BEFORE THE NATIONAL GREEN TRIBUNAL WESTERN ZONE BENCH, PUNE

Original Application No. 92 & 94/2021(WZ)

IN THE MATTER OF:

Shreeji Mahila Charitable Trust

…Applicant

Versus

State of Gujarat & Ors.

…Respondent(s)

STATEMENT OF OBJECTIONS, ON BEHALF OF THE RESPONDENT NO. 5, TO THE STATUS REPORT FILED BY THE GPCB.

(FOR INDEX KINDLY SEE INSIDE)

THROUGH

MANDEEP KALRA

ADVOCATE FOR THE RESPONDENT NO. 5

PLACE: VAPI

DATE: 18.09.2023

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	A copy of the Compliance letter submitted by the Respondent No. 5 dated 25.04.2023.	

THROUGH

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STATEMENT OF OBJECTIONS, ON BEHALF OF THE RESPONDENT NO. 5, TO THE STATUS REPORT FILED BY THE GPCB.

MOST RESPECTFULLY SHOWETH:

1. That the present Statement of Objections is filed on behalf of M/s Vapi Green Enviro Limited, impleaded as Respondent No.5 in the above-captioned Original Application. Furthermore, the present

Statement of Objections in filed with respect to "Status Report" submitted by the Respondent No. 2 before this Hon'ble Tribunal.

2. That the Answering Respondent is a non-profit Company registered under the Companies Act, 1956, bearing CIN No. U74210GJ1997GAP031525 and Registration No. 031525. It is a Non-Equity & Non-Profit Entity, based on cooperative principles with a corporate culture of management and was formed with an objective of providing a Comprehensive Environment Management Program (CEMP) for the Vapi Industrial Estate. It is pertinent to note that the "Status Report" submitted by the Respondent No. 2 before this Hon'ble Tribunal, at Page No. 380, records that Consolidated Consents & Authorisation Order No. AWH-123065, dated 20.12.2022, was issued in favour of the Answering Respondent under provisions of the Water Prevention and Control of Pollution Act 1974, Air Act, 1981 & Hazardous and Other Wastes (M&TM) Rules,2016; and the same is valid upto 02.02.2024. Therefore, the Answering Respondent whilst exercising due diligence, has endeavoured to comply with provisions of all relevant Acts. Furthermore, it is a matter of record that the Answering Respondent has promptly compiled with all directions issued by that the Gujarat

Pollution Control Board (GPCB), therefore, the cause of action alleged by the Applicant, viz. a Charitable Trust, in the above-captioned Original Application is illusory and vague.

3. That it may be noted that the Applicant, viz. a Charitable Trust, in the above-captioned Original Application, initially filed the Writ Petition (PIL) NO. 27 of 2016, which the Hon'ble High Court of Gujarat after due consideration transferred to this Hon'ble Tribunal, as the matter at hand involves a substantial question of Environmental Law. Even though the said Writ Petition (PIL) NO. 27 of 2016 was received on 06.12.2022, the matter could be taken up for hearing only on 10.02.2023. Furthermore, vide the Order dated 10.02.2023, the said Writ Petition (PIL) NO. 27 of 2016 was subsequently re-numbered.

4. That the Applicant, viz. a Charitable Trust, filed the Writ Petition (PIL) NO. 27 of 2016, before the Hon'ble High Court of Gujarat under 14, 21, 300 A and 226 of the Constitution of India. The said Writ Petition was filed in public interest against certain TSDF (Treatment, Storage, Disposal) Sites, namely, Bharuch Enviro

Infrastructure Limited (Ankleshwar GIDC, District Bharuch), Gujarat Enviro Projects & Infra Limited – Surat (Sachin GIDC, District Surat), Vapi Green Enviro Limited (Phase IV GIDC, District Vapi), Nandesarai Enviro Company Limited (Nandesarai GIDC, District Vadodara), and Gujarat Enviro Project & Infra Limited (Near Alang, District Bhavnagar). The primary contention of the Applicant, viz. a Charitable Trust, is that the above-mentioned TSDF (Treatment, Storage, Disposal) Sites, have breached the statutory limit of the buffer zone i.e. a distance of 500 meters, which is compulsorily required to be maintained between such Sites and neighbouring residential areas. At the outset, it may be noted that this contention is posited upon the false basis that such sites were selected subsequent to the construction of residential areas. In this regard, it is pertinent to mention the submissions made by the Counsels for the Respondents No. 1 & No. 2, as to the legality of such sites, which have been duly recorded vide the Order dated 06.04.2023 in the above-captioned Original Application, passed by this Hon'ble Tribunal, whereby it is established that the residential areas in the vicinity of such sites do not, in fact, pre-date the establishment of such sites. Furthermore, the primary contention of the Applicant, viz. a Charitable Trust, with respect to the Answering Respondent is

concerned with the above-mentioned TSDF (Treatment, Storage, Disposal) Site being, *ipso facto* and sans any incriminating evidence, hazardous in nature. However, the Answering Respondent, vide the above-mentioned Compliance Letter dated 25.04.2023 (Annexure-1 appended thereto), furnished a detailed Health Report; and it was concluded that there is "no direct or indirect perceivable effect of industrialization on the health of residents" of Vapi.

5. That this Hon'ble Tribunal vide the Order dated 06.04.2023, passed in the above-captioned Original Application, directed the Respondents No. 1 & No. 2 to submit a "Status Report." The relevant extract of the same is reproduced as under:

"5. In view of these facts, we would like the Respondent Nos. 1 & 2 to place before us current status of the spot, particularly with respect to the five sites in question and the status of habitation as to how far the habitation from these sites is there and whether there is any possibility of the buffer zone being created of 500 mtrs. and also submit a report with respect to health hazards to the residents of the local area within a period of three weeks."

PRELIMINARY SUBMISSIONS:

6. That the "Status Report" submitted by the Respondent No. 2 before this Hon'ble Tribunal, at Page No. 374, issued certain specific instructions to the Answering Respondent. Pursuant to the said instructions, the Answering Respondent has duly submitted a Compliance Letter dated 25.04.2023. Furthermore, the submission of the said Compliance Letter is duly recorded at Page No. 376 of the "Status Report." The relevant extract of the said instructions is reproduced as under:

"Specific Instructions given to Industry at the time of visit, for Pt to Pt Compliance

2. Submit the compliance of the NGT order dated 06/04/2023 in matter of O.A. No. 92 to 96/2021 at R.O. VAPI in 3-days.

3. Submit quarterly compliance report at R.O. VAPI in 3-days.

4. Submit time bound action plan for capping of the extension cell no. 4.1 & 4.2 (extension).

1. In contexts with NGT order dt.06/04/2023 in matter of N.G.T. O.A. No. 92 to 96/2021 and GPCB letter No. GPCB/HAZ.

GEN-756/739304/ date 17/04/2023 submit the (i) Report with respect to health hazardous to the residents of the local area."

A copy of the above-mentioned Compliance Letter dated 25.04.2023 is annexed herewith as **ANNEXURE R – 1**.

OBJECTION TO ADVERSE FINDING:

7. That the "Status Report" submitted by the Respondent No. 2 before this Hon'ble Tribunal, at Page No. 380, has recorded a seemingly adverse finding with respect to the Answering Respondent. In this regard, the Answering Respondent has submitted a detailed response, vide the above-mentioned Compliance Letter dated 25.04.2023, justifying that the said seemingly adverse finding is within permissible limits and it is not hazardous *per se*. The said seemingly adverse finding is reproduced as under for the perusal of this Hon'ble Tribunal:

"Filling of hazardous waste is observed going on in new cell no. 1 & 2 extensions."

8. That the aforementioned detailed response furnished vide the above-mentioned Compliance Letter dated 25.04.2023, justifying that the said seemingly adverse finding is within permissible limits and it is not hazardous *per se*, is mentioned as under:

"1) Total quantity of hazardous waste received in three months (January 2023 to March 2023) is 32,296.913 MT.

2) Total Leachate generated in the last three months (January 2023 to March 2023) is 333 KL and the respective quantity has been sent to C.M.E.E. at CETP Vapi for further treatment."

COMPLIANCES WITH RESPECT TO AFORESAID INSTRUCTIONS:

9. **Time-bound action plan for capping of the extension cell no. 4.1 & 4.2 (extension):**

That the Answering Respondent, vide the above-mentioned Compliance Letter dated 25.04.2023, has submitted that "tendering work" for such capping has been finalized and the contractor was also finalized in April, 2023. Furthermore, the "capping of the extension cell no. 4.1 & 4.2 (extension)" will be completed after October, 2023 i.e. after the monsoon season.

10. **Health Report:**

That the primary contention of the Applicant, viz. a Charitable Trust, with respect to the Answering Respondent is concerned with the above-mentioned TSDF (Treatment, Storage, Disposal) site being, *ipso facto* and sans any incriminating evidence, hazardous in nature. However, the Answering Respondent, vide the above-mentioned Compliance Letter dated 25.04.2023 (Annexure-1 appended thereto), furnished a detailed Health Report; and it was concluded that there is "no direct or indirect perceivable effect of industrialization on the health of residents" of Vapi.

PRAYER

It is therefore most respectfully prayed that, in light of the above-mentioned submissions, this Hon'ble Court may kindly:

a. Consider & accept aforesaid para-No. 7-10 (i.e., objection and compliance by the answering Respondent No. 5) in the interest of justice, equity and fair play;
b. Reject the GPCB report in the light of above-mentioned prayer (i.e. prayer a);

c. Pass any other order/ directions, in view of the above-mentioned submissions, in the interest of justice.

DEPONENT

THROUGH

MANDEEP KALRA

ADVOCATE FOR THE RESPONDENT NO. 5

PLACE: VAPI

DATE: 18.09.2023

BEFORE THE NATIONAL GREEN TRIBUNAL WESTERN ZONE BENCH, PUNE

Original Application No. 92 & 94 of 2021 (WZ)

IN THE MATTER OF:

Shreeji Mahila Charitable Trust

...Applicant

Versus

State of Gujarat & Ors.

...Respondent(s)

SHAILESH N. MEHTA REGD. NO. 867/09 VAPI, TAL. VAPI DIST. VALSAD. (GOVT. OF GUJARAT) NOTARY

AFFIDAVIT

I, Jatin Mehta, S/o Shri Vamanrai Mehta, aged about 63 years, R/o Avadh Utopia, at village Tukwada, Ta: Killa-Pardi, District Valsad, do hereby solemnly, affirm and state as under:

1. That I am the authorised representative of the Respondent No. 5 in the above-mentioned Objections on behalf of the Respondent No. 5 and as such fully conversant with the facts and circumstances of the present case and also competent to swear to this Affidavit.

2. That I have read and understood the contents thereof. The facts stated therein are true and correct to the best of my knowledge and belief.

For VAPI GREEN ENVIRO LIMITED

CHIEF EXECUTIVE OFFICER

3. I state that no part of this Affidavit is false and nothing material has been concealed therefrom.

For VAPI GREEN ENVIRO LIMITED

CHIEF EXECUTIVE OFFICER

DEPONENT

VERIFICATION:

Verified on 11th day of September, 2023. I the above-named deponent do hereby verify that the contents of the above Affidavit are true and correct to the best of my knowledge and belief. No part of it is false and nothing material has been concealed therefrom.

For VAPI GREEN ENVIRO LIMITED

CHIEF EXECUTIVE OFFICER

DEPONENT

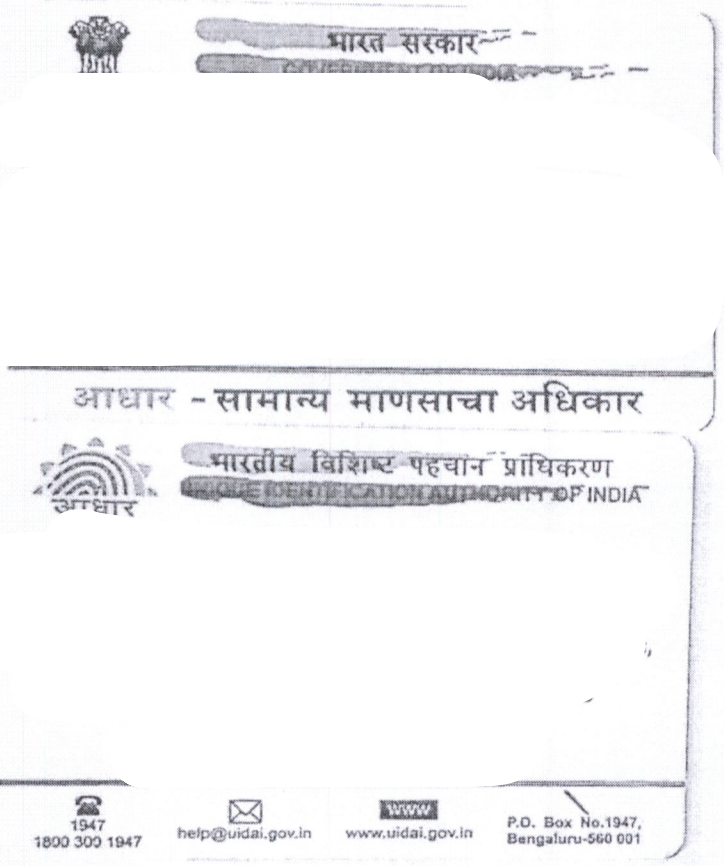
IDENTIFIED BY ME

Kamleshkumar Vimal Patel
9714008394

Solemnly affirmed before me by Mr./Mrs./Miss. Jatin V. Mehta of Tukwada who has been identified by Shri Kamleshkumar V. Patel of Vapi to whom I know personally.

SHAILESH N. MEHTA
ADVOCATE & NOTARY
Shop No. 12, Kamp's Corner,
Adjecent to Hotel Galaxy, Koparli Road,
G.I.D.C., VAPI-396 195-Gujarat State.

Book No. : 02
Page No. : 196
Serial No. : 1938
Date : 11/09/2023


भारत सरकार

आधार - सामान्य माणसाचा अधिकार

भारतीय विशिष्ट पहचान प्राधिकरण

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P.O. Box No.1947,
Bengaluru-560 001

VAPI GREEN ENVIRO LIMITED
VGEL
VAPI
GIDC

VAPI GREEN ENVIRO LIMITED

VIA House, Plot No. 135, Char Rasta, GIDC VAPI - 396 195. Gujarat. INDIA
Mob.: 9714000828 | **Tel.:** (0260) 2428950, **Telefax :** (0260) 2429950 | **Email :** admin@vgelvapi.com
Website : www.vgelvapi.com | www.coevapi.com | CIN : U74210GJ1997GAP031525

PCB ID-24763

Ref.No.VGEL-TSDF/GPCB/2022-2023/0027

25-04-2023

To,
The Regional Officer,
Gujarat Pollution Control Board,
Vapi 396195

Sub: Reply of the Notice given by Regional office team visit to TSDF site dated 19-04-2023

Respected Sir,
This is with reference to the Regional office team visit to TSDF site Vapi on 19-04-2023
In This regard our point wise replies are as under:

Regional officer team visit to TSDF site on 19-04-2023		
Sr. no	Remark Given by Regional officer	Reply
1	In context with NGT order dt-06/04/2023 in Matter of NGT O.A. no.92 to 96/2021 and GPCB letter no GPCB /HAZ-Gen-756/739304 Dated17/04/2023 submit the (i) Report with respect to health hazards to the residents of the local area.	Vapi Industries Association conducted the health survey with respect to health Hazard to the residents in 2020 by PARIRAKSHNA (A Society for Promotion and Protection of Health System Management training and Research) and report is attached as **Annexure-1**
2	Submit the compliance of the NGT order dated 06/04/2023 in matter of O.A no 92 to 96/2021 at R.O. Vapi in 3-days.	Copy of GPCB letter to VIA / VGEL for land required for solid waste project at Vapi. The same is mentioned in the Forest & Environment department of Government of Gujarat Notification dated 08/11/1995.Attached as **Annexure-2** Also enclosing herewith a copy of Gazette of Government of Gujarat mentioned that the land area at village Karvad and Kocharva acquired for the hazardous waste management project attached as **Annexure -3.** Based on above notifications clearly indicated that the Plot no: 4807, 4807/A etc fourth phase, GIDC Vapi 396195 located in industrial estate only and habitation not there within 500 meter area. Hence, *the direction to create of 500 meter buffer land / creation is not applicable to TSDF – VGEL*

VAPI GREEN ENVIRO LIMITED

VIA House, Plot No. 135, Char Rasta, GIDC VAPI - 396 195. Gujarat. INDIA
Mob.: 9714000828 | **Tel.:** (0260) 2428950, **Telefax :** (0260) 2429950 | **Email :** admin@vgelvapi.com
Website : www.vgelvapi.com | www.coevapi.com | CIN : U74210GJ1997GAP031525

<table>
<tr><td>3</td><td>Submit quarterly compliance report at R.O.Vapi in 3-days.</td><td>1) Total quantity of hazardous waste received in three months (Jan-2023 to March 2023) is 32,296.913 M.T.
2)Total Leachate generated in last three month (Jan-2023 to March 2023) is 333 KL and respective quantity has been sent to C.M.E.E. at CETP Vapi for further treatment.
3) Month wise details of Hazardous waste and Leachate.

<table>
<tr><td>Month</td><td>Quantity of Haz. Waste (In M.T.)</td><td>Qty. of Leachate (In KL.)</td></tr>
<tr><td>Jan-2023</td><td>12886.650</td><td>91</td></tr>
<tr><td>Feb-2023</td><td>13599.870</td><td>104</td></tr>
<tr><td>March-2023</td><td>5810.393</td><td>138</td></tr>
<tr><td>Total</td><td>32,296.913 MT</td><td>333 KL</td></tr>
</table>
</td></tr>
<tr><td>4</td><td>Submit time bound action
Plan for capping of the extension cell no 4.1 & 4.2 (extension)</td><td>Tendering work for capping of Cell 4.1 & Cell 4.2 has been completed and contractor finalization will in April-2023

Execution of the capping work which will be done after Monsoon, October -2023. Please find the bar chart for the same as Annexure-4</td></tr>
</table>

Thanking You,

Yours Faithfully,
For Vapi Green Enviro Ltd.,

Jatin Mehta
Chief Executive Officer

VAPI GREEN ENVIRO LIMITED VGEL VAPI GIDC

RECEIVED
Sign : 25/04/2023
Date :
G.P.C. Board, VAPI.

Encl: as above.

Study on Health Status of Vapi Industries Area-2020 In Valasad Dist. of Gujarat

Dr. A.V.Ratnam

M.B.B.S, D.L.O, M.Phil., Ph.D

PARIRAKSHANA

(A Society for Promotion and Protection of Health Systems Management Training & Research)

Study on Health Status of Vapi Industries Area-2020 In Valasad Dist. of Gujarat

Dr. A.V.Ratnam

M.B.B.S, D.L.O, M.Phil., Ph.D

PARIRAKSHANA

(A Society for Promotion and Protection of Health Systems Management Training & Research)

CONTENTS

EXPERIENCE OF PARIRAKSHANA IN RESEARCH STUDIES RELATED TO PUBLIC HEALTH

1. **Household Study of mental abilities of children of farmers in two different geographical locations in A.P.**

OBJECTIVES: House hold studies of 500 houses were conducted in two districts of Andhra Pradesh. Warangal and Rangareddy. Here the metal abilities of farmer's children were assessed. Rangareddy district has maximum number of tribal population. The I.Q of children below 5 yrs was tested and compared with similar group from Warangal district which is considered as control group. Here the food habits, health seeking behavior, immunization status and their performance in the school was tested and compared with control group. The effect of pesticides being used by the farmers was also tested. Period of study-2 months.

2. Household Study of socio economic conditions and health status of farmers using endosulfan and non farmers of the selected villages in A.P.

OBJECTIVES: House hold studies of 1000 houses were conducted in 10 villages of Andhra Pradesh Rangareddy. Here the health status and their socio economic profile, health seeking behavior and the expenditure incurred for health and the various popular sources of health care facilities used by them was studied. The study group consisted of 500 houses from 5 selected villages which are having high tribal population and another 500 houses from 5 selected villages from nearby mandal who are Non tribal farmers. The questionnaire included information pertaining to their socio economic status, professions involved, number of children, immunization status, source of health information and various sources of health facilities popular with the community including RMP. Doctors Govt. hospitals etc. it also elicited information regarding the expenditure incurred per annum for different health interventions and the sources of funds. This information is compared with control group who are nearby villagers but non tribal's.

Period of study-3 months.

3. Household Study of health status of industrial workers and farmers in the district Ankaleshwar and Bharuch in Gujarat. (2004)

OBJECTIVES: House hold studies of 3000 houses were conducted in Ankaleshwar and Bharuch towns of Gujarat. Here the health status and their socio economic profile, health seeking behavior and the expenditure incurred for health and the various popular sources of health care facilities used by them was studied. The study group consisted of 2000 houses from 15 selected villages which are having high industrial workers population and another 1000 houses from 5 selected villages

from nearby villages adjacent to the industrial town who are not effected by the industrial growth or economy. They were mostly farmers. The questionnaire included information pertaining to their socio economic status, professions involved, number of children, immunization status, source of health information and various sources of health facilities popular with the community including RMP. Doctors Govt. hospitals etc. it also elicited information regarding the expenditure incurred per annum for different health interventions and the sources of funds. This information is compared with control group who are fromnearby villagers but non industrial workers.Period of study-4 months.

