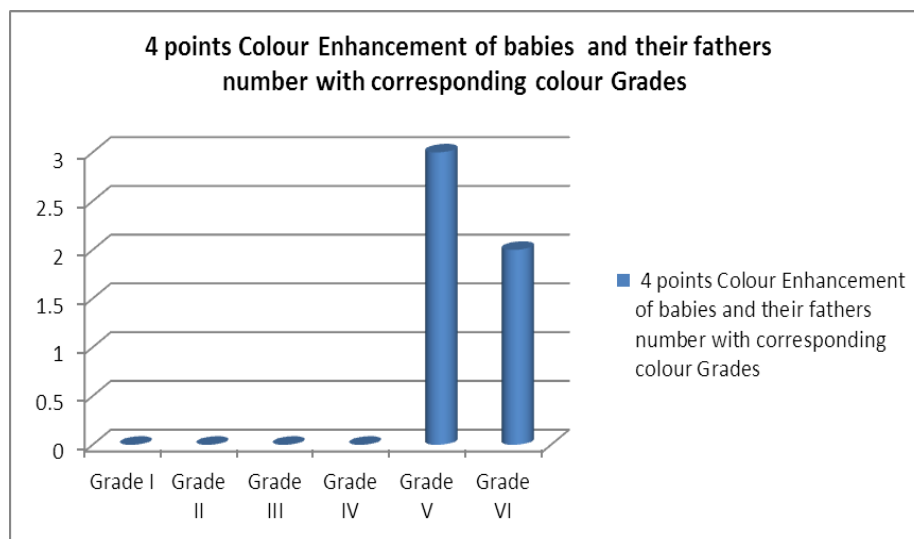
Grading of skin colour

Grade I- Very Fair; Grade II-Fair, White; Grade III- Medium White; Grade IV-Moderate Brown; Grade V –Brown; Grade VI Black -Very dark Brown.

Observation: 8 fathers of “3 points colour enhancement babies” fall in grade IV&V colour. Out of 8, 4fathers in grade IV & 4 fathers in grade V. That means colour grade IV & V fathers having babies of I & II colour grade respectively. It indicates that the colour enhancement 3 in babies is seen more in grade IV & V fathers.

Table No. 36: 4 Points Colour Enhancement of babies and their fathers number with corresponding colour grades.

S. No	NO. OF FATHERS	COLOUR GRADES OF FATHERS
a.	0	I
b.	0	II
c.	0	III
d.	0	IV
e.	3	V
f.	2	VI



Graph No. 13: 4 Points Colour Enhancement of babies and their fathers' number with corresponding colour grades.

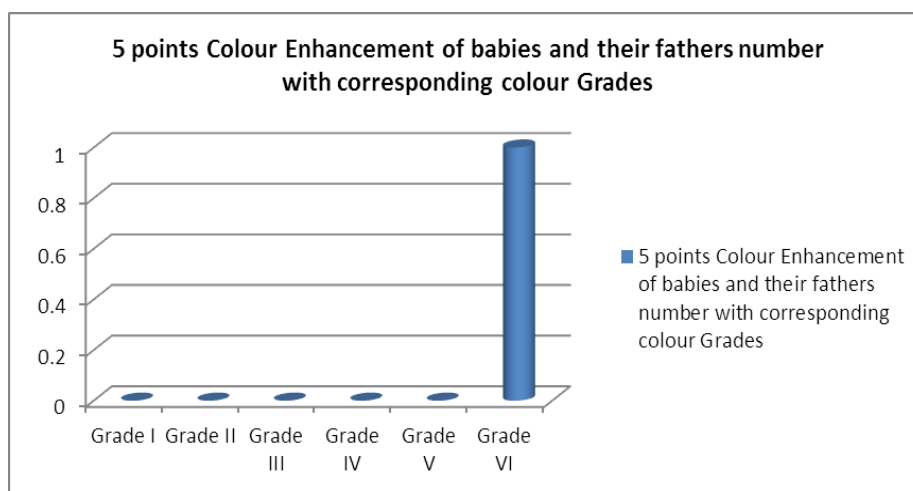
Grading of skin colour

Grade I- Very Fair; Grade II-Fair, White; Grade III- Medium White Grade; IV-Moderate Brown; Grade V –Brown; Grade VI Black -Very dark Brown.