4. Household Study of socio economic conditions and health status of farmers using Endosulfan and non farmers of the selected villages in Rajkot district of Gujarat. (2005)

OBJECTIVES: House hold studies of 3000 houses were conducted in the Rajkot district of Gujarat. Here the health status and their socio economic profile, health seeking behavior and the expenditure incurred for health and the various popular sources of health care facilities used by them was studied. The study group consisted of 2000 houses from 15 selected villages which are having farmers who are using high amount of pesticides and another 1000 houses from 5 selected villages who are non farmers by profession. Who are not affected by the agricultural economy. They were mostly petty traders and small self employed persons. The questionnaire included information pertaining to their socio economic status, professions involved, number of children, immunization status, source of health information and various sources of health facilities popular with the community including RMP. Doctors Govt hospitals etc. it also elicited information regarding the expenditure incurred per annum for different health interventions and the sources of funds. This information is compared with control group who are non

farmers but socio economically equaling with the other group.Period of study-4 months.

5. **Household Study of socio economic conditions and health status of farmers and non farmers of the selected villages in Bhatinda district of Punjab. (2006)**

OBJECTIVES: House hold studies of 3000 houses were conducted in the Bhatinda district of Punjab. Here the health status and their socio economic profile, health seeking behavior and the expenditure incurred for health and the various popular sources of health care facilities used by them was studied. The study group consisted of 2000 houses from 15 selected villages which are having farmers who are using high amount of pesticides and another 1000 houses from 5 selected villages who are non farmers by profession. Who are not affected by the agricultural economy. They were mostly petty traders and small self employed persons. The questionnaire included information pertaining to their socio economic status, professions involved, number of children, immunization status, source of health information and various sources of health facilities popular with the community including RMP. Doctors Govt. hospitals etc. it also elicited information regarding the expenditure incurred per annum for different health interventions and the sources of funds. This information is compared with control group who are non farmers but socio economically equaling with the other group. Period of study-4 months.

6. **Study of socio economic conditions, demographic profile and patient satisfaction of patients visiting Acharya Tulsi cancer Research hospital Bikaneer and M.N.J. cancer research institute Hyderabad. (2006)**

Objectives: A detailed study about the socio economic conditions of

1000 patients visiting Acharya tulasi cancer hospital in Bikaneer Rajasthan and 500 patients visiting MNJ cancer hospital Hyderabad was carried out in which their personal habits, family history, professional back ground and the food habits and the treatment facilities were studied the amount of expenditure involved and any relation to their socio economic status or the profession like farming or industrial workers in relation to the type of cancer they are suffering was also studied.

7. Household study of health status of industrial workers and farmers in the district Vapi in Gujarat.(2006)

OBJECTIVES: House hold studies of 3000 houses were conducted in Vapi town of Gujarat. Here the health status and their socio economic profile, health seeking behavior and the expenditure incurred for health and the various popular sources of health care facilities used by them was studied. The study group consisted of 2000 houses in and around vapi town having high industrial workers population and another 1000 houses from 5 selected villagesfromnearby villages adjacent to the industrial town who are not affected by the industrial growthor economy. They were mostly farmers. The questionnaire included information pertaining to their socio economic status, professions involved, number of children, immunization status, source of health information and various sources of health facilities popular with the community including RMP. Doctors Govt. hospitals etc. it also elicited information regarding the expenditure incurred per annum for different health interventions and the sources of funds. This information is compared with control group who are nearby villagers but non industrial workers.

Period of study-4 months.

8. Development of Health diary for Community Health Workers for A.P.E.R.P.Project.(World Bank Assisted)-2004

A comprehensive health diary for the ANM"s working in sub centers of A.P. was developed which they are supposed to use it for their house hold health parameters data collection. this diary captures all the necessary information of the houses they are visiting with regard to all the mother and child health programs and the institutional delivery facility, immunization status, and family welfare measures being adopted by them. This diary also gives the detailed information required for an ANM to predict any expected seasonal epidemics and the various preventive measures she is supposed to take it.

This is a most popular diary which is printed by the health department even now and being regularly supplied to all ANM's.

9. Participation in IPP VIII project of Municipal Corporation of Hyderabad in collaboration with ESSMEDS, Hyderabad (NGO) world bank assisted

India population project VIII was introduced and being implemented in Hyderabad by the municipal corporation of Hyderabad in the year 2000. here we were allotted a large chunk of slum area consisting of 5000 houses. Here we were regularly conducting health camps, introduction of family welfare measures and conducting house hold survey about various health parameters and disease burden to community.

10. Participation in RCH project in Kothur Mandal of Mahaboobnagar District. world bank assisted

Reproductive and child health project II was introduced in A.P. in the year 2003. We were allotted kotturmandal in mahaboobnagar district. This has 15 villages and each village has an average 300-400 houses. Here we were regularly monitoring all the health parameters and introduction of mother and child health programs and evaluating the utilization of the same by regular house hold visits. This was carried out for a period of 2 years till the completion of the project.

11. Review Household study of health status of industrial workers and farmers in the district Vapi in Gujarat.-2011

OBJECTIVES: a house hold study of 3000 houses is being conducted in Vapi town of Gujarat. Here the health status and their socio economic profile, health seeking behavior and the expenditure incurred for health and the various popular sources of health care facilities used by them is be studied. The study group consists of 2000 houses in and around vapi town having high industrial workers population and another 1000 houses from 5 selected villages from nearby villages adjacent to the industrial town who are not affected by the industrial growth or economy. They were mostly farmers. The questionnaire included information pertaining to their socio economic status, professions involved, number of children, immunization status, source of health information and various sources of health facilities popular with the community including RMP. Doctors Govt. hospitals etc. it also elicited information regarding the expenditure incurred per annum for different health interventions and the sources of funds. This information is compared with control group who are nearby villagers but non industrial workers and also with the previous study conducted 5 years back in the same location.

Period of study-4 months.

12. Health status study of 3000 farmers houses in the Guntur district of Andhra pradesh.-2011

a house hold study of 3000 houses is being conducted in 10 villages of Guntur district of A.P. Here the health status and their socio economic profile, health seeking behavior and the expenditure incurred for health and the various health problems of 2700 families spread in 10 villages of Guntur. The study group consisted of farmers engaged in farming for last more than 5 years and extensively using pesticides. The control group consists of non farmers of the same villages engaged in trade, job, service etc. a comparison is made of both groups to see whether the pesticides has any impact on the farmers health.

13. **Household Study of health status of industrial workers and farmers in the district AHMADABAD Vatva and Narol industrial area Gujarat.(2013)**
14. **Household Study of health status of industrial workers and farmers in the district Ahmadabad Naroda and Odhav in Gujarat.(2013)**
15. **Health status study of 4000 farmers houses in the Yavatmal district of Maharastra.-2014**

a house hold study of 4000 houses is being conducted in 13 villages of Yavatmaldistrict of Maharastra. Here the health status and their socio economic profile, health seeking behavior and the expenditure incurred for health and the various health problems of 3200 families spread in 13 villages of Yavatmal. The study group consisted of farmers engaged in farming for last more than 5 years and extensively using pesticides. The control group consists of non farmers of the same villages engaged in trade, job, service etc. a comparison is made of both groups to see whether the pesticides has any impact on the farmers health.

16. **Household study of health status of industrial workers and farmers in Ankleshwar, panoli, and jhagadia in Gujarat.-2014**
17. **Household Study of health status of industrial workers and farmers in the district AHMADABAD Vatva and Narol industrial area Gujarat.(2019)**
18. **Household Study of health status of industrial workers and farmers in the district Ahmadabad Naroda and Odhav in Gujarat.(2019)**

Vapi Location Map

I INTRODUCTION

1.1 Back ground of the study

Gujarat is one of the highly developed states in the country. Industrial growth of Gujarat far exceeds that of many other states in the country. Blessed with many natural resources, large coast line, excellent infrastructure facilities and progressive, dynamic entrepreneurial community, the state is leading the country towards developed India. However it is to be noted that all developments will have its own drawbacks or side effects among the dependent community. The industrial areas have large number of migrant population as industrial labor living in slums bearing the brunt of the development.

In view of present scenario where there is a discontent that industrial pollution, effluents, emission, working conditions are affecting the health of nearby population, an attempt is made to study and assess the health status of communities in nearby industrial areas.

Gujarat has experienced a rapid rate of urbanization in last three decades. In 1971 rate of growth of urban population in Gujarat was 41.00%. 1981 this rate of growth was 41.04%. In 1991 this rate of growth was 34.39 % which is quite higher than the national Average of 25.71%. The pattern of urbanization weighed heavily towards cities because of industrial development in last three decades. Thus the population increases rapidly.

The main magnitude of the growing urban center is the rate of growth in employment, which belongs to growth of industrial activities, on the other hand haphazard urban development took place. The magnitudes of urban problems require a special approach towards unplanned urban growth and its related problems. This is particularly so in view of the fact that in most of the cases the level of urban services, both physical and social, as well as the living conditions is deteriorating. In this context there is a pressing

need to plan for the control and regulate the development activities not only for the Vapi town but for adjoining villages Chala and Dungra. As a first step towards this, Development Plan for Vapi area was prepared in the year 1982 and was sanctioned under the GTP & UD Act 1976, and put into force by Vapi municipality in the year 1985.

Vapi site at the coordinates 20°22'12"N latitude and 72°54'0"E Longitude. Vapi is located on the main transport spine of Gujarat and Maharashtra state corridor. The city is very well connected to the main business center of both the states viz. Surat and Mumbai respectively thorough rail and road.

National Highway 8 bisects the town, creating east and west parts - the western part being the original old town-place, and the eastern part mainly hosting the industries and the newly constructed residential areas. The new modernized highway, Mumbai is about 180 km to the south and the city of Surat is about 120 km to the north.

To cater to the industry, the town handles a huge amount of what is called a "floating population" and the Vapi railway station on the Mumbai-Vadodara rail link of Western India has become the direct beneficiary in terms of revenues due to daily commuters.

There are two urban belts in Vapi Region, one of them is Daman- Chala-Vapi Town and Vapi GIDC-Dungra- Dadara. And other is parallel to National High Way No-08 which consist of Valsad- Atul-Pardi- Udavada- Balitha-Vapi Town. The town being a part of Pardi Taluka in Valsad district is been connected by major transportation corridors. The compared urbanization in the district shows Vapi town getting the scale of the existing Taluka in terms of its physical spread and population. The belt being influenced the

town has spread well beyond the present municipality limits and it has even its population spread across the GIDC and surrounding villages.

Vapi town had been the commercial center and the whole sale business hub for grass since decades. It is situated near Damanganga River in southern Gujarat, India. Around 28 km south of the district headquarter city of Valsad, 120 km away from Surat and 175 km away from Mumbai. It is surrounded by Union Territories of Daman on the west and by Dadra and Nagar Haveli on theeast. Economic and industrial growth of the recent decades has, however, blurred the physical boundaries, and the small stretch of roughly 21 km of Daman-Vapi-Silvassa has almost become a monolith.

Vapi is a gateway of South Gujarat. It is at very strategic location from NH8 (Golden Quadrilateral) passes through both city. It is the major halting junction station of Western Indian Railway.

Vapi is one of the active destinations of western railway due to the connectivity to Daman and Silvasa. The important cities of Gujarat and Maharashtra are well connected through the rail network. It is caters to the industrial as well as domestic services for daily commuters and long distance route trains.

Growth of Vapi

Vapi town derives its beingnamelocatedfromtowardsthe'VAV'north Ofthe towni.e. ain Balitha towards the west of railway station. The town has been traditionally being a commercial destination for the trade of grass till in 1960-1965. Due to the development of GIDC in 1970 the rapid increase in trade and industry took Vapi on the growth trend. Vapi has been converted Gram Panchayat to Vapi Municipality in 1965. Due to the

rail connectivity to Mumbai it was also the home to Parsis that migrated to Mumbai. The Parsi was the original land owners who sold their land to the local Desai, Bania and Panchals. The town at present has mixed cultural of migrant population and cultural influence of Maharashtra, Orissa and other states migration annually dueto employment opportunities.

Theindustrial township of Vapi household and itsarguably the second largest industrial area in Asia in terms of small-scale industries, dominatedby chemical and paper industry plants.The Arabian Sea is about 7 km to the west, where the Daman Ganga River creates its delta. Thecity has tropical weather and enjoys three distinct seasons of mild winter, moderate summer andheavy monsoon, with rainfall ranging from 100 inches to 120 inches per annum.There are scopes of urban development in surrounded villages like Balitha, Namdha, Chandor,Charavada, Chiri, Chanod.

The health status of Vapi population is compared with that of their respective age group counter parts from nearby villages Dharmpur, Karaya, Degom, Karvad, and KarvadFatak.

1.2 Objectives of the study

i. To assess health status of Vapi area inhabitants.

ii. To compare health status of urban and rural community.

iii. To compare reproductive cycle and hormonal life (in terms of spontaneous abortions, abnormal fetuses and infertility) of urban women with that of women from rural community.

iv. To compare growth attributes of children from urban and rural community.

1.3 Scope of the study

The scope of the present study is to figure out variations, if any; between inhabitants of industrial area of Vapi and nearby villages with regards to health aspects.

1.4 Approach & Methodology

The study is purely a primary research carried out through household survey in areas of Vapi nearby villages. Five villages namely Dharmpur, Karaya, Degom, Karvad, and KarvadFatak are considered for the survey.

1.5 Primary Research (Field Operations)

Primary data collection was done in Vapi Town and surrounding villages (Dharmpur, Karaya, Degom, Karvad, and KarvadFatak). Household survey was conducted using a set of questionnaires designed separately for each age group segment studied.

Period of study-January 2020

Specialists in health care, Epidemiology, Environmentalists and rural studies developed questionnaires after carefully considering the objectives of the study. A pilot test was carried out in specific areas. The required corrections and modifications in the questionnaires were carried out before administering the same to the households.

1.6 Sampling Plan and Survey coverage

Vapi town and surrounding villages (Dharmpur, Karaya, Degom, Karvad, and KarvadFatak) of Vapi area were selected for comparison with industrial area inhabitants of Vapi.

5917 households were selected for the study at random using area maps and door numbers.

This study compares the health status of Vapi families with that of surrounding villages' families. Hence Vapi families studied are treated as **'focus group'** and nearby five villages (Dharmpur, Karaya, Degom, Karvad, and KarvadFatak) families are considered as **'control group'**.

The selected sample follows 95% confidence level and 5% precision level.From the analysis it is found that the data follows normal distribution in terms of the profile of the study and control groups which indicate that the results from the survey are statistically valid. This is arrived by adopting strict information gathering procedures and filtering techniques followed by data back checks, data validation procedures and data cleaning techniques.

In 5917 families interviewed, 3866 are from Vapi, 2113 are from five villages surrounding Vapi areas.

Details of different segments of the sample interviewed are given in the Following table:

Segment	Vapi	Villages	Total sample size
Total households-5917, Vapi-3866 + Villages-2113	**3866**	**2113**	**5917**
Married males	3717	2051	5768
Married females	3691	2085	5776
Children aged up to 1 Year	447	302	749
Children in the age group of more than 1 to 5 Years	1486	781	2267
Children above 5 Years - up to 12 Years	1722	857	2579
Boys, Girls and Unmarried (Male & Female) Above 12 Years	2497	1359	3856
Total members interviewed	**13560**	**7435**	**20995**

EXECUTIVE SUMMARY

SUMMARY OF FINDINGS:

1. The money spent on health in last one year is an indication of health status. 23% of the villages have spent nearly Rs.1000/- for health problem, where as 34% of them from study group spent this amount. Surprisingly the people who spent nearly 10,000/- are 36% in villages and 31% in vapi
2. Approaching Govt. hospital for health requirements is also a good indicator of availability of services. More number of villagers are depending on Govt. hospital(53%) than vapi town population as they can afford private hospital also.
3. Death of a family member in last 2 years also a very significant index. Only 7-8% of the total population in both control group and study group had reported a death in the family. Among this 2-3%% is only heart attacks in control and study group. Death due to accidents is 3% in both the groups in both groups and deaths due to cancer is nil in vapi and 1% in villages.**92-93% of the both the populations did not report any death in the family.**
4. In the villages the main occupation is non industry and in the study group majority of them(90%) are working in industry justifying our sample selection.

5. **43-47% of these men are smokers** representing both groups and a significant of them are heavy smokers without any differentiate between control group and study group.
6. Similarly 58% to 64% of both groups are having the habit of tobacco chewing and some of them are consuming heavy amount and there is absolutely no difference among both the groups.
7. 73%% of people in both groups had suffered with attack of fever either once or more than once in last one year. This shows there is absolutely no difference in both control group and study group, People with more than 3 attacks of fever is 12% in villages and only8% in vapi.**Hence it can be concluded that the health of industrial population is better than that of control group.**
8. It is observed that 49% of the control group did not suffer with attack of loose motions, where as 57% of study group has suffered with loose motions. This is mainly due to unsafe water and unsafe food, and this finding has no relevance to the industrial pollution what so ever.
9. In the industrial workers 33% of them are suffering with Dermatitis, irritation and redness of the eyes, dry irritating cough. All these population are working in chemical and dye industry and there is a lack of occupational safety among these workers, and management has to urgently address this problem. And in villages it is only 20%

10. **The incidence of diabetes, high blood pressure and asthma is same in both the groups**.. However there is no established correlations between industrial environment and these disease. **As alleged there is no extra incidence of asthma in vapi.**

11. **Even skin allergy is also absolutely same in control group and study group, repudiating the claim that industry is causing skin allergy in large number.**

12. 40% of the women in villages had normal delivery ,where as it is 29% in vapi, may be because these women are preferring private hospital for delivery.

13. Even the number of abortions faced by the reproductive age group women is absolutely same(4-5%) in control group and study group. **This data clearly rejects and repudiates the claim by certain vested interest that women in industrial area are having more abortions than their counter parts from villages.**

14. Still birth or neonatal mortality for the pregnant mothers is another major allegation by those people among industrial workers. **However it is to be noted that there is absolutely no difference among control group and study group.**

Allergy among women is only25-28% of all varieties and the women in vapi has less incidence of allergy comparing to women from villages.

15. **The incidence of cancer is very minimal and it is same in both study group & control group. That means there is absolutely no truth in the allegation that people in industrial area are more prone for cancer.**
16. Minor health complaints like joint pains, head ache, vision defect are also absolutely same in both control group and study group women.
17. **It is also alleged that women in industrial area have hormonal imbalance and suffer from gynaec problems. But the data proves that the incidence is same both in control group and study group.**
18. **It was also alleged that industrial pollution is leading to congenital defects in the new born children. But it is observed that there is no difference in percentage of birth defects among control group and study group.**
19. The general health of the children below 1 year is also absolutely same in both control group and study group. The industrial environment has absolutely no affect on them.

20. There was also allegation by some agencies that industrial pollution is affecting the mental growth of the children. But the study has proved that the children in the industrial area are performing better in academic activities than control group.

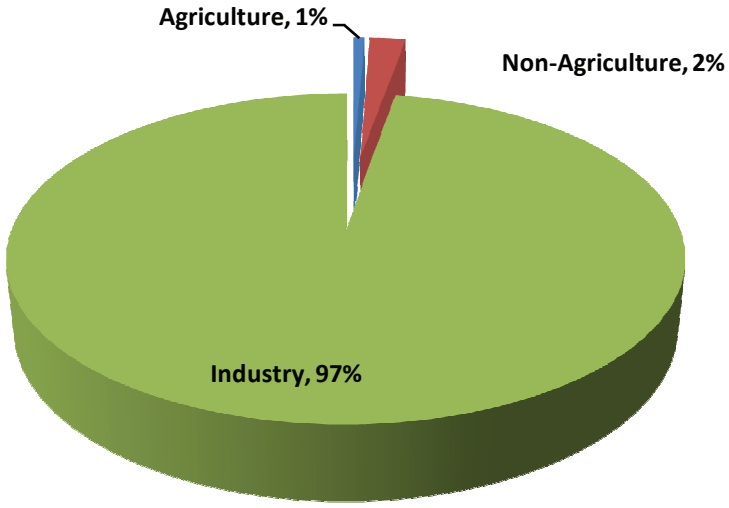
21. There was a wild allegation that the girls in the industrial area are having their menarche much delayed due to pollution. The study has disproved that and there is not much difference among study group and control group.

III RESEARCH AND ANALYSIS FINDINGS PROFILE OF THE SAMPLE SURVEYED IN VAPI

1. GENERALINFORMATION

3.1.1 Main source of family Income

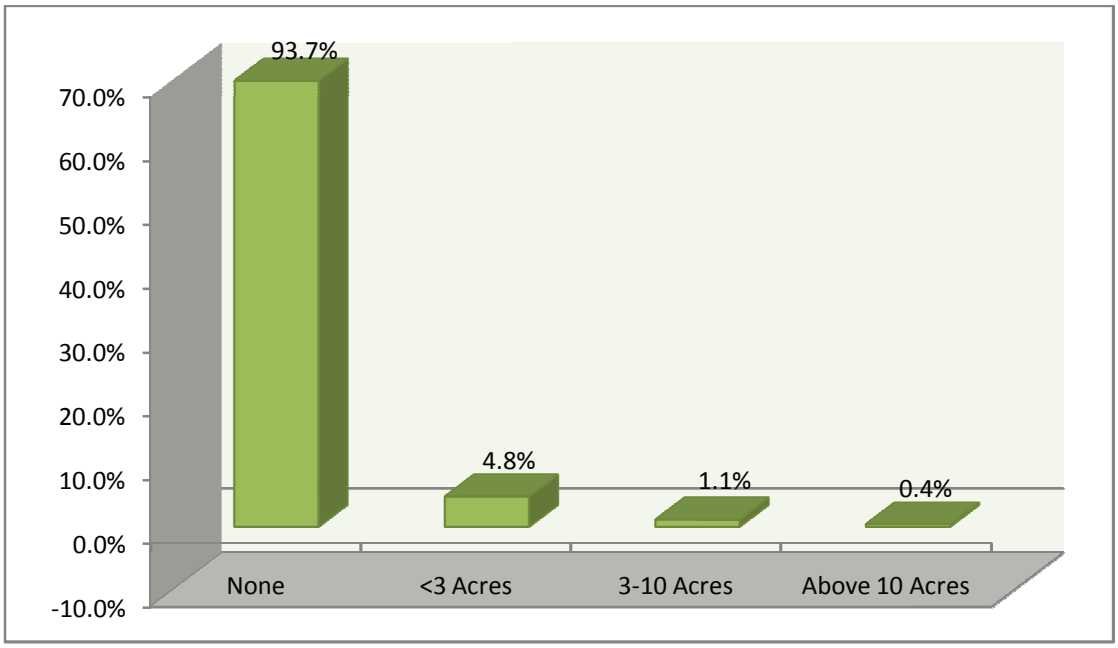
Main source of family Income?		
	Frequency	Percent
Agriculture	23	1%
Non-Agriculture	81	2%
Industry	3762	97%
Total	3866	100%



The study sample is segmented into two groups. One is industry based income group, and the second one is non-industrial income families. So when the sample is collected from the Industrial residential areas, it is to be observed that in this area 97% of the population is dependent on the industry for livelihood. 2% of the population are dependent on other business like Kirana Store, Vegetable & Fruit vendors, Tea stall and Canteen etc. So this sample truly represents the Industrial population.

3.1.2 Owns Land

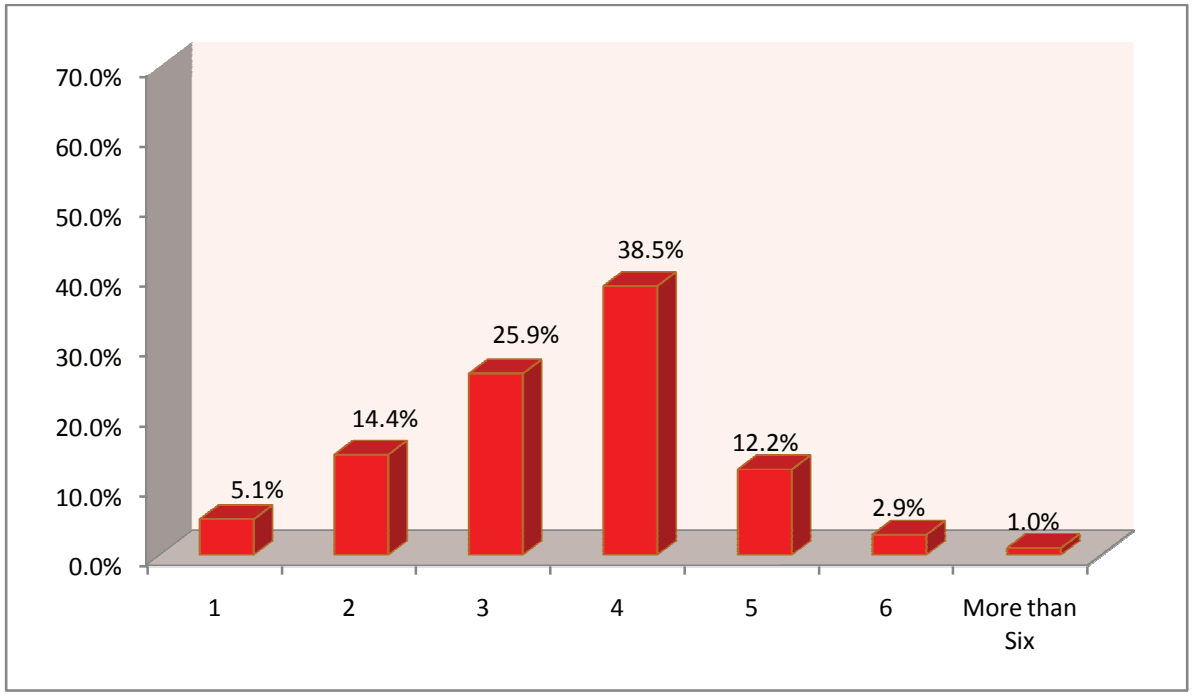
Owns Land?		
	Frequency	Percent
None	3622	93.7%
<3 acres	184	4.8%
3 – 10 ac	44	1.1%
Above 10 ac	16	0.4%
Total	3866	100.0%



This graph again reiterates that majority of the population(93%) in the sample area does not own any land. This brings out a fact that majority of this industrial population does not have any rural back ground. And this also gives an indication that most of them are migrant workers who might have migrated from other towns in Gujarat may be even from other States, who are not finding any livelihood in their native villages have migrated to this place for work. This shows the employment potential of this area, who otherwise have no livelihood.

3.1.3 No. of family members

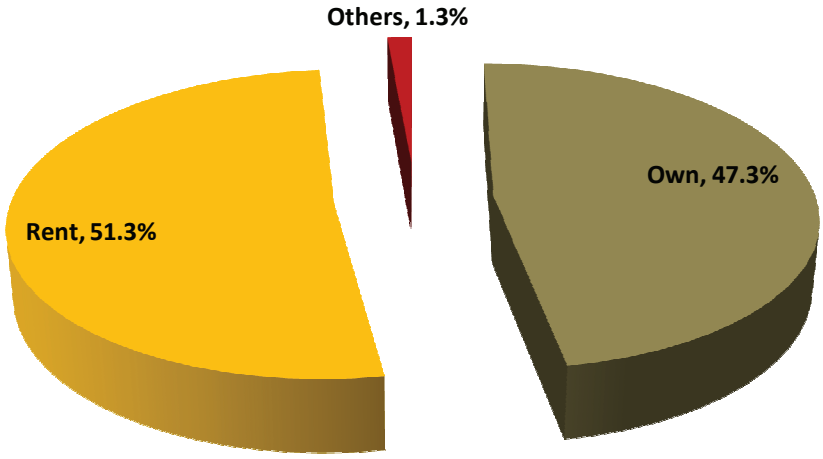
No. of family members?		
	Frequency	Percent
One	197	5.1%
Two	555	14.4%
Three	1003	25.9%
Four	1488	38.5%
Five	473	12.2%
Six	112	2.9%
More than six	38	1.0%
Total	3866	100.0%



Number of family members dependent on bread winner is a direct indication of the economic status of the family. It is to be observed that 63% of the sample families have 3 – 4 members depending on them. In view of the fact that most of them are migrant labour, and in view of the limited resources and accommodation, most of them are restricting their family size.

3.1.4 Owns the present residence

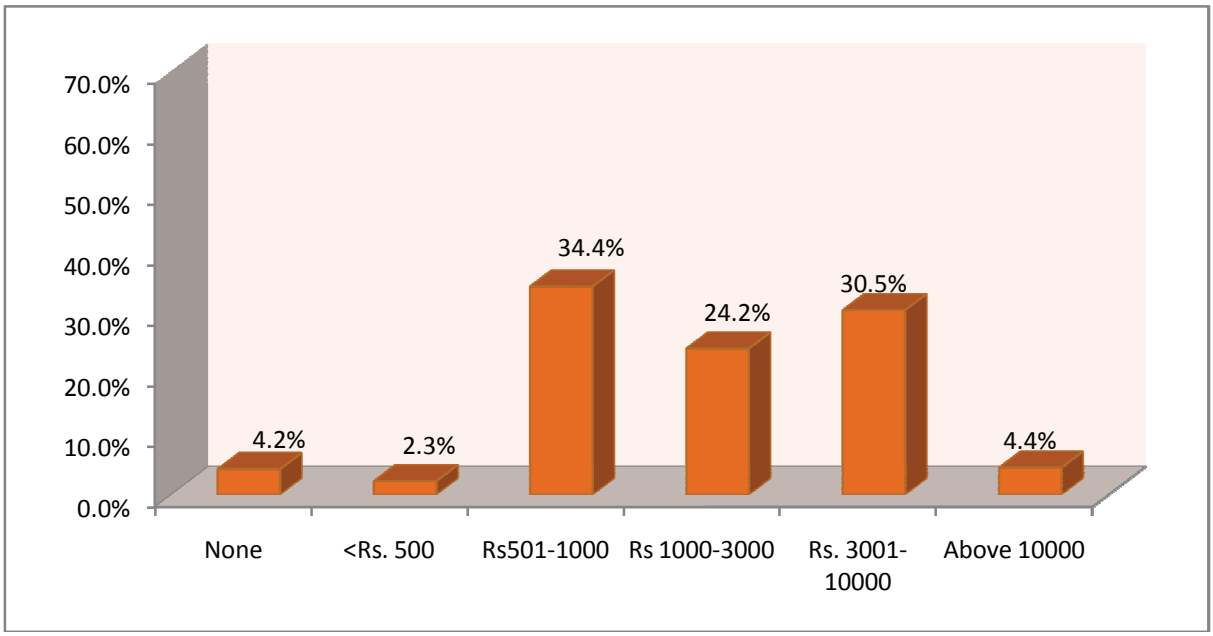
Owns the present residence?		
	Frequency	Percent
Own	1829	47.3%
Rent	1985	51.3%
Others	52	1.3%
Total	3866	100.0%



Owning the residence also indicates the social and demographic nature of the residents. Only 47% of the sample Members own the premises and nearly 51% of them are in rented houses. As they are migrant labour, they could not have afforded their own premises. They pay rent and stay, and probably after retirement they will either go back to their native village or procure an own house and permanently settle down.

3.1.5 How much money was spent last time for any ill health (last 3 years) for total family

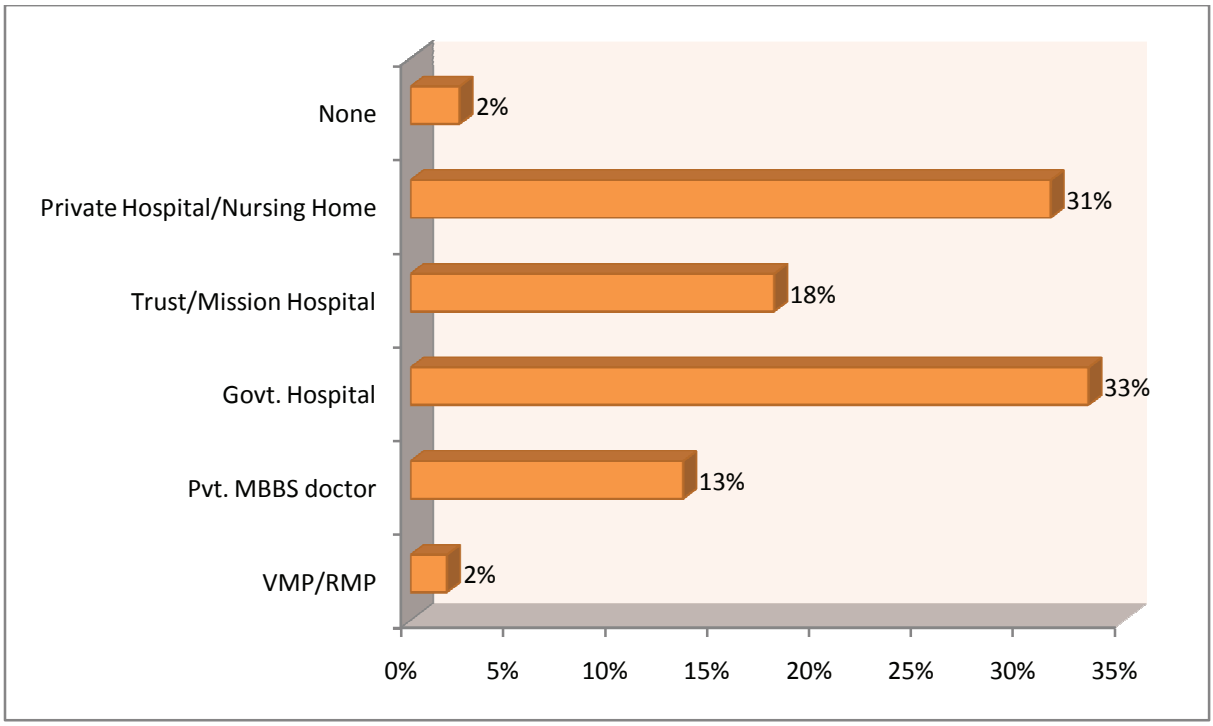
How much money was spent last time for any ill health (last 3 years) for total family?		
	Frequency	Percent
None	163	4.2%
<Rs. 500	87	2.3%
Rs501-1000	1331	34.4%
Rs 1000-3000	934	24.2%
Rs. 3001-10000	1179	30.5%
Above 10000	172	4.4%
Total	3866	100.0%



Money spent for treatment of any illness also indicates the health status. Nearly 60% of the total population spent less than Rs.3000/- for any treatment. It shows either they are reasonably healthy or their ESI card takes care of their health expenditure. People who have spent more than 10,000 in an year are mere 4.4 % of the population.

3.1.6 Where do you get Medical Aid

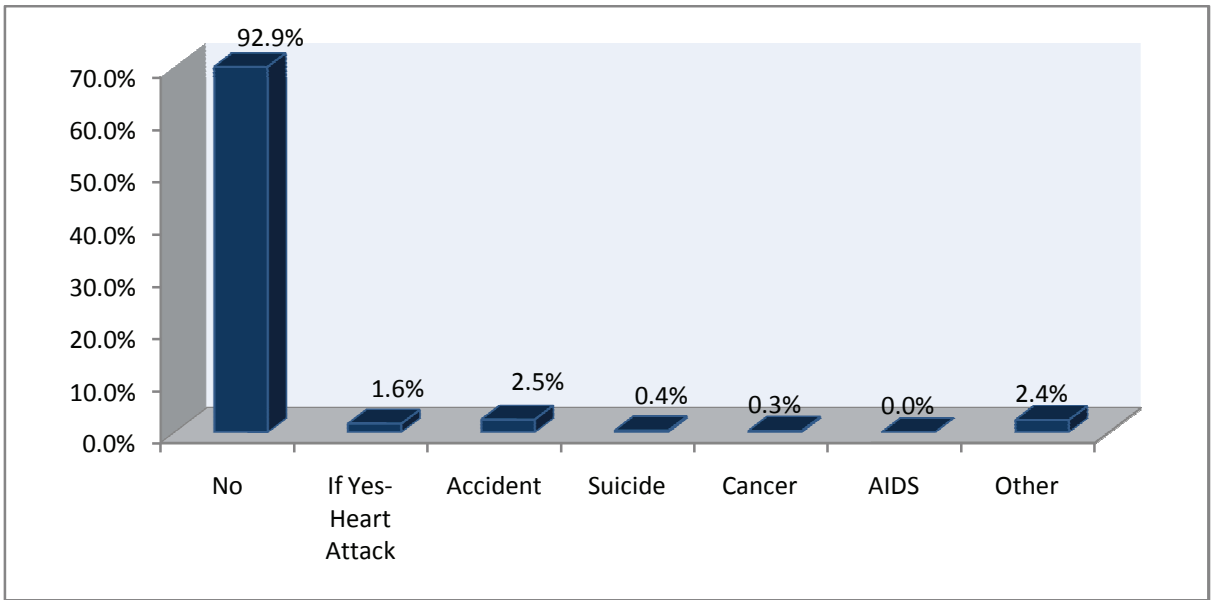
Where do you get Medical Aid?		
	Frequency	Percent
VMP/RMP	78	2%
Pvt.MBBS Doctor	584	13%
Govt.Hospital	1452	33%
Trust/Mission Hospital	779	18%
Private Hospital/Nursing Home	1371	31%
None	105	2%



Availability of medical facilities in a particular geographical area is indication of the development. The type of medical facility used by the people also indicate their economic viability. Nearly 33% of the people have confidence, availability, approach to the Govt. hospital or ESI hospital, which is able to meet their requirement. Private medical practitioners are also being utilized by good percentage of population (13%). Private hospitals are serving nearly 31% of the population.

3.1.7 Did any of your family members die in the last 2yrs

Did any of your family members die in the last 2yrs?		
	Frequency	Percent
No	3591	92.9%
If Yes- Heart Attack	63	1.6%
Accident	95	2.5%
Suicide	14	0.4%
Cancer	11	0.3%
AIDS	1	0.0%
Other	91	2.4%
Total	3866	100.0%



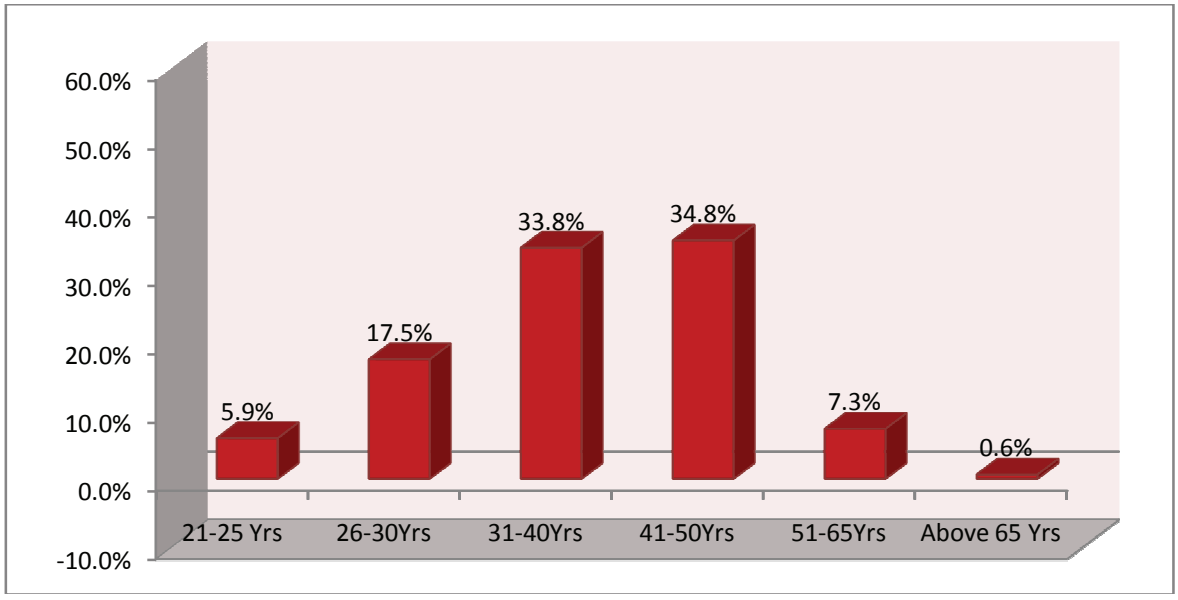
From the total sample population only 7% of the families had a death in last 2 years. Unfortunately 33% of the deaths are due to accidents. This is a major concern. We have to find out what type of accidents they were involved. Was it road accidents or industrial accidents. What was the age group of these victims? Howe did it effect the family economic condition? Whether such incidents can be prevented? Next highest deaths are due to heart attack. So this also reflects the life style condition.


FIRST AID
BOX

2.Physical Details of Men

3.2.1 Age

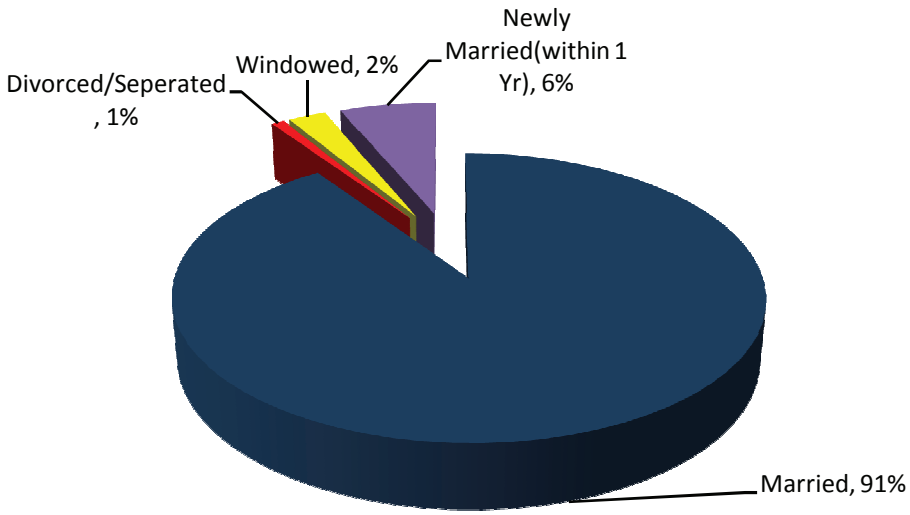
Age		
	Frequency	Percent
21-25 yr.s	221	5.9%
26-30yr.s	649	17.5%
31-40	1256	33.8%
41-50yr.s	1295	34.8%
51-65 yr.s	272	7.3%
Above 65 yr.s	24	0.6%
Total	3717	100.0%



85% of the sample population is in the age group of 26 years to 50 years. This indicates the head of the family, who is bread earner to the family is in highly productive age group. This can reflect in the various socio economic problems faced by the society. If the health of this group is effected by external agents like Air, Water, Food, working environment, life style etc, the economy of the middle class families is effected and also the society.