Observation: 5 fathers of “4 points colour enhancement babies” fall in grade V & VI colour. Out of 5, 3fathers in grade V & 2 fathers in grade VI. That means colour grade V & VI fathers having babies of I & II colour grade respectively. It indicates that the colour enhancement 4 in babies is seen more in grade V fathers.

Table No. 37: 5 Points Colour Enhancement of babies and their fathers number with corresponding colour grades.

S. No	NO. OF FATHERS	COLOUR GRADES OF FATHERS
a.	0	I
b.	0	II
c.	0	III
d.	0	IV
e.	0	V
f.	1	VI



Graph No. 14: 5 Points Colour Enhancement of babies and their fathers' number with corresponding colour grades.

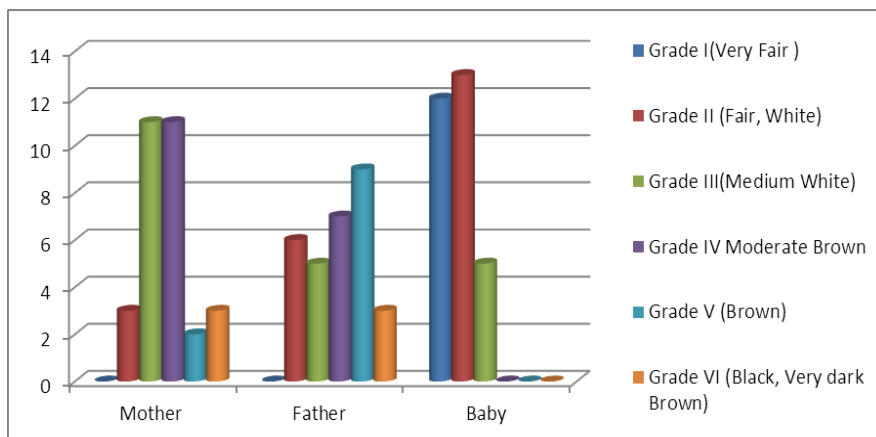
Grading of skin colour

Grade I- Very Fair; Grade II-Fair, White; Grade III- Medium White; Grade IV-Moderate Brown; Grade V –Brown; Grade VI –Black, Very dark Brown.

Observation: 1 father of “5 points colour enhancement babies” fall in grade VI colour. It indicates that the colour enhancement 5 in babies is seen more in grade VI fathers.

Table No. 38: Showing babies Colour Enhancement and color Grade of corresponding mothers and fathers.

S. No		GRADE I	GRADE II	GRADE III	GRADE IV	GRADE V	GRADE VI	TOTAL
a.	No. of Mothers	0	3	11	11	2	3	30
b.	No. of Fathers	0	6	5	7	9	3	30
c.	No. of Babies	12	13	5	0	0	0	30



Graph No. 15: Babies Colour Enhancement and color Grades of corresponding mothers and fathers.

Grading of skin colour

Grade I- Very Fair; Grade II -Fair, White; Grade III- Medium White Grade; IV-Moderate Brown; Grade V –Brown; Grade VI Black -Very dark Brown.

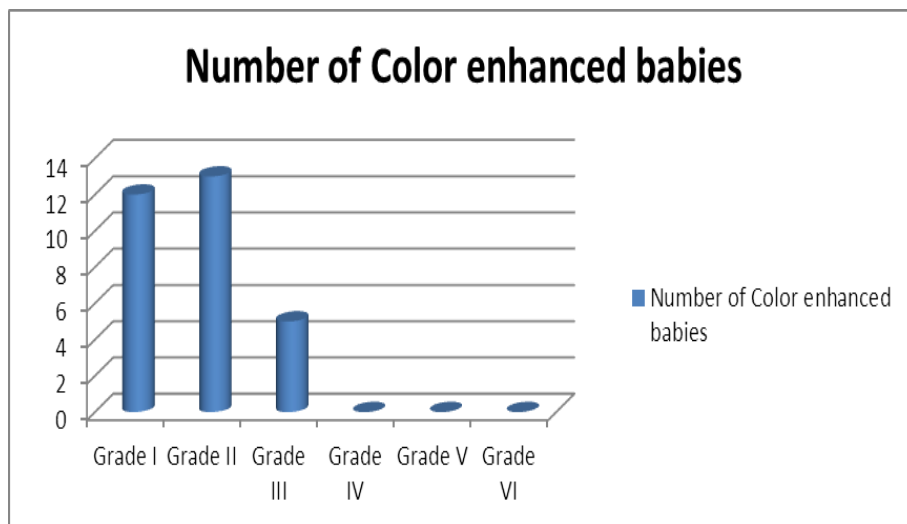
Observation: In this present study out of 30 mothers 3 mothers were present in Grade II, 11 mothers in Grade III, 11 mothers in Grade IV, 2 mothers in Grade V & 3 mothers in Grade VI.