3.2.2 Marital Status

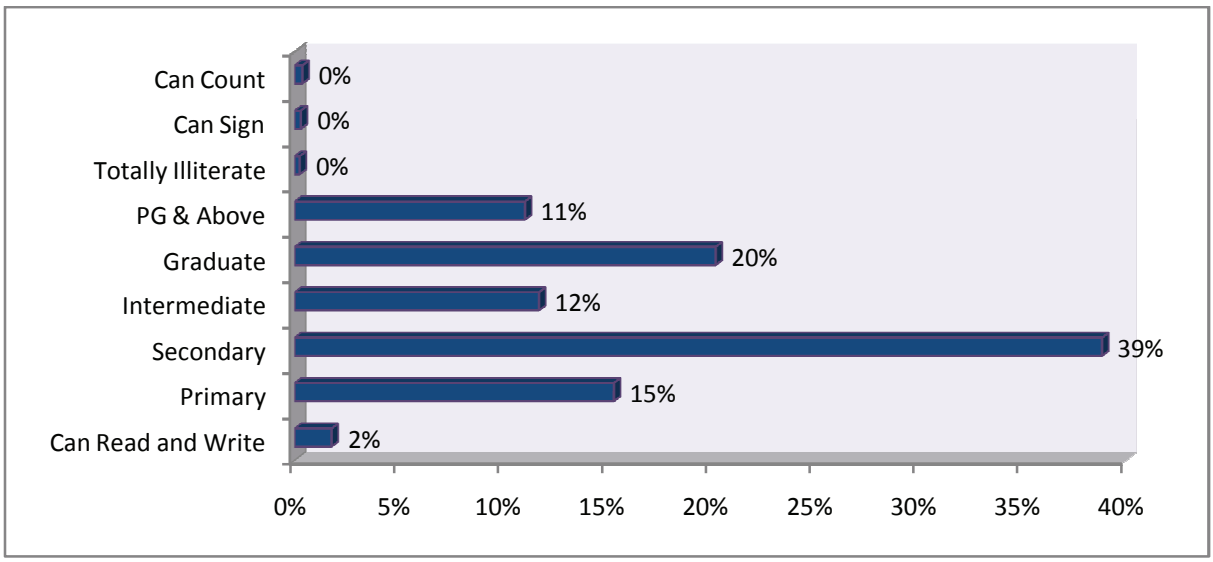
Marital Status?		
	Frequency	Percent
Married	3364	91%
Divorced/Separated	30	1%
Widowed	91	2%
Newly married (With in 1yr.)	232	6%
Total	3717	100%



This table shows that 91% of the head of the family are married. This indicates that the bread earner of the family has his only family with 3-5 members to support. We can also derive at a conclusion that his health status is very important. The economic condition of the whole family is dependent on this members health. If he is working in an industry and if the industrial pollution is affecting his productivity, then it is a major concern.

3.2.3 Education

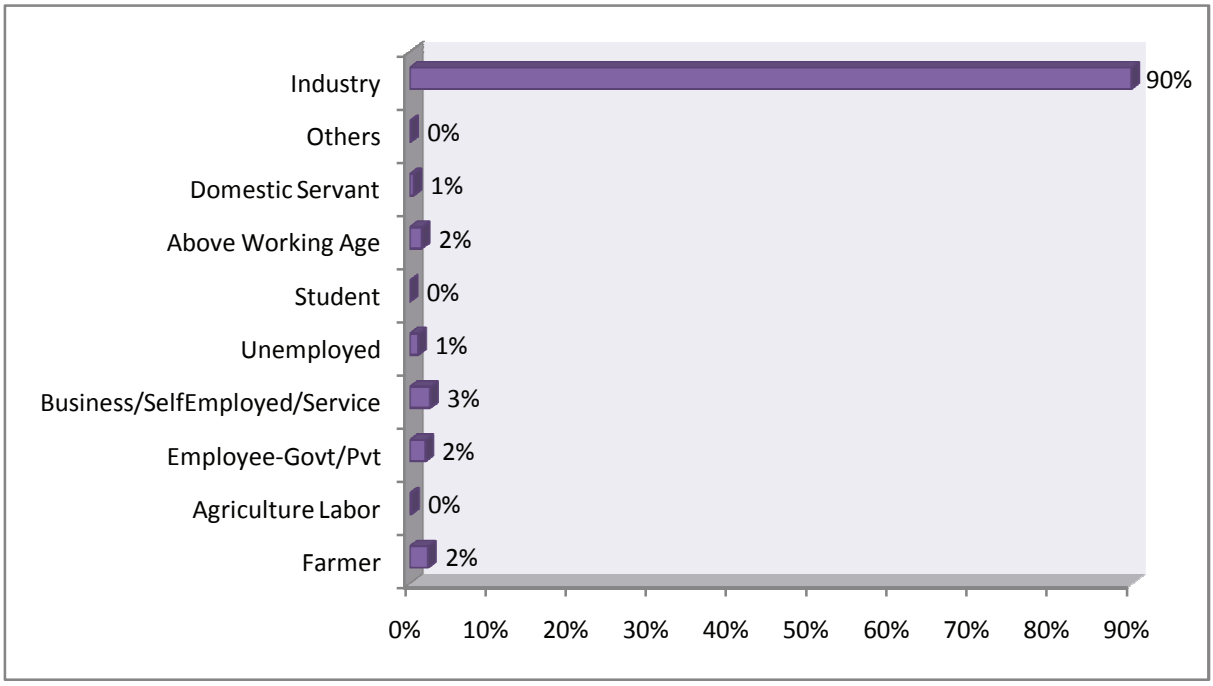
Education?		
	Frequency	Percent
Can Read and Write	66	2%
Primary	571	15%
Secondary	1444	39%
Intermediate	437	12%
Graduate	753	20%
PG and Above	412	11%
Totally Illiterate	9	0%
Can Sign	11	0%
Can Count	14	0%
Total	3717	100%



Educational background of the head of the family is an important indicator of the socio economic background of the family. Education decides the health indicator and importance of preventive steps. However as expected 54% of the male members who are running the family are educated upto secondary school level only. 2% of the industrial workers from the sample population can only read, write and sign. 31% of the population are graduates or studied above graduation.

3.2.4 Occupation

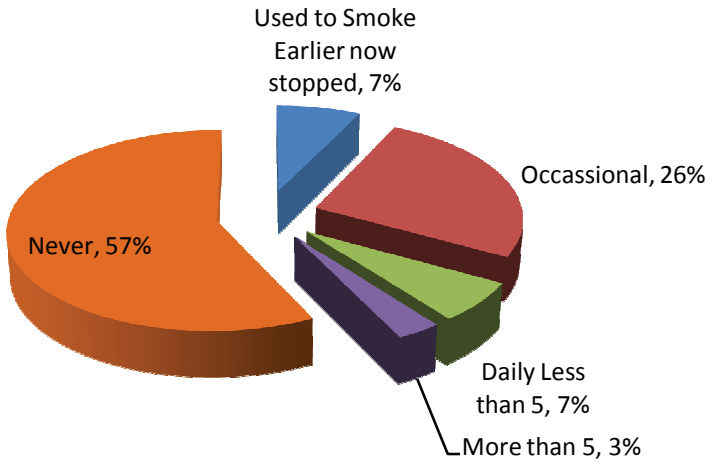
Occupation?		
	Frequency	Percent
Farmer	85	2%
Agriculture Labor	7	0%
Employee-Govt./Pvt.	73	2%
Business/SelfEmployed/Service	95	3%
Unemployed	40	1%
Student	1	0%
Above Working Age	56	2%
Domestic Servant	19	1%
Others	3	0%
Industry	3338	90%
Total	3717	100%



90% of the population are industrial workers in the study group, where the sample is picked up from Industrial zone. Remaining is either self employed depending on the industry or few of them are in Govt. service and residing in the same area. Hence the selection of the area is justified.

3.2.5 Smokes (Cigarettes, Beedi, any others)

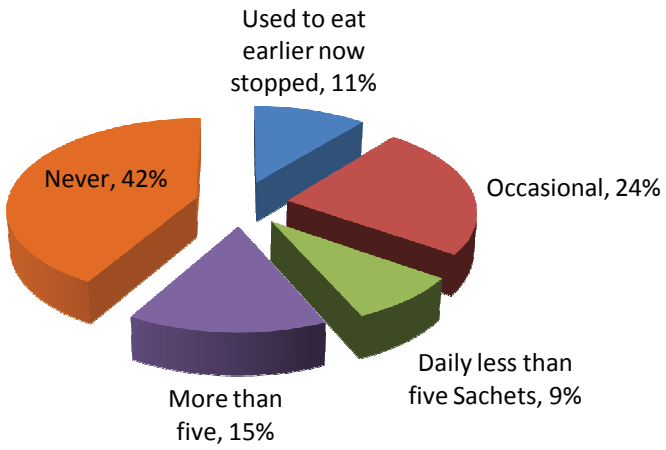
Smokes (Cigarettes, Beedi, any others)?		
	Frequency	Percent
Used to Smoke Earlier now Stopped	269	7%
Occasional	960	26%
Daily less than five	242	7%
More than five	116	3%
Never	2130	57%
Total	3717	100%



43% of the workers including non industrial workers are smokers. Some of them indicated that they stopped smoking now. This may not be totally true. As majority of the people more than the percentage indicated have been observed smoking by the field staff. Some might have concealed the habit for the reasons better known to them. **The NFHS report also states that50% of men in Gujarat are smokers**.

3.2.6 Eats Gutka / Zardapan (Tobacco in any farm

Eats Gutka / Zardapan (Tobacco in any farm) ?		
	Frequency	Percent
Used to Eat Earlier now Stopped	403	11%
Occasional	888	24%
Daily less than five sachets	320	9%
More than five	558	15%
Never	1548	42%
Total	3717	100%

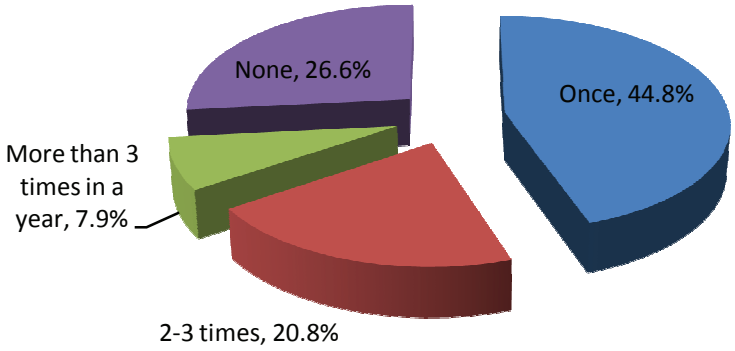


58% of the population in this group openly admitted that they consume oral tobacco in different forms. The quantity of consumption is also very high. In view of the age group being 25 – 50 years for majority of the workers, they may be consuming oral tobacco for quite a long time. The effect of consuming oral tobacco of huge quantity for such a long time is a matter of concern. This requires an in-depth study on their health impact.

The NFHS(national family health survey) report states that only 37% of people are consuming oral tobacco products in Gujarat..

3.2.7 Suffered with Fever in last one year

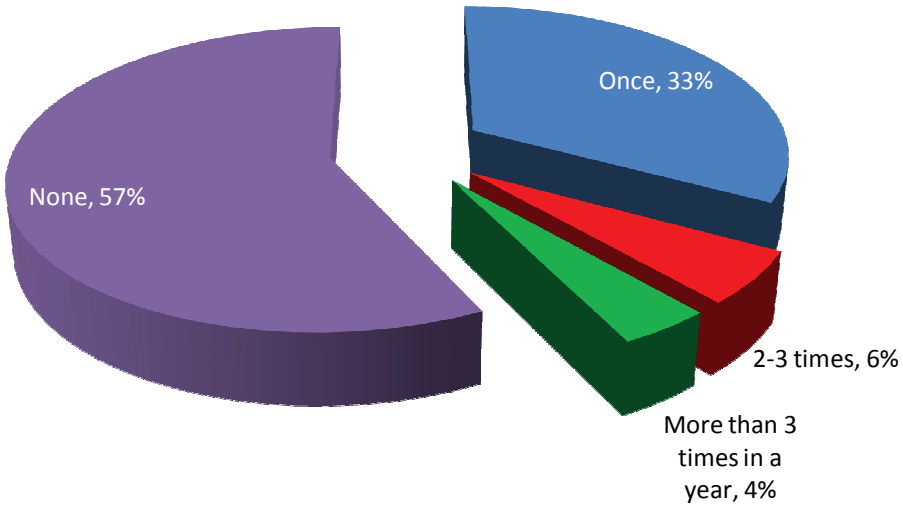
Suffered with Fever in last one year?		
	Frequency	Percent
Once	1664	44.8%
2-3 times	774	20.8%
More than 3 times in a year	292	7.9%
None	987	26.6%
Total	3717	100.0%



74% of the population suffered with fever at least once in last one year. 32% of them had the attack of fever more than 2-3 times. However, in view of the poor hygienic conditions and improper public health and sanitation facilities. This is expected. Huge percentage of fever either malaria or viral fever attacks in a year which may be mainly due to hygiene and sanitation conditions and also improper mosquito control measures.

3.2.8 Suffered with Loose motions in last one year

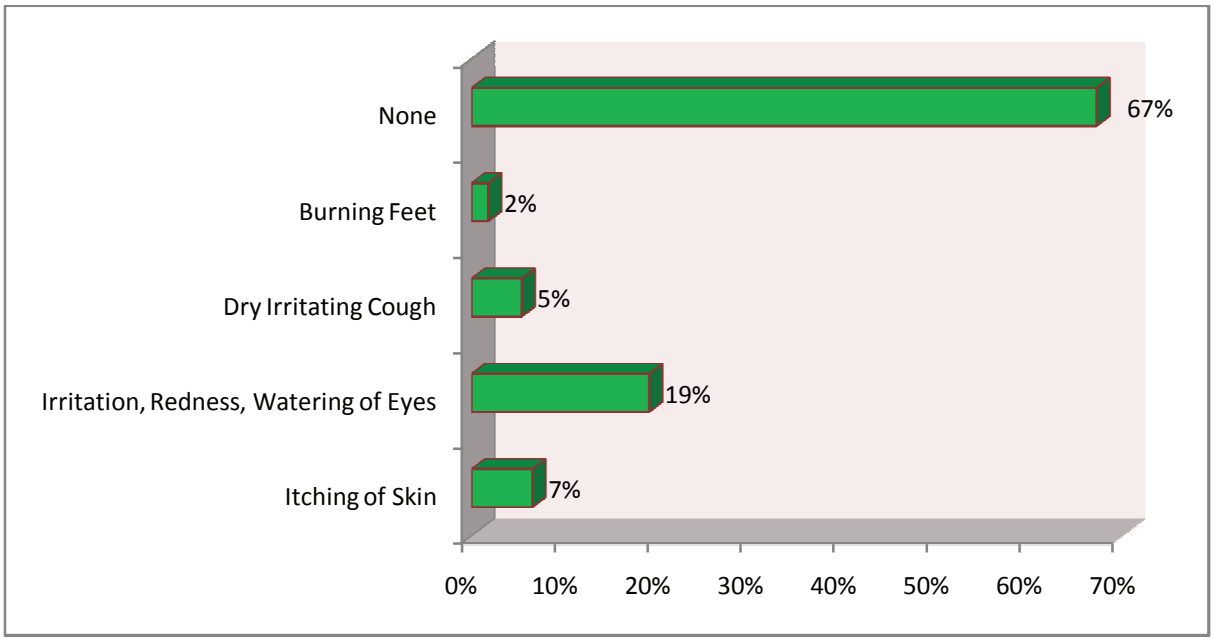
Suffered with Loose motions in last one year?		
	Frequency	Percent
Once	1224	33%
2-3 times	209	6%
More than 3 times in a year	151	4%
None	2133	57%
Total	3717	100%



Attack of loose motions also indicates unsatisfactory and unsafe drinking water facility. It also reflects unhygienic food habits and unsafe food availability. 43% of the people suffered with one or more attacks of loose motions which can be infective-bacillary dysentery or viral gastroenteritis. This will reduce the productivity and will also effect the industrial output as with each attack the worker will be absent for the duty for at least 3-4 days, where he has to be paid wages also.

3.2.9 Do you Suffer with any of them

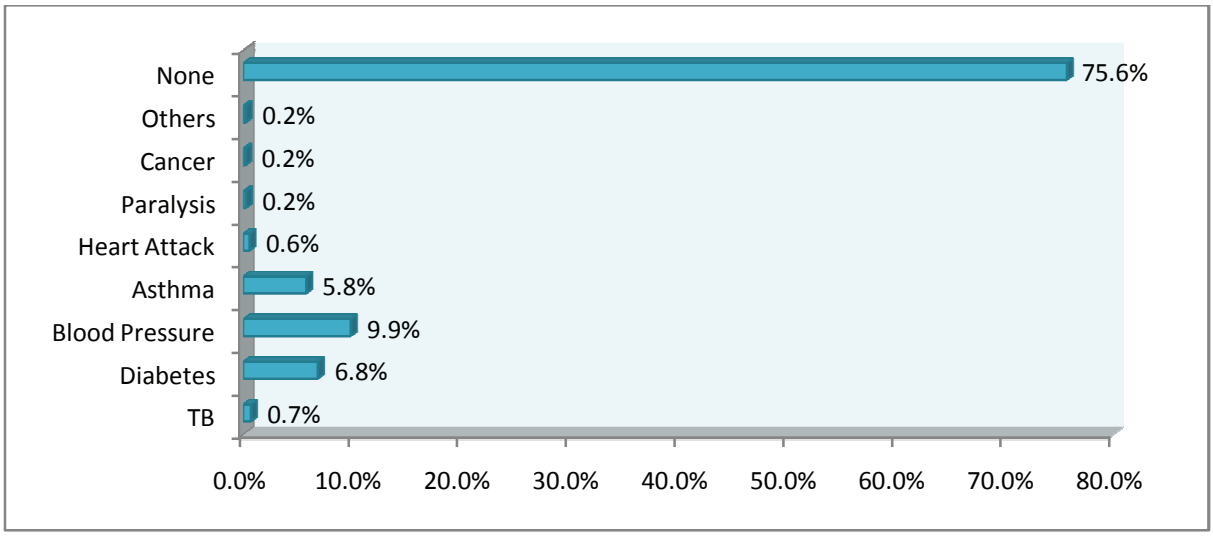
Do you Suffer with any of them??		
	Frequency	Percent
Itching of Skin	246	7%
Irritation, Redness, Watering of Eyes	719	19%
Dry Irritating Cough	203	5%
Burning Feet	67	2%
None	2529	67%



Some of the health complaints like burning and redness of the eye, itching sensation of the skin, dry irritating cough, burning feet etc. nearly 33% of the total sample population complained of any one of the above complaints. This may related to the dyes and chemicals they are dealing with or the working conditions and the fumes emanating from the industry. Unless a detailed medical report is not obtained, we may not be able to relate this to industrial pollutions. However it is observed that this percentage is not more than the last study 5 yrs back.