Out of 30 fathers 6 fathers were present in Grade II, 5 fathers in Grade III, 7 fathers in Grade IV, 9 fathers in Grade V & 3 fathers in Grade VI.

Out of 30 babies 12 babies were born in Grade I, 13 babies in Grade II & 5 babies in Grade II.

Table No. 38: No & Percentage of Color enhanced babies.

S. No	COLOR GRADES	No. of Babies	% of Colour Enhancement
a.	I	12	40%
b.	II	13	43.33%
c.	III	5	16.66%
d.	IV	0	0
e.	V	0	0
f.	VI	0	0



Graph No. 16: Number of Colour enhanced babies.

Grading of skin colour

Grade I- Very Fair; Grade II-Fair, White; Grade III- Medium White; Grade IV- Moderate Brown; Grade V –Brown; Grade VI Black -Very dark Brown.

Observation: In this present study 12 babies (40%) were born in the Grade I, where as 13 babies (43.33%) were born in the Grade II and 5 babies (16.66%) were in the Grade III.

This study has shown better result (94%) in colour enhancement of in babies than colour of parent.

DISCUSSION

The aim and objective of any research is to reach up to a definite conclusion, by understanding the concepts in their correct manner. Study of any concept under various headings gives its complete orientation, but correct understanding and proper interpretation of the concept helps to achieve the determined goal and it is possible only with the help of discussion i.e. *Upanaya*. Thus, the discussion paves the way for the conclusion i.e. *Nigamana*, which is the final step of complete work.

- Skin complexion is not only a psychological and social issue, but also it is one of the important factor of the individual's personality. That is why people spend much time & money to get better skin complexion.
- In this study, an attempt has been made to prove the efficacy in the internal administration of the drug Kesara in pregnant women to get better complexion in babies comparatively parentage.

- *Mahabhutas* present in the *Garbhashaya* and those which are contributed by the *sukra* and *sonita* form the *Varna* according to their relative dominance. Among them the prime factor is *Teja Dhatu* i.e. *Agni Mahabhuta*.

Panchaboutika composition rasapanchaka of Kesara

Rasa: Katu:- Vayu+ Agni

Tikta:- Vayu+ Aakasa

Guna: Snigdha:- Prudvi + Jala

Virya: Ushna - Agni

Vipaka: Katu - Vayu+ Agni

Predominance of agni mahabhuta seen in the rasapanchaka of Kesara may be a contributory factor for improving complexion.

Due to the presence vata-kaphahara property of Kesara it helps maintaining the normalcy of pitta, thereby improving the complexion of babies.

Collected data, with Parents and baby photos to compare the colour Grade with the help of Fitzpatrick Scale.

Grading of skin colour

Grade I- Very Fair; Grade II-Fair, White; Grade III- Medium White; Grade IV- Moderate Brown; Grade V – Brown; Grade VI- Black, Very dark Brown.

- In this present study out of 30 babies 2 babies (6.66%) were born in same colour Grade that means 0 enhancement, 8 babies (26.66%) with 1 point enhancement, 13 babies (43.33%) with 2 points enhancement, 5 babies (16.66%) with 3 points enhancement & 2 babies (6.66%) with 4 points enhancement than mothers colour Grade.
- 2 mothers of “0 colour enhancement babies” fall in Grade III. It indicates that the colour change of babies in Grade III mothers is not seen.
- 8mothers of “1 point colour enhancement babies” fall in Grade II, III & IV. Out of 8, 3mothers in Grade II, 2mothers in Grade III & 3 mothers in Grade IV. That means colour Grade II, III & IV mothers giving birth to babies of I, II & III colour Grade respectively. It indicates that the colour enhancement 1 in babies is seen more in Grade II & IV mothers
- 13 mothers of “2 points colour enhancement babies” fall in Grade III & IV colour. Out of

13, 6mothers in Grade III & 7 mothers in Grade IV. That means colour Grade III & IV mothers giving birth to babies of I & II colour Grade respectively. It indicates that the colour enhancement 2 in babies is seen more in Grade IV mothers.