3.2.10 Did Suffer any time with

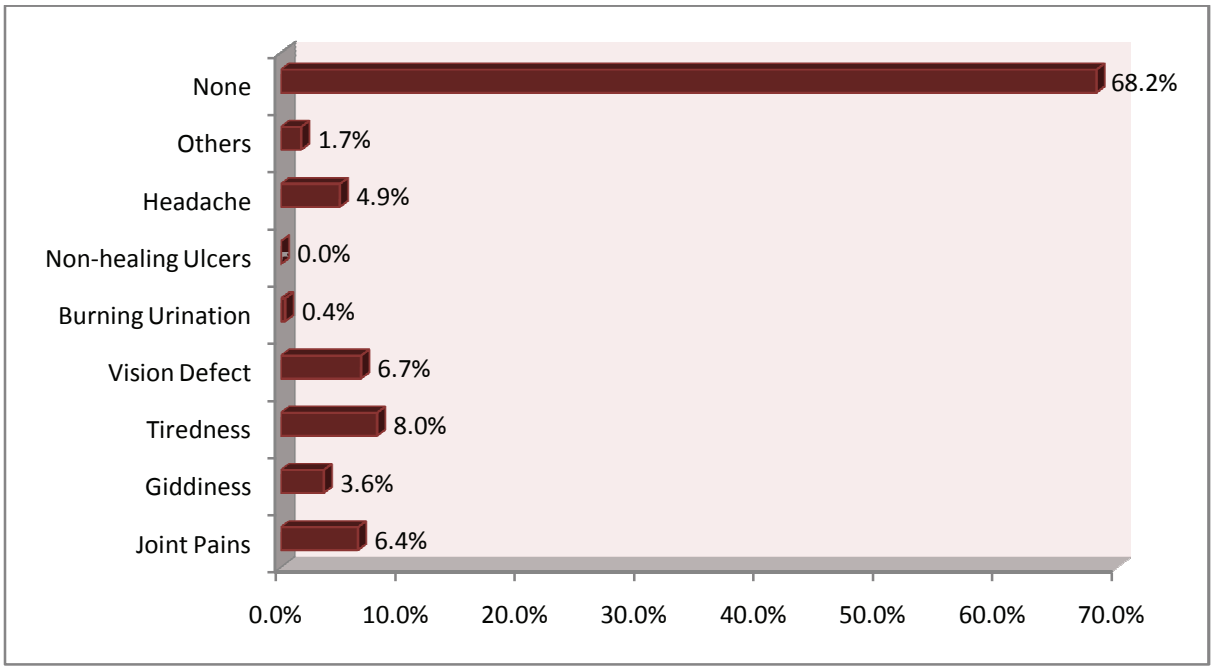
Did Suffer any time with?		
	Frequency	Percent
TB	26.0	0.7%
Diabetes	256.0	6.8%
Blood Pressure	369.0	9.9%
Asthma	216.0	5.8%
Heart Attack	21.0	0.6%
Paralysis	9.0	0.2%
Cancer	7.0	0.2%
Others	8.0	0.2%
None	2828.0	75.6%



688 people out of 3428 of the total population had some diseases which are either genetic or lifestyle or infective in nature. This indicates 1/5th of the male workers who are head of the family are suffering with some kind of disease. Among these 29% of them are suffering from Asthma. Blood pressure and diabetes is also comparatively in good number. 10% of the population are suffering with high blood pressure, may be because of stress. 6.5% of them suffering from diabetes, which indicates the problem is increasing. .however these percentages are only slightly more than the previous study period.

3.2.11 Do you have any of the following Health Complaints

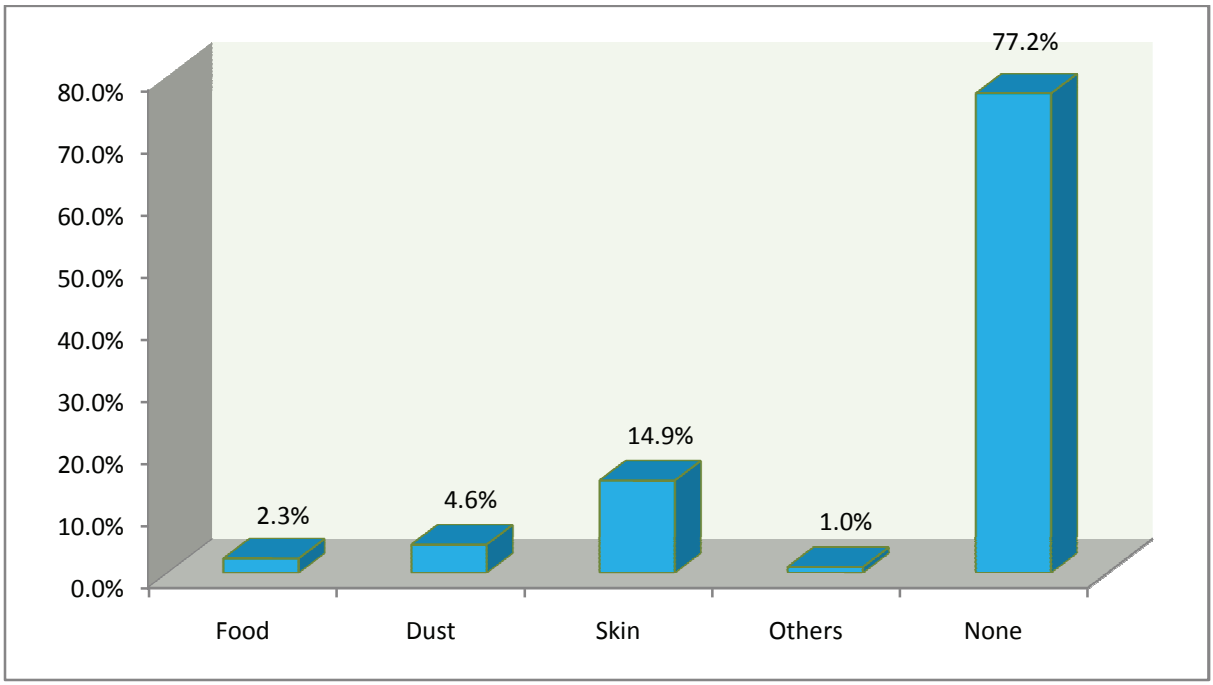
Do you have any of the following Health Complaints?		
	Frequency	Percent
Joint Pains	246	6.4%
Giddiness	137	3.6%
Tiredness	307	8.0%
Vision Defect	256	6.7%
Burning Urination	14	0.4%
Non-healing Ulcers	0	0.0%
Headache	188	4.9%
Others	65	1.7%
None	2601	68.2%



People were also enquired about any minor health complaints which they did not consider serious and may be ignoring them. 6.42% of this workers have joint pains, 3.6% giddiness, 8% Tiredness, 6.7% vision defect, 4.9% regular headache. These symptoms though minor in nature, but sometimes indication of serious impeding disease.

3.2.12 Has any Allergy

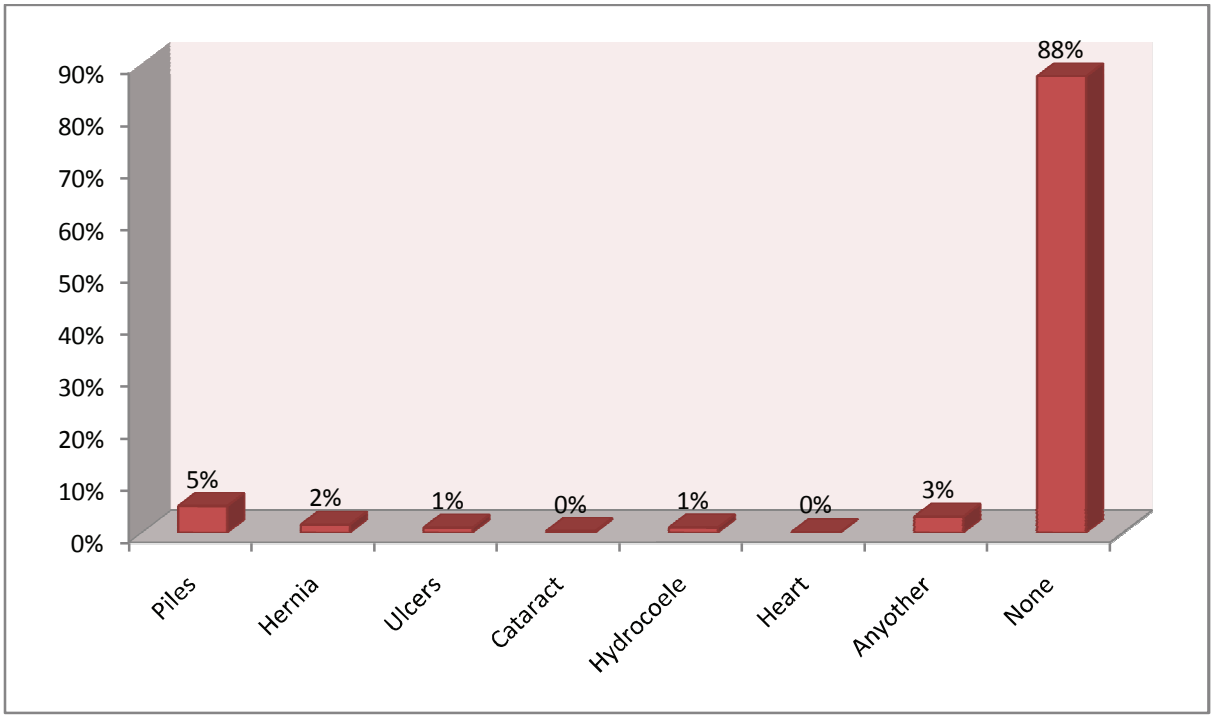
Has any Allergy?		
		Percent
Food	87.0	2.3%
Dust	171	4.6%
Skin	556.0	14.9%
Others	36	1.0%
None	2883.0	77.2%



Nearly 23% of the total population is suffering with some kind of allergy. Majority of them complained of itching sensation of the skin. This may be mostly due to working conditions, improper occupational safety measures or improper handling of the dyes and chemicals in the work place. The management has to focus on this problems and further medical report may be obtained to initiate preventive measures.

3.2.13 Were you ever Operated for

Were you ever Operated for?		
	Frequency	Percent
Piles	191	5%
Hernia	59	2%
Ulcers	37	1%
Cataract	13	0%
Hydrocoele	38	1%
Heart	6	0%
Anyother	115	3%
None	3259	88%

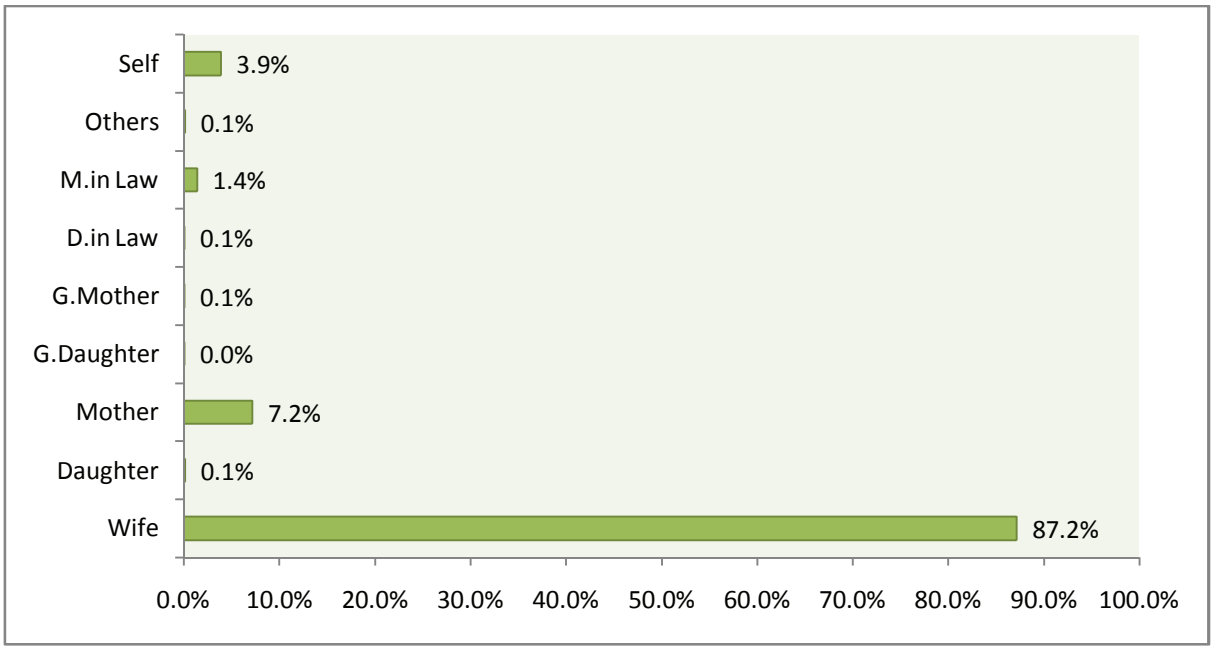


Nearly 12% of the population has undergone some type of surgery during their lifetime till this age. Majority of the surgeries are minor in nature which are common and the frequency is as per the national standards. However it is to be noted that no major surgeries were reported in the field data collection. This is an indication of some amount of positive health being maintained by the workers.

3.Physical details for Women

3.3.1 Relation with Head

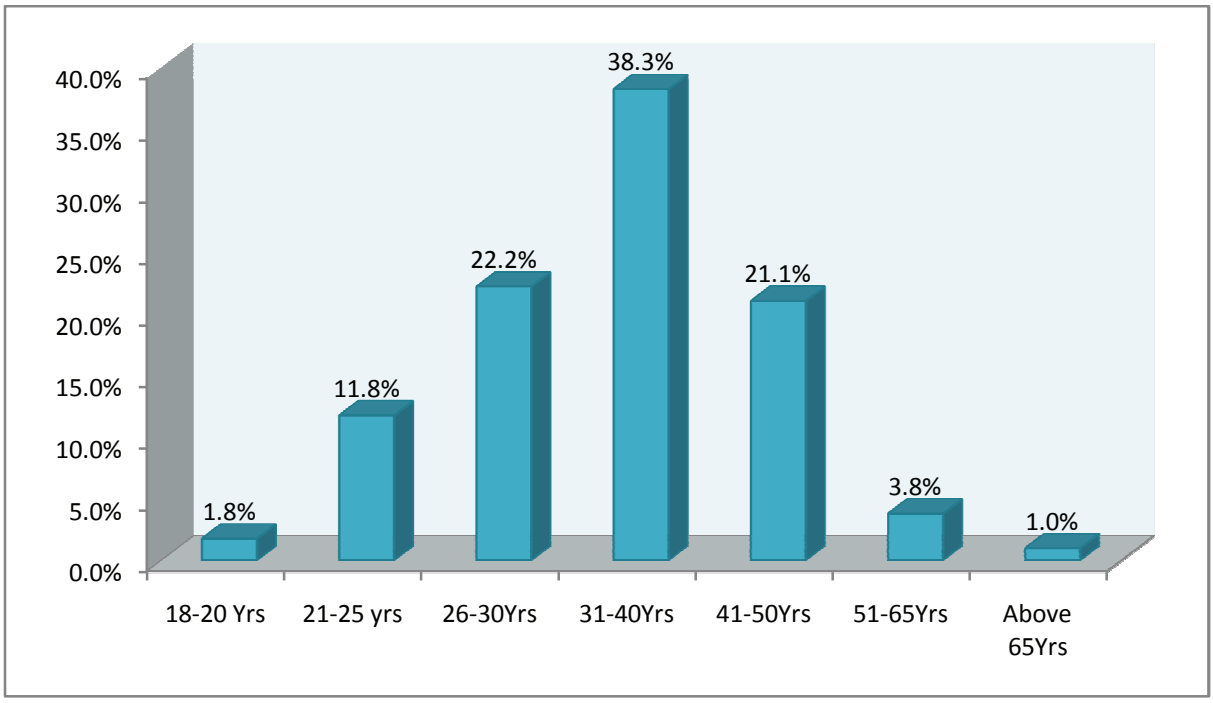
Relation with Head?		
	Frequency	Percent
Wife	3217	87.2%
Daughter	5	0.1%
Mother	264	7.2%
G.Daughter	1	0.0%
G.Mother	3	0.1%
D.in Law	2	0.1%
M.in Law	51	1.4%
Others	5	0.1%
Self	143	3.9%
Total	3691	100.0%



This graph indicates the nature of the family. The person who was interview in the house being the wife of the worker, who is available. Most of the families have old mother or father apart from the growing children. The women member of the family was interrogated and revealed the information.

3.3.2 Age

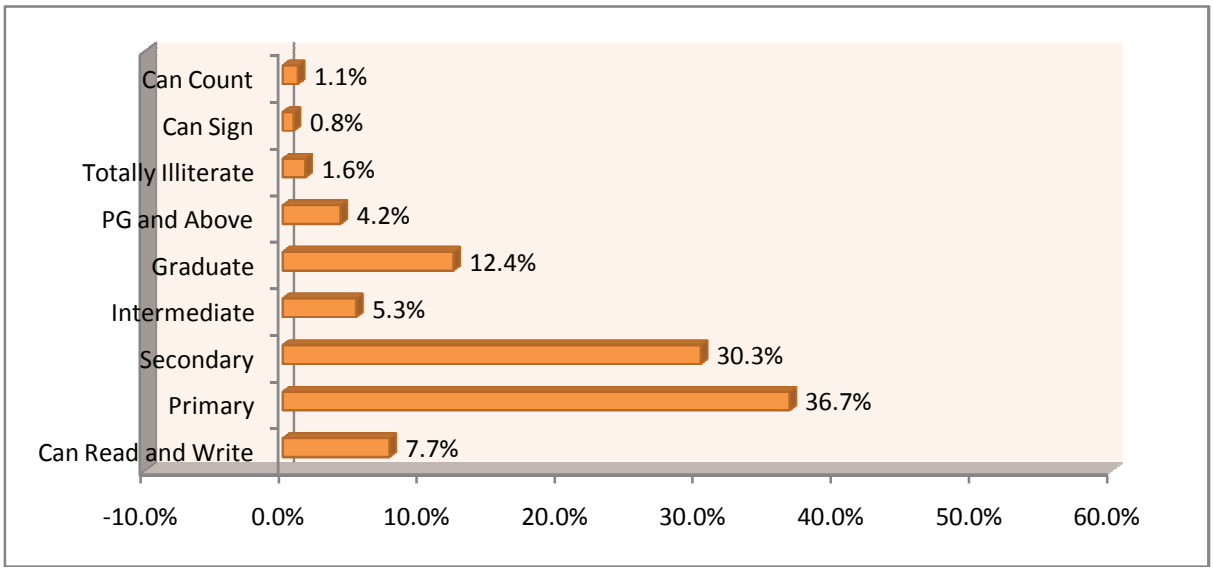
Age?		
	Frequency	Percent
18-20yr.s	66	1.8%
21-25yr.s	435	11.8%
26-30 Yr.s	821	22.2%
31-40 yr.s	1413	38.3%
41-50yr.s	778	21.1%
51- 65 yr.s	141	3.8%
Above65 yr.s	37	1.0%
Total	3691	100.0%



73% of the women in these families, who are mostly the wives of the industrial workers belong to age group of 20 – 40 years i.e. reproductive age group. This is a very important indicator of the socio economic structure of the family. The house wife plays a very important role in maintaining the family including the health, and economic status. Younger the house wife better the control over the family.

3.3.3 Education

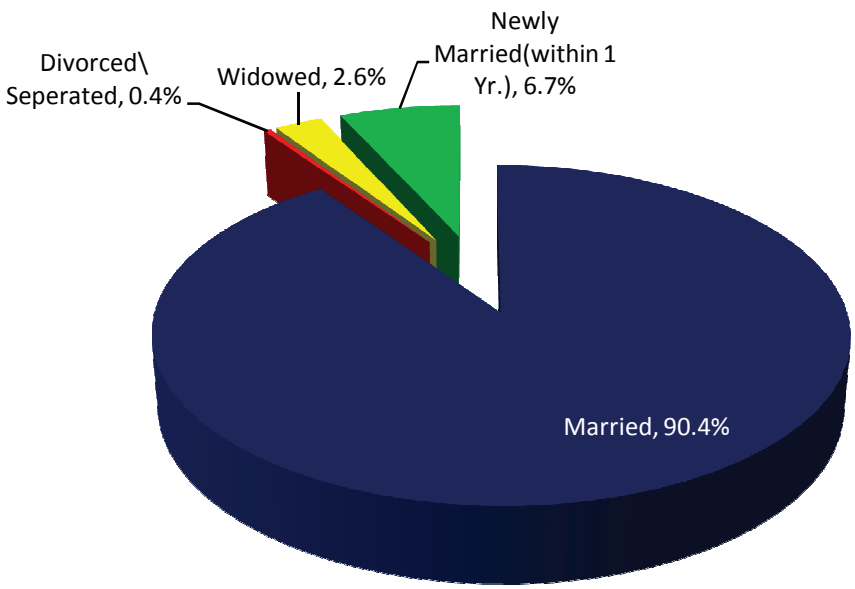
Education?		
	Frequency	Percent
Can Read and Write	285	7.7%
Primary	1354	36.7%
Secondary	1117	30.3%
Intermediate	196	5.3%
Graduate	456	12.4%
PG and Above	154	4.2%
Totally Illiterate	60	1.6%
Can Sign	29	0.8%
Can Count	40	1.1%
Total	3691	100.0%



Education of the housewife is an important indicator of the socio economic condition of the family. If she is educated whole family is educated. Nearly 36% of them have completed primary education. 31% of them are educated more than high school. 12.3% of them are graduates. But it is to be observed that 8% of them are totally illiterate, and people who can just read, write and count 9%. Hence female literacy has to be improved. This improvement of literacy rate is increased comparing to last study.

3.3.4 Marital Status

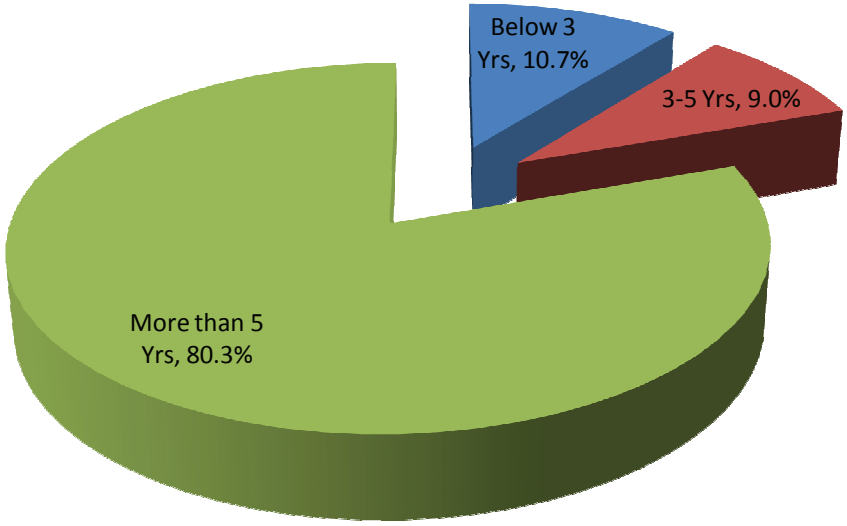
Marital Status?		
	Frequency	Percent
Married	3335	90.4%
Divorced/Seperated	13	0.4%
Widowed	97	2.6%
Newly married (With in 1yr.)	246	6.7%
Total	3691	100.0%



90% of the women in this group are married. This is in perfect coordination with the working male population. This indicates all of the population in the sample study area are married couples with family. Hardly any one is unmarried either male or female. This clearly indicates it is the families whole together migrate for the work, not leaving wife and children at native place, unlike construction workers.

3.3.5 No. of years of Marriage

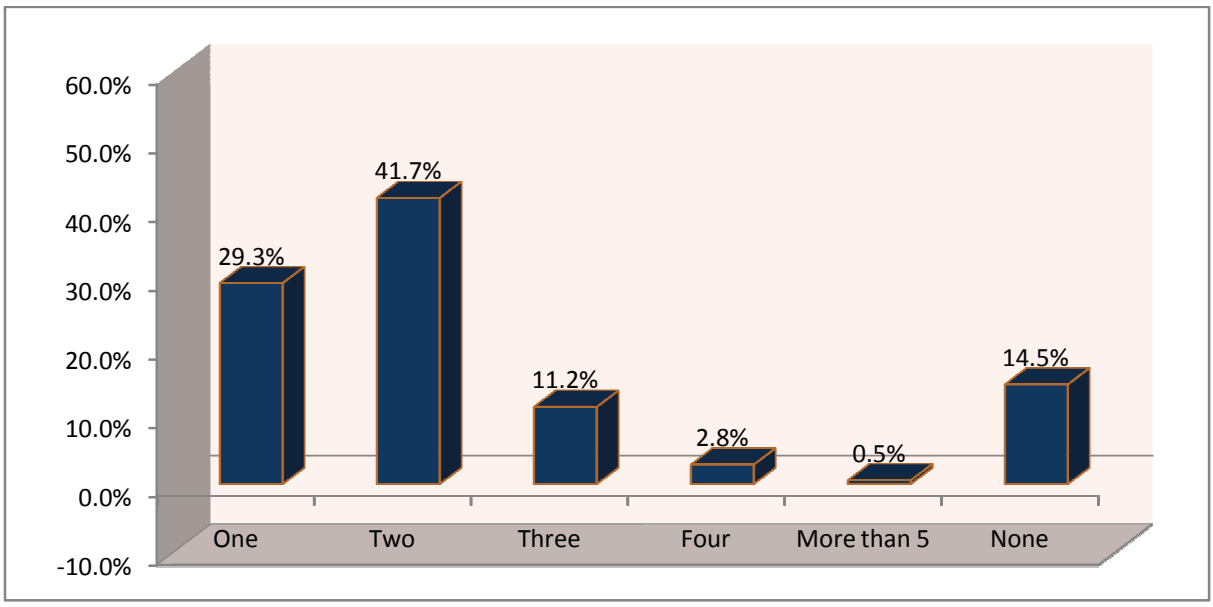
No. of years of Marriage?		
	Frequency	Percent
Below 3 yrs	395	10.7%
3-5 yrs	331	9.0%
More than 5yrs	2965	80.3%
Total	3691	100.0%



Young couples are only 11% who are married below 3 years. That means they migrated after marriage 80% of the couple are married for more than 5 years. This indicates the families are settled here for longer time as many of them are permanent employees. This is important to study the impact of industrialization on their health.

3.3.6 Number of live Children

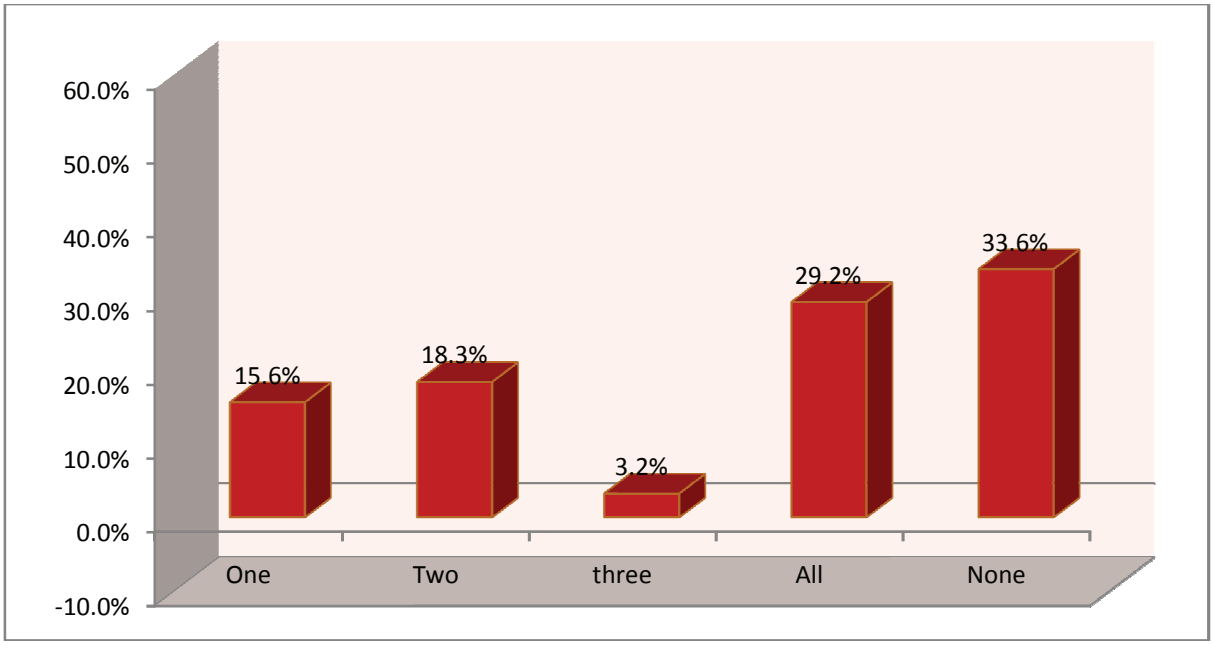
Number of live Children?		
	Frequency	Percent
One	1080	29.3%
Two	1538	41.7%
Three	414	11.2%
Four	104	2.8%
More than five	20	0.5%
None	535	14.5%
Total	3691	100.0%



No. of living children in a family indicates, whether there is any child deaths or abortions etc. to the women. 52% of the women have either 2 or 3 children living and healthy. This is also an indication of the hormonal changes due to nutrition, poverty or environmental effect. However 14.5% of the women have no children. This has to be further evaluated to know what is the age of the women, and since how long they are married and is there any temporary or permanent infertility among women.

3.3.7 No. of Normal Deliveries

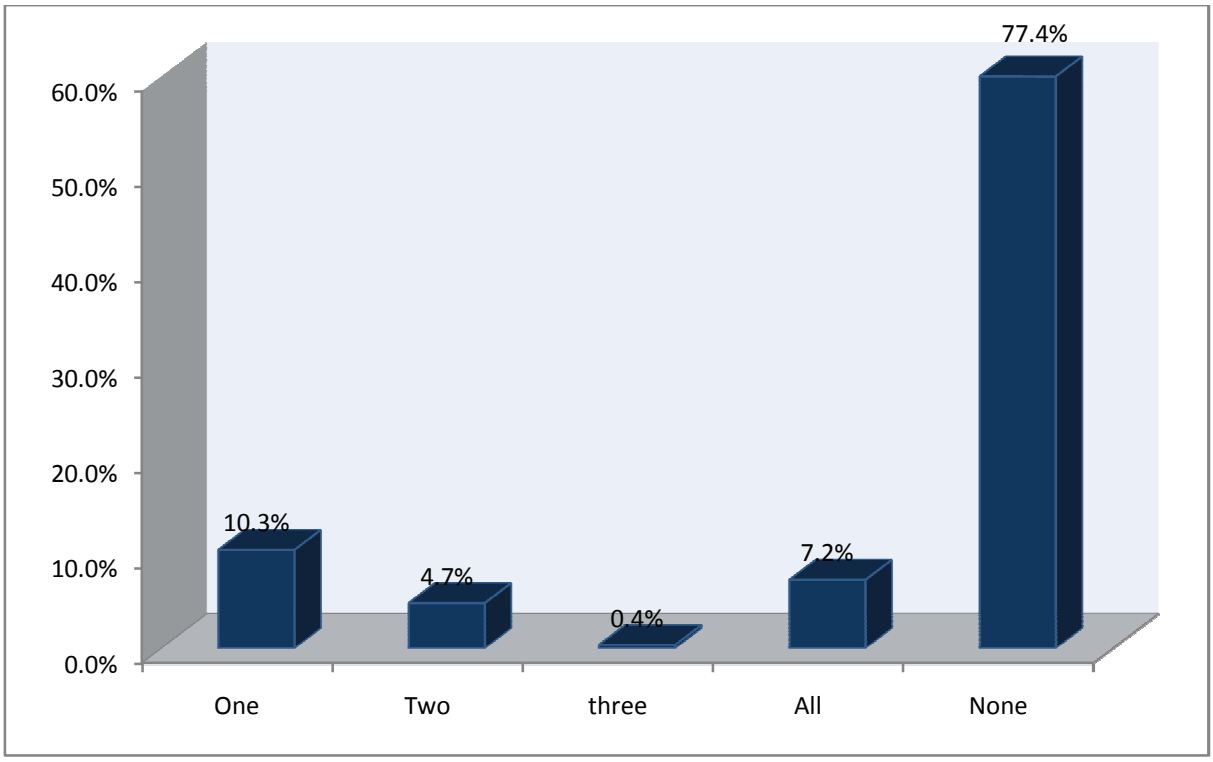
No. of Normal Deliveries?		
	Frequency	Percent
One	576	15.6%
Two	677	18.3%
Three	119	3.2%
All	1077	29.2%
None	1242	33.6%
Total	3691	100.0%



Number of normal deliveries also gives a good indication of the ante natal care and maternal health service available in the area. 67% of the women had normal deliveries and 33% of the women had assisted delivery or caesarian section. In the present scenario in the country this is not abnormal but it requires an in depth study of these cases about the reasons for caesarian, and whether they took place in Government hospital or private maternity home as private doctors are more inclined towards caesarian as they do not want to wait for so long.

3.3.8 No. of Caesarian Deliveries

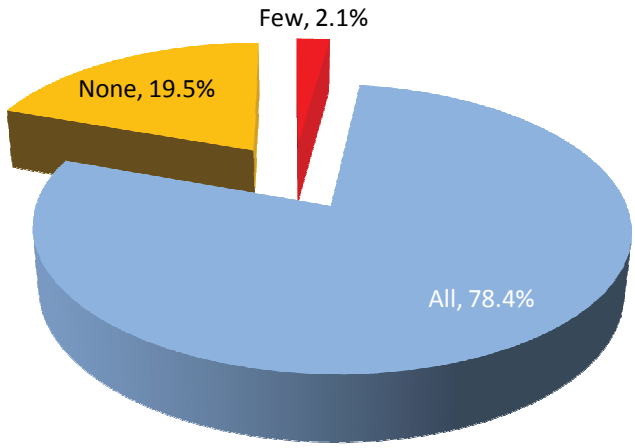
No. of Caesarian Deliveries?		
	Frequency	Percent
One	381	10.3%
Two	175	4.7%
Three	13	0.4%
All	265	7.2%
None	2857	77.4%
Total	3691	100.0%



In this table the number of actual caesarian sections data is collected. Here it indicates only 22% of them underwent caesarian. As it is clear from this data, only 22% had caesarian. This is very close to the national average. Hence we can conclude that the antenatal services or mother and child health services are satisfactory in this area.

3.3.9 No. of Deliveries in Hospital

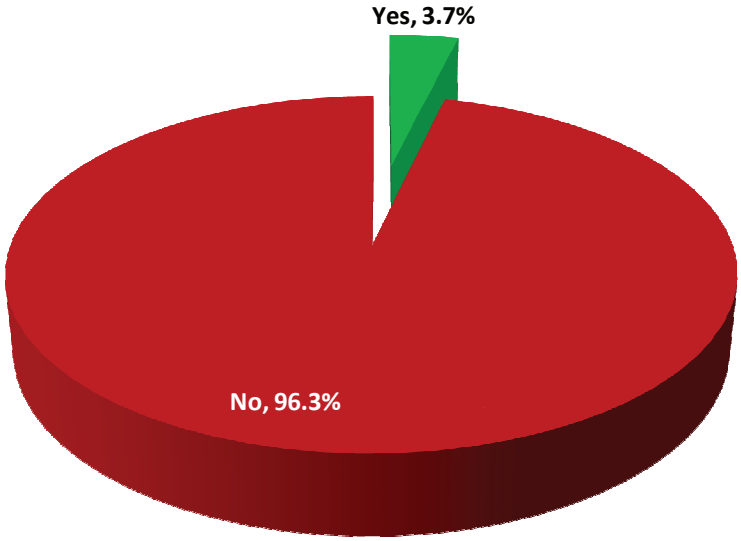
No. of Deliveries in Hospital?		
	Frequency	Percent
Few	79	2.1%
All	2892	78.4%
None	720	19.5%
Total	3691	100.0%



Number of deliveries in a hospital either Govt. or private is an indication of good antenatal and mother and child services. The infant mortality grossly gets reduced whenever the delivery takes place in experienced hands, either a good midwife or lady doctor. 79% of the women had all their deliveries conducted in hospital. But more important is 19.5% of the women had their deliveries conducted at home. Here the chances of infant mortality is very high. As the study area is in the vapi municipal limits, how the ANM:s or anganwadi workers did not motivate them for hospital deliveries. This huge percentage has to be reduced and the Govt. has to focus on this major problem.

3.3.10 Number of Abortions

Number of Abortions?		
	Frequency	Percent
Yes	136	3.7%
No	3555	96.3%
Total	3691	100.0%

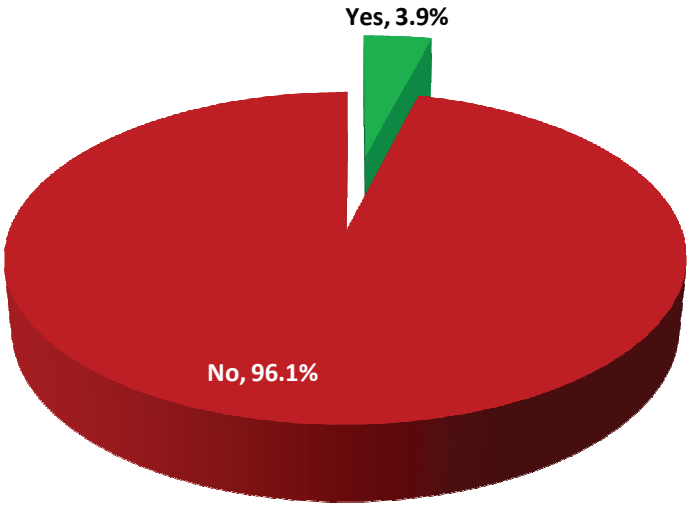


Number of abortions a women faced in her life is an important indication of several factors influencing the pregnancy. As we have seen in the previous table, nearly 24% of the women did not have proper antenatal check up by the Gynecologist. They may be having nutritional deficiency, increased blood pressure etc. when they plan to have delivery at home, it may result in abortions. **But 3.7% of pregnant women had abortions eithermedical or illegal or unwanted pregnancy is not a very high percentage to be noticed or recognized**.

This percentage is same as that of 5yrs back study.

*3.3.11(a)*Any child died after Birth/Still births

Any child died after Birth/Still births?		
	Frequency	Percent
Yes	145	3.9%
No	3546	96.1%
Total	3691	100.0%

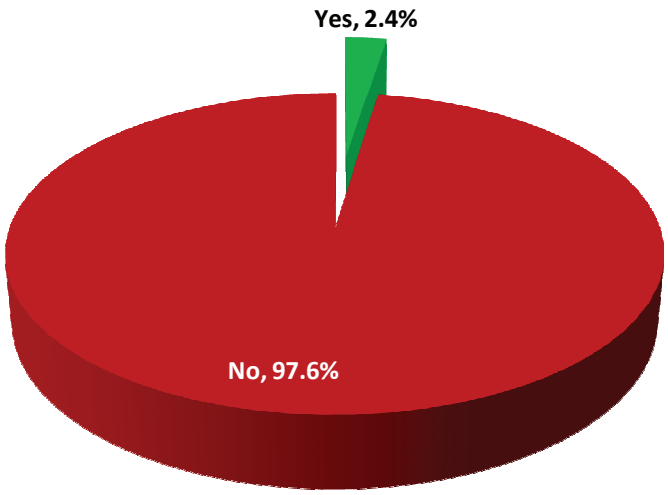


Birth of a dead child or death immediately after delivery is also a significant indication of poor antenatal and mother and child health services. Significant percentage of women i.e. 3.9% of the women experienced still birth or death immediately after delivery. This is a matter of concern. Ideally this should not be more than 1-2 percentage. The reasons for this mortality figure has to be investigated further and the Department of family welfare of the State Govt. should focus on this problem to reduce it to the national standards.

The NFHS report for Gujarat reports 3.4%.so there is no extra incidence in study area.

3.3.11(b) Hysterectomy (Removal of uterus) ?

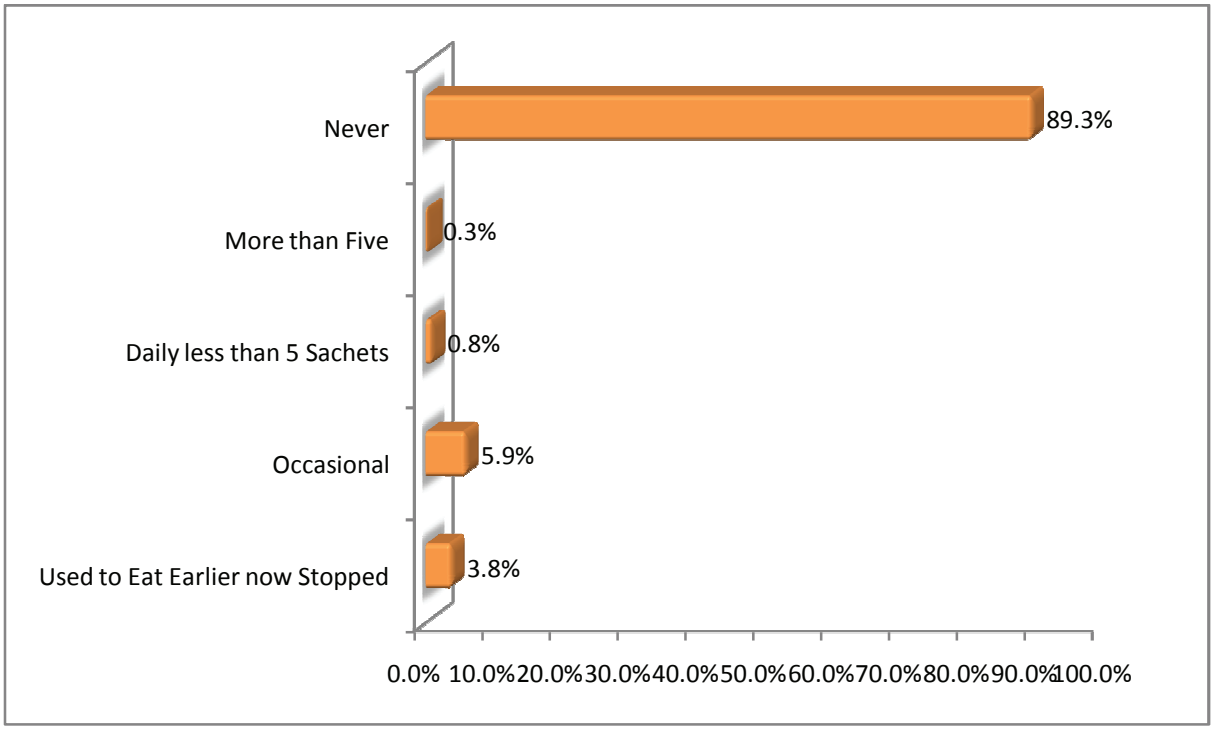
	Frequency	Percent
Yes	89	2.4%
No	3602	97.6%
Total	3691	100.0%



97.6% of the women did not under go hysrectomy operation. This indicates there is a good menstrual hygiene and there is no hormonal imbalance. as majority of the population are under 40 yrs this is very significant.