- 5 mothers of “3 points colour enhancement babies” fall in Grade IV, V & VI colour. Out of 5, 2mothers in Grade IV, 2mothers in Grade V & 1 mother in Grade VI. That means colour Grade IV, V & VI mothers giving birth to babies of I, II & III colour Grade respectively. It indicates that the colour enhancement 3 in babies is seen more in Grade IV & V mothers.
- 2 mothers of “4 points colour enhancement babies” fall in Grade V & VI colour. Out of 2, 1 mother in Grade V & 1 mother in Grade VI. That means colour Grade V & VI mothers giving birth to babies of I & II colour Grade respectively. It indicates that the colour enhancement 4 in babies is seen more in Grade V & VI mothers.
- In this present study out of 30 babies 4 babies (13.33%) were born in same colour Grade that means 0 enhancement, 7 babies (23.33%) with 1 point enhancement, 5 babies (16.66%) with 2 points enhancement, 8 babies (26.66%) with 3 points enhancement, 5 babies (16.66%) with 4 points enhancement & 1 baby (3.33%) with 5 points enhancement than fathers colour Grade.
- 4 fathers of “0 colour enhancement babies” fall in Grade II & III. It indicates that the colour change of babies in Grade II fathers is not seen.
- 7 fathers of “1 point colour enhancement babies” fall in Grade II, III & IV colour. Out of 7, 2 fathers in Grade II, 3fathers in Grade III & 2 fathers in Grade IV. That means colour Grade II, III & IV fathers having babies of I, II & III colour Grade respectively. It indicates that the colour enhancement 1 in babies is seen more in Grade III fathers.
- 5 fathers of 2 points colour enhancement babies fall in Grade III, IV & V colour. Out of 5, 2 fathers in Grade III, 1 father in Grade IV & 2 fathers in Grade V. That means colour Grade III, IV & V fathers having babies of I, II & III colour Grade respectively. That means 2 points enhancement of colour was observed in babies.
- 8 fathers of “3 points colour enhancement babies” fall in Grade IV & V colour. Out of 8, 4 fathers in Grade IV & 4 fathers in Grade V. That means colour Grade IV & V fathers having babies of I & II colour Grade respectively. It indicates that the colour enhancement 3 in babies is seen more in Grade IV & V fathers.
- 5 fathers of “4 points colour enhancement babies” fall in Grade V & VI colour. Out of 5, 3fathers in Grade V & 2 fathers in Grade VI. That means colour Grade V & VI fathers having babies of I & II colour Grade respectively. It indicates that the colour

enhancement 4 in babies is seen more in Grade V fathers.

- 1 father of “5 points colour enhancement babies” fall in Grade VI colour. It indicates that the colour enhancement 5 in babies is seen more in Grade VI fathers.
- In this present study out of 30 mothers 3 mothers were present in Grade II, 11 mothers in Grade III, 11 mothers in Grade IV, 2 mothers in Grade V & 3 mothers in Grade VI.

Out of 30 fathers 6 fathers were present in Grade II, 5 fathers in Grade III, 7 fathers in Grade IV, 9 fathers in Grade V & 3 fathers in Grade VI.

- In this present, out of 30 study 12 babies (40%) were born in the Grade I, where as 13 babies (43.33%) were born in the Grade II and 5 babies (16.66%) were in the Grade III.

This study has shown better result (94%) in colour enhancement of in babies than colour of parents.

CONCLUSION

- There is some influence of mother and father colour gradation on the enhancement of child's colour. The enhancement is totally the influence of medicine. parent belonging to high colour grade didn't give birth to lower colour children. Therefore the drug has shown only colour enhancement of born child. Higher percentage of child in mother belonging colour grade-IV.
- This study is seldom seen. We found Kesara (*Crocus sativus*) a miraculous herb evaluated here to act as *varnya* directly or indirectly as per Ayurveda. Hence they can be potentially employed as effective skin-whitening agents, if it is administered in intra uterine life of baby then there will be no need of attention on cosmetics in future.
- To give a clear cut understanding of drug size of the data should be more. However the colour enhancement might be happening by stimulating the recessive genes of colour in mothers. Therefore we can conclude that drug given in intrauterine child is able to decide the colour of born baby at the gene level. That would be reason by people consuming regularly this drug as a custom in certain parts of India at Rajasthan, Gujarat in giving birth to brighter child.
- Therefore the study concludes that consumption of *Crocus sativus* must be made compulsory in the darker population of country. This study also create a meant of popular practice.