3.3.12 Eats Gutka / Zarda pan (Tobacco in any farm)

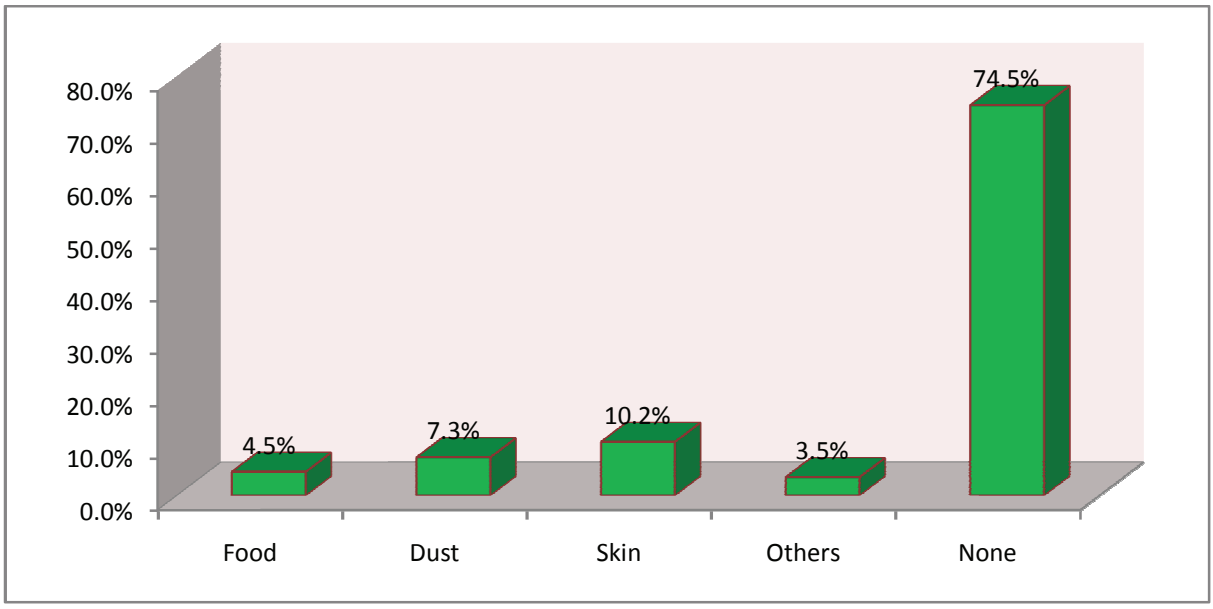
Eats Gutka / Zarda pan (Tobacco in any farm) ?		
	Frequency	Percent
Used to Eat Earlier now Stopped	139	3.8%
Occasional	216	5.9%
Daily less than five sachets	31	0.8%
More than five	10	0.3%
Never	3295	89.3%
Total	3691	100.0%



Women in this group have openly admitted i.e. 11% of them, that they consume oral tobacco in some form. However, we observed that this percentage is much higher than what it is revealed in the questionnaire. Probably 30-40% of the women are consuming oral tobacco. This is a matter of concern as this would affect the pregnancy and child birth significantly.

3.3.13 Has any Allergy

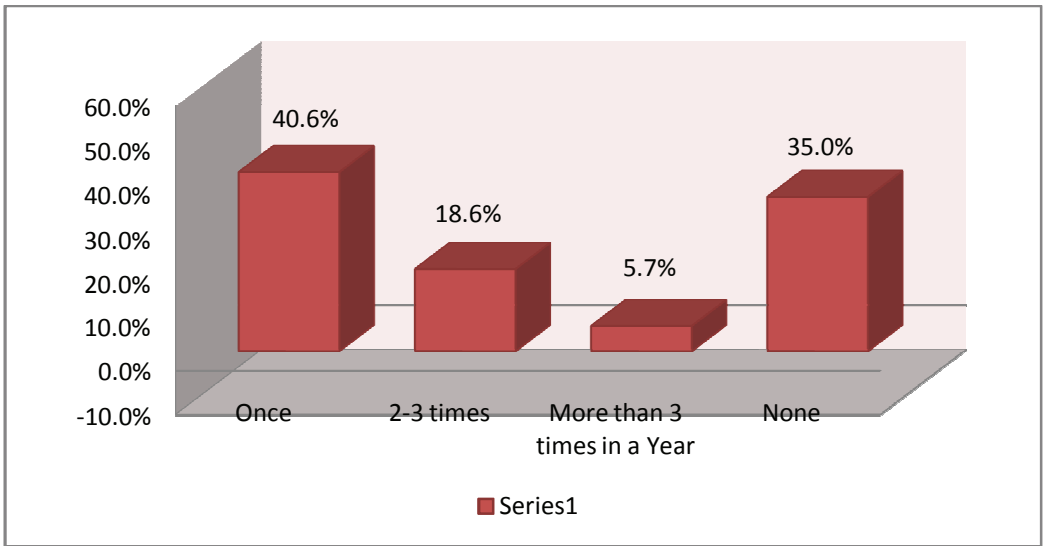
Has any Allergy?		
	Frequency	Percent
Food	167	4.5%
Dust	269	7.3%
Skin	378	10.2%
Others	129	3.5%
None	2748	74.5%
Total	3691	100.0%



Allergy in any organ of the body or for any item also indicate environmental pollution. 25.5% of the sample study members indicated that they suffer from some type of allergy. Significantly 10% of them are suffering from skin allergy. This may be due to bad hygiene conditions, or chemical irritants at the work place or environmental pollution. However as this is as per national data and also as per other states. **This is not significant. But this is slightly more than last study**.

3.3.14 Suffered with Fever in last one year

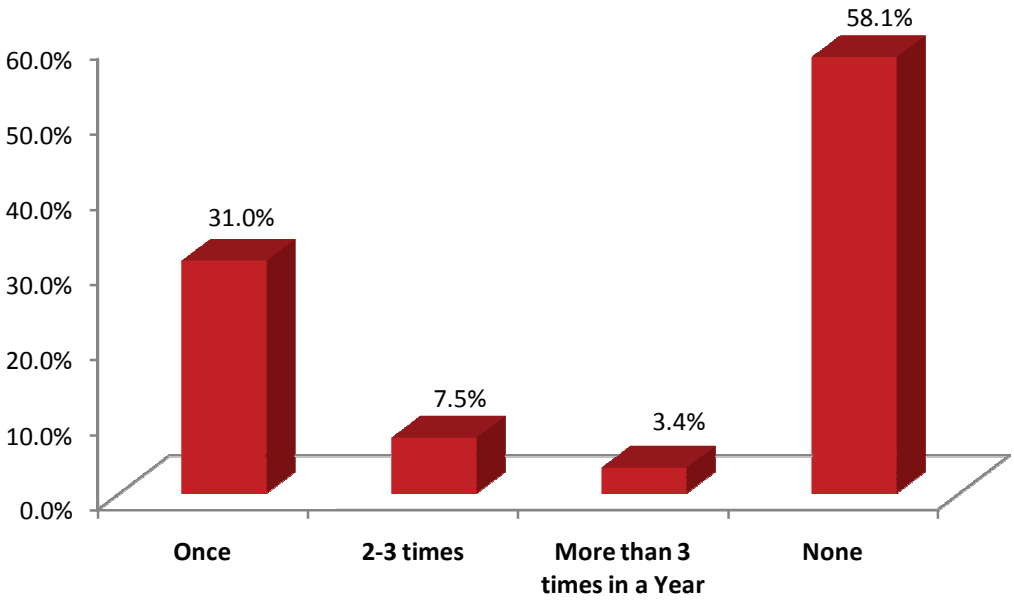
Suffered with Fever in last one year?		
	Frequency	Percent
Once	1500	40.6%
2-3 times	688	18.6%
More than 3 times in a year	211	5.7%
None	1292	35.0%
Total	3691	100.0%



Attack of fever is an indication of body resistance. One attack in a year of fever because of any reason is normal. 40% of the people had just one attack. 23% of the women had two or more than two attacks of fever in last one year. This may be malaria or viral fevers like dengue and chikenguinea. If the incidence of fevers is very high in any particular area, this indicates bad public health measures. This will have a bearing as the total health index of the population and reflects on the apathy of the Government. **This is same percentage as last study.**

3.3.15 Suffered with Loose motions in last one year

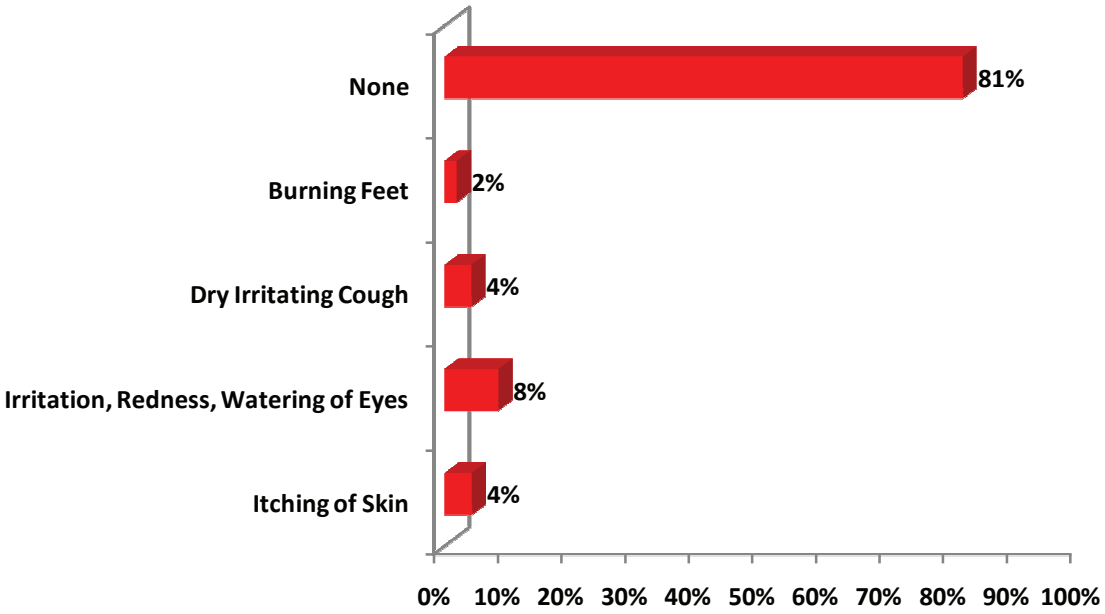
Suffered with Loose motions in last one year?		
	Frequency	Percent
Once	1144	31.0%
2-3 times	275	7.5%
More than 3 times in a year	127	3.4%
None	2145	58.1%
Total	3691	100.0%



Attack of loose motions is also a good indicator of the public health, especially safe drinking water and standard scientific disposal of the sewerage from the houses. It also denotes dirty water collection in several low lying areas, which breeds flies and mosquitoes. 11% of the population suffered more than two times of an attack of loose motions in last one year. Though this is not very significant, but still a matter of concern for the public health department.

3.3.16 Do you Suffer with any of them

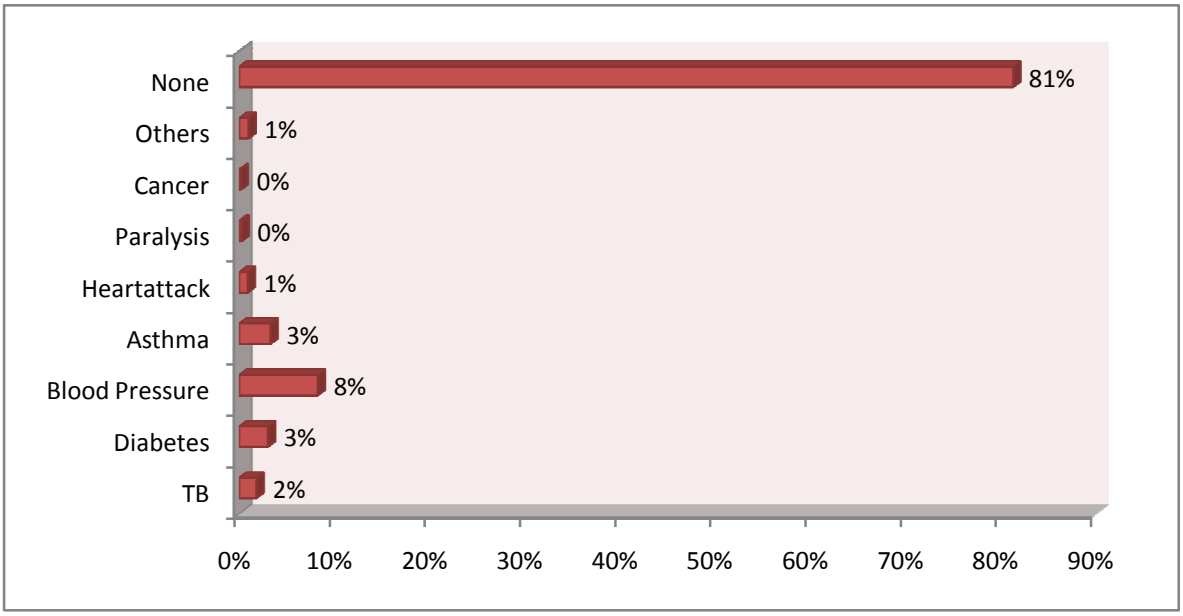
Do you Suffer with any of them?		
	Frequency	Percent
Itching of Skin	157	4%
Irritation, Redness, Watering of Eyes	309	8%
Dry Irritating Cough	155	4%
Burning Feet	68	2%
None	3013	81%



Some common health conditions affecting the people which has a bearing or dependence on the air, water and the environmental pollution is also elicited in the questionnaire. 6% had itching of the skin. 8% had redness and watering of the eyes, 4% had dry irritating cough. Altogether 20% of the study sample population had some type of complaint related to air, water and environmental pollution. This figure has to be observed carefully and any increase in percentage over the years indicates environmental pollution.

3.3.17 Suffered with any of them

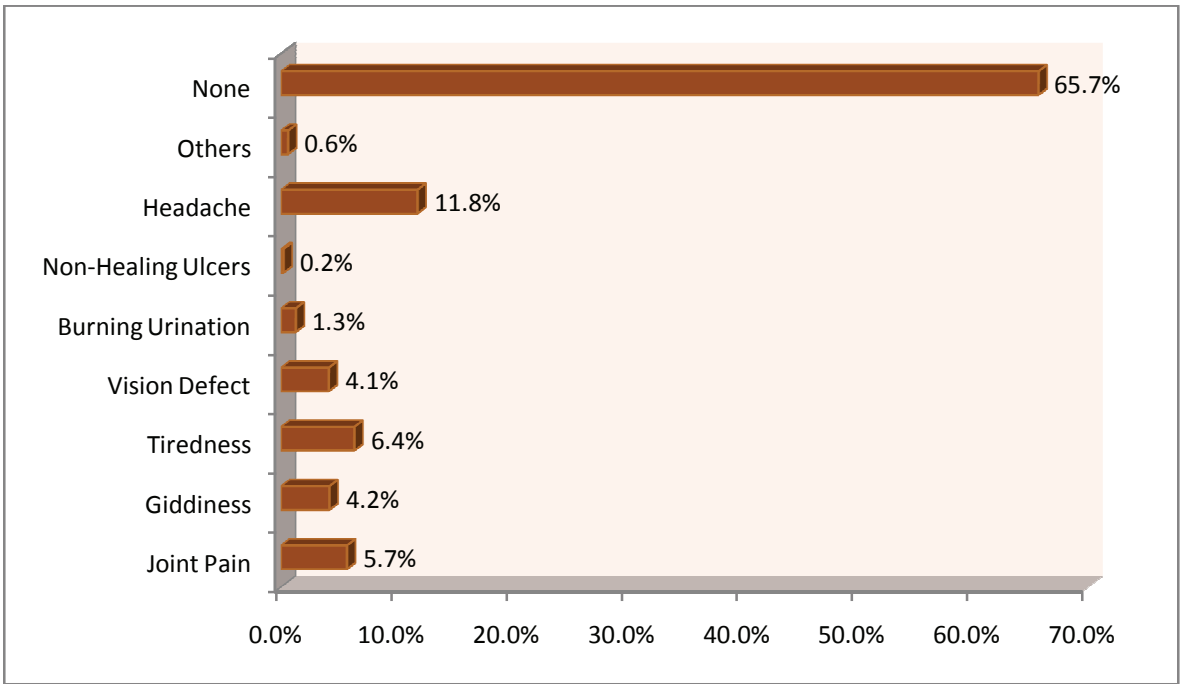
Suffered with any of them?		
	Frequency	Percent
TB	68	2%
Diabetes	113	3%
Blood pressure	308	8%
Asthma	123	3%
Heart attack	34	1%
Paralysis	10	0%
Cancer	6	0%
Others	37	1%
None	3034	81%



Only 19% of the women population out of 3034 people are suffering with some health problem. out of this only 3%are suffering with diabetes, 8% of them have increase blood pressure, 3% of them are suffering with asthma. As the trend of suffering with non communicable diseases is increasing because of bad food habits and lifestyle changes, this figure has to be observed carefully over the years and necessary measures should be initiated.

3.3.18 Do you have any of the following Health Complaints

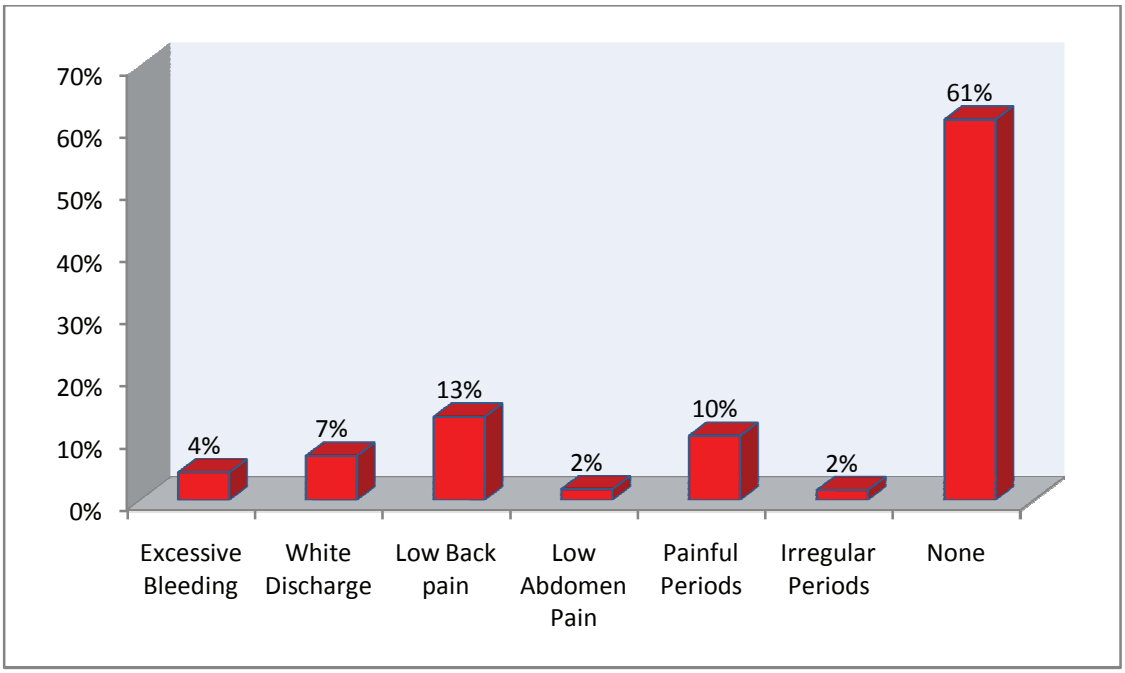
Do you have any of the following Health Complaints?		
	Frequency	Percent
Joint Pain	214	5.7%
Giddiness	157	4.2%
Tiredness	238	6.4%
Vision Defect	155	4.1%
Burning Urination	48	1.3%
Non-Healing Ulcers	8	0.2%
Headache	443	11.8%
Others	23	0.6%
None	2459	65.7%



Apart from the identified diseases as mentioned in the previous table, non specific health complaints are also registered. 5.7% of the women complained of joint pains which trend is observed. giddiness may be due to uncontrolled diabetes or hypertension or cervical spondylosis, which are increasing in frequency in the urban population over the years.

3.3.19 Has she any Gynaec Complaint

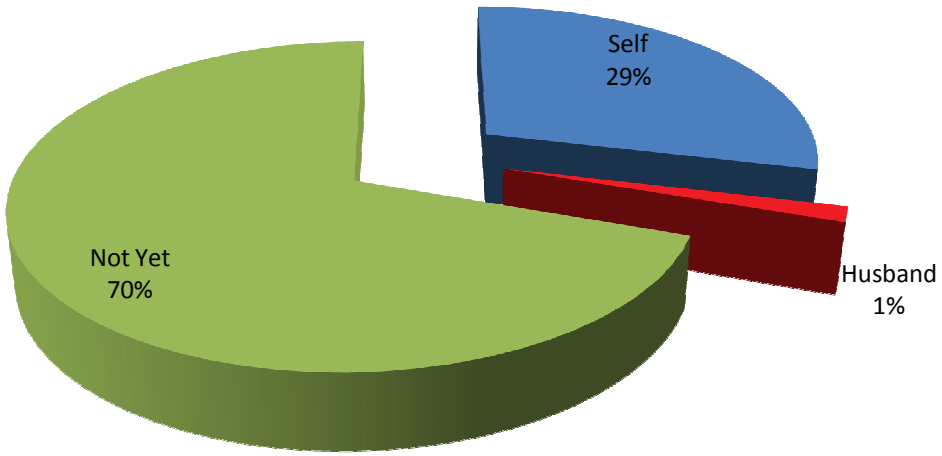
Has she any Gynaec Complaint?		
	Frequency	Percent
Excessive Bleeding	165	4%
White Discharge	263	7%
Low Back pain	495	13%
Low Abdomen Pain	65	2%
Painful Periods	383	10%
Irregular Periods	59	2%
None	2261	61%



61% total women have no Gynecology complaints. This is an indication of bad menstrual hygiene. 8% of them are suffering with white discharge. 4% of them with excessive bleeding which may result in anemia and tiredness, weakness etc. 10% of them have painful periods.

3.3.20 Family planning Operation (ask only to those who have children)

Family planning Operation (ask only to those who have children)		
	Frequency	Percent
Self	1060	28.7%
Husband	56	1.5%
Not Yet	2575	69.8%
Total	3691	100.0%

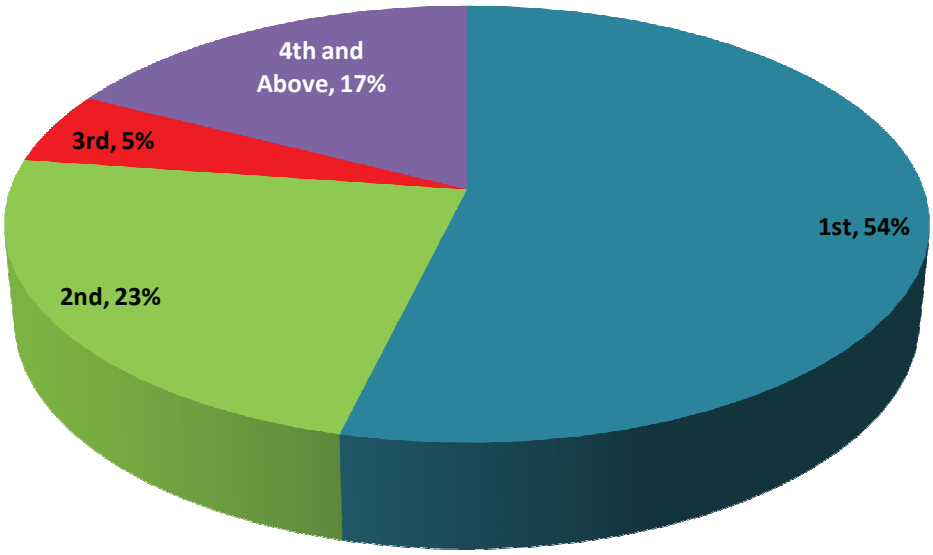


Out of 3691 women who are married and having children are enquired about family planning operation. It is observed that 69% of them are still in child bearing age and not yet planned for family planning operation. however out of 30% of the women who said family planning operation was carried out in their family shockingly 29% of the women who have undergone tubectomy and only 1.5% of the men underwent vasectomy.

This clearly shows bias against the women.

3.3.21 What is the Order
Only Pregnant Woman

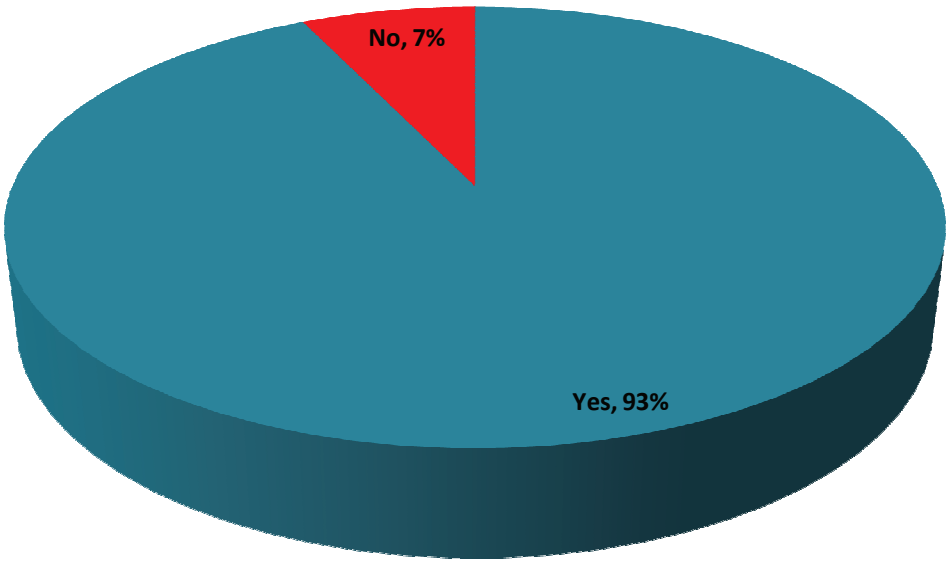
What is the Order?		
	Frequency	Percent
First	71	54%
Second	31	23%
Third	7	5%
Fourth and above	23	17%
Total	132	100%



They were 132 pregnant women in the sample. 54% of them are pregnant for the first time. 23% of them are pregnant for second time. 5% of them were pregnant for third time. 17% of them are pregnant for fourth time and there were two women in the sample who are pregnant for the fifth time.

3.3.22 Are you in Regular Checkup and Immunized

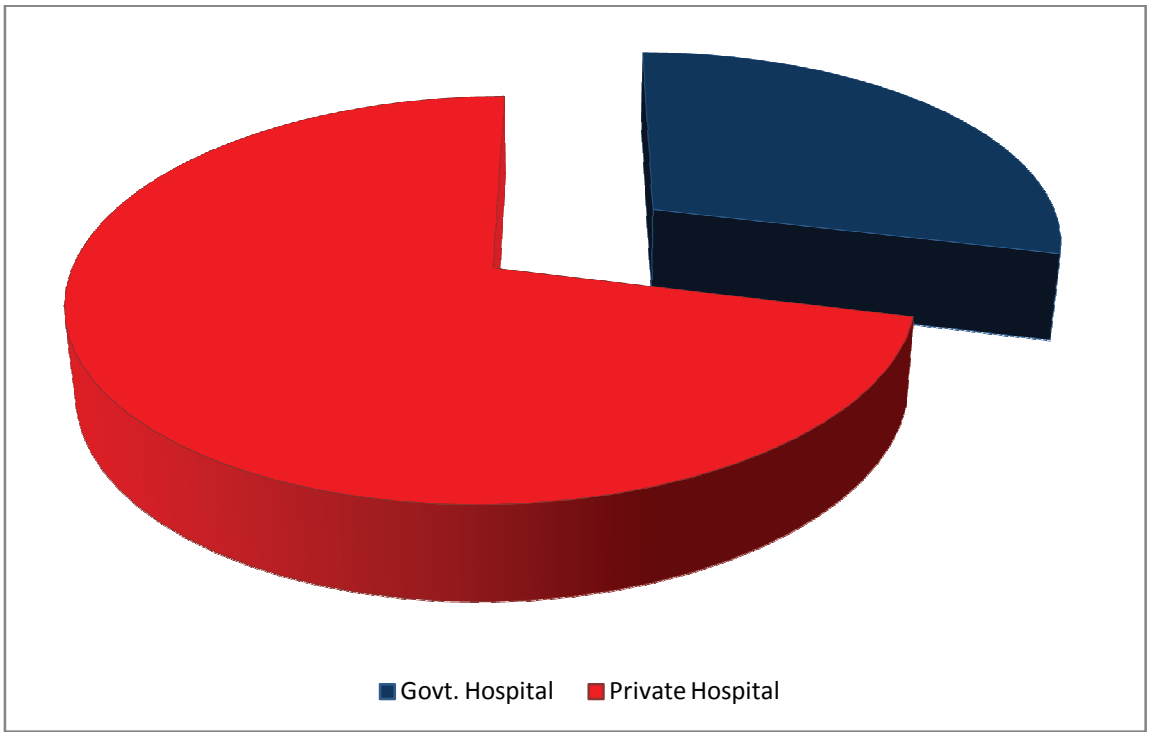
Are you in Regular Checkup and Immunized?		
	Frequency	Percent
Yes	128	97%
No	4	3%
Total	132	100%



97% of them said they are undergoing regular antenatal check up and following the instructions of the ANM or Anganwadi worker and female doctor. This is in quite contrast to nearly 19.5% of the women who said in the previous table, that they had their delivery at home. It is not clear whether they are from migrated population and elderly people, and the present generation of the pregnant women are more educated than the previous generation.

3.3.23 Where do you plan to go for Delivery

Where do you plan to go for Delivery?		
	Frequency	Percent
Govt.Hospital	38	29%
Private Hospital	94	71%
Total	132	100%

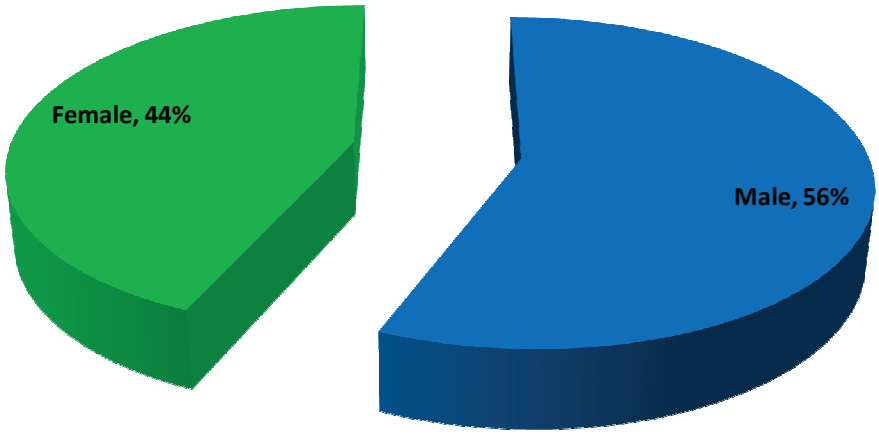


29% of the pregnant women said they prefer Govt. hospital for delivery and 71% are preferring private hospital for delivery. The percentage of women preferring Govt. hospital for delivery is a good indication of the quality of service extended by the Govt. hospital. This also indicates the availability, approachability and affordability of the Govt. hospital. However71% proffering private hospital indicates their economic back ground and financially sound status.

4.Physical details for Children aged up to one year

3.4.1 Gender

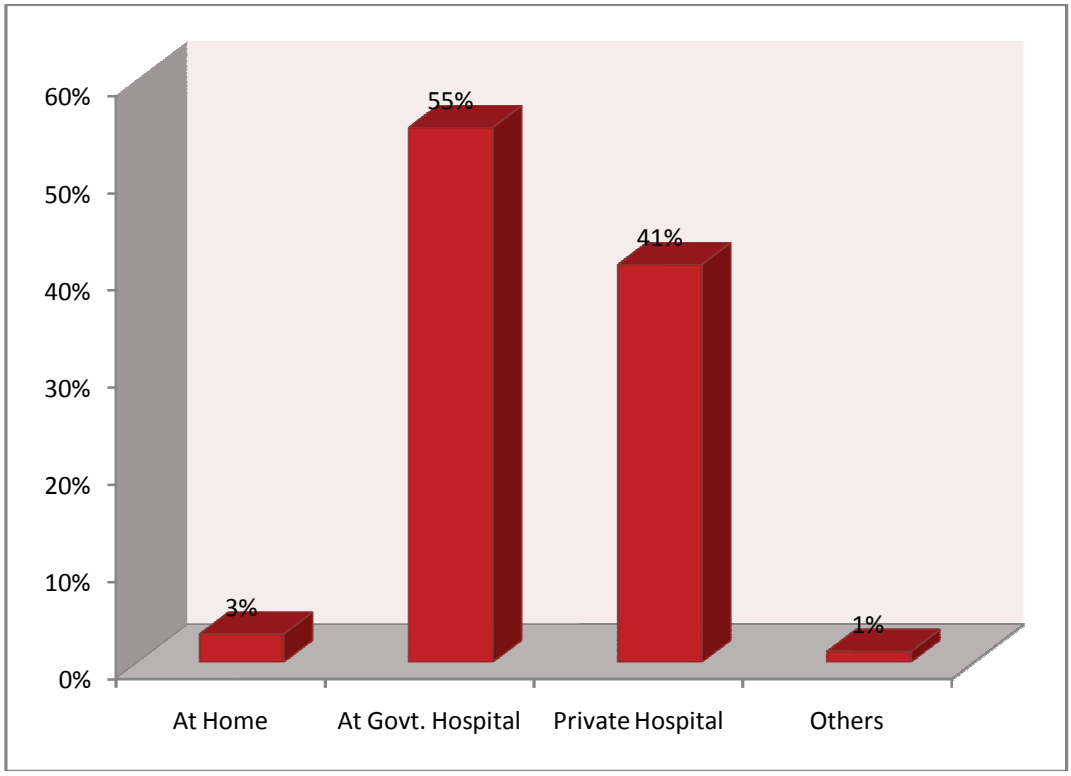
Gender?		
	Frequency	Percent
Boy	252	56%
Girl	195	44%
Total	447	100%



There are 447 children below the age of one year in the sample study data. Out of this 56% of them are boys and 44% of them are girls. This clearly indicates that in the study population preference for male child is preponderance and people may be getting family planning done after male child.

*3.4.2*Born

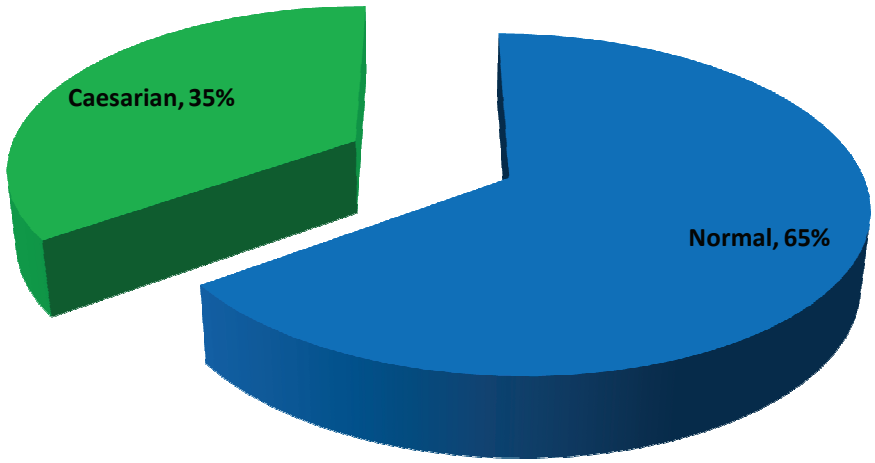
Born?		
	Frequency	Percent
At Home by Local Dai	13	3%
Govt.Hospital	246	55%
Private Hospital	183	41%
Others	5	1%
Total	447	100%



55% of these children below the age of 1 year are born in Govt. hospital. This is a very good indicator of hospital delivery/home delivery. This percentage is comparatively higher than the women who reported about their children's delivery, only 3% of them said they had a home delivery. Increase in institutional delivery is a clear indication of increasing quality of antenatal services and mother and child services.

*3.4.3*Type of Delivery

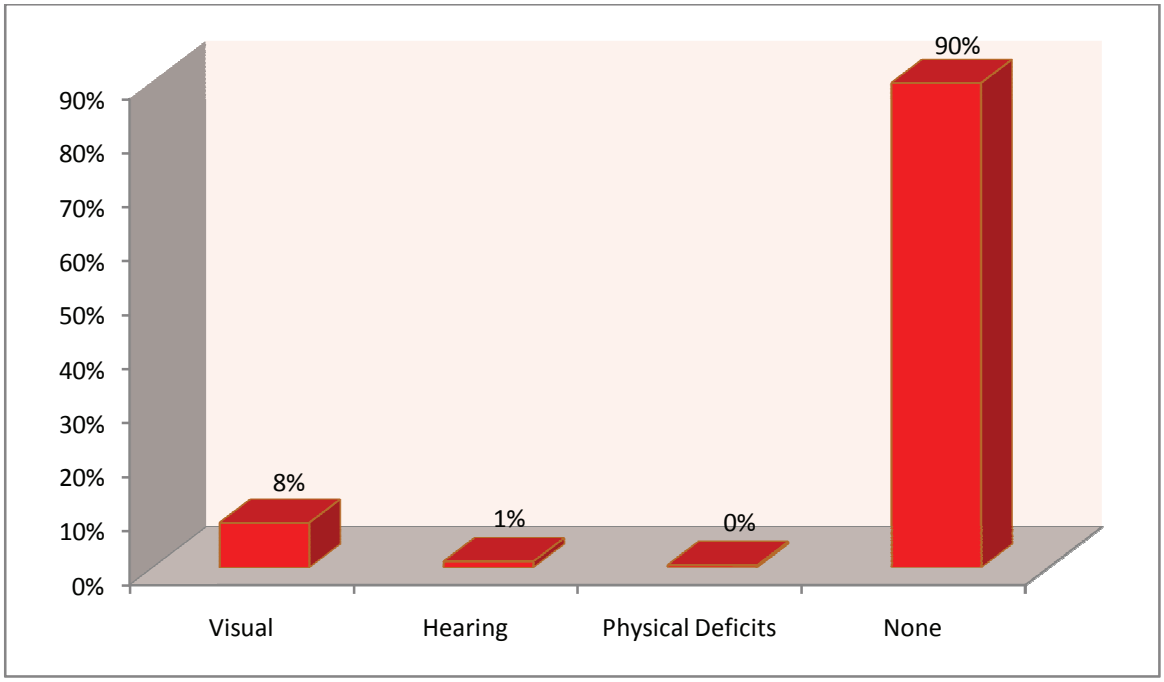
Type of Delivery?		
	Frequency	Percent
Normal	291	65%
Caesarian	156	35%
Total	447	100%



Among these below 1 year children, 35% of them are caesarian born and 65 % of them are normal delivery. Among these normal deliveries again significant percentage of them are home deliveries. The increasing percentage of caesarian deliveries is a matter of concern, but among them now many are done at Govt. hospital and how many are done at private hospital is very important. As it is likely that significant percentage of private hospital delivery are medically not indicated.

3.4.4 Was baby born with any health Deficits

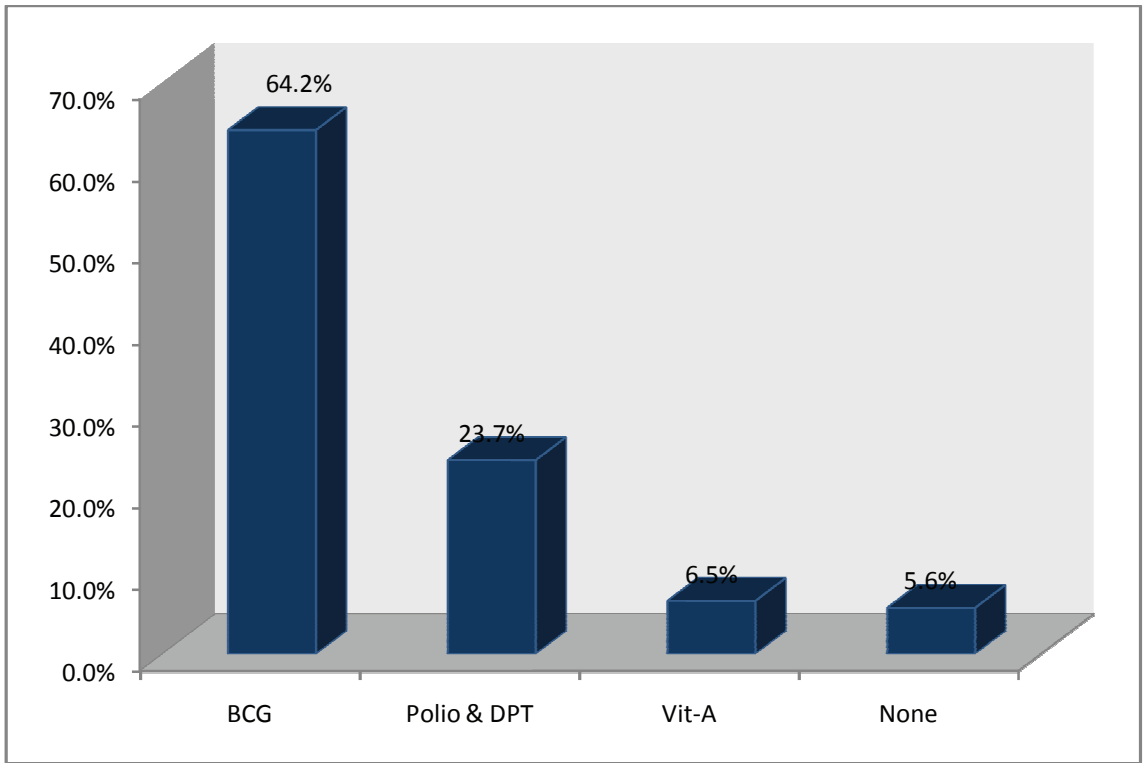
Was baby born with any health Deficits?		
	Frequency	Percent
Visual	37	8%
Hearing	5	1%
Physical Deficits	2	0%
None	403	90%
Total	447	100%



90% of these children were born healthy. Only 2% had physical defects and another 1% had hearing impaired. 8% of these infants had visual defects. What is the actual defect, whether they are born totally blind or temporary disorder has to be probed? This could be due to genetic or congenital anomaly. It may also be dive to nutritional deficiency of the pregnant mother.

3.4.5 Immunized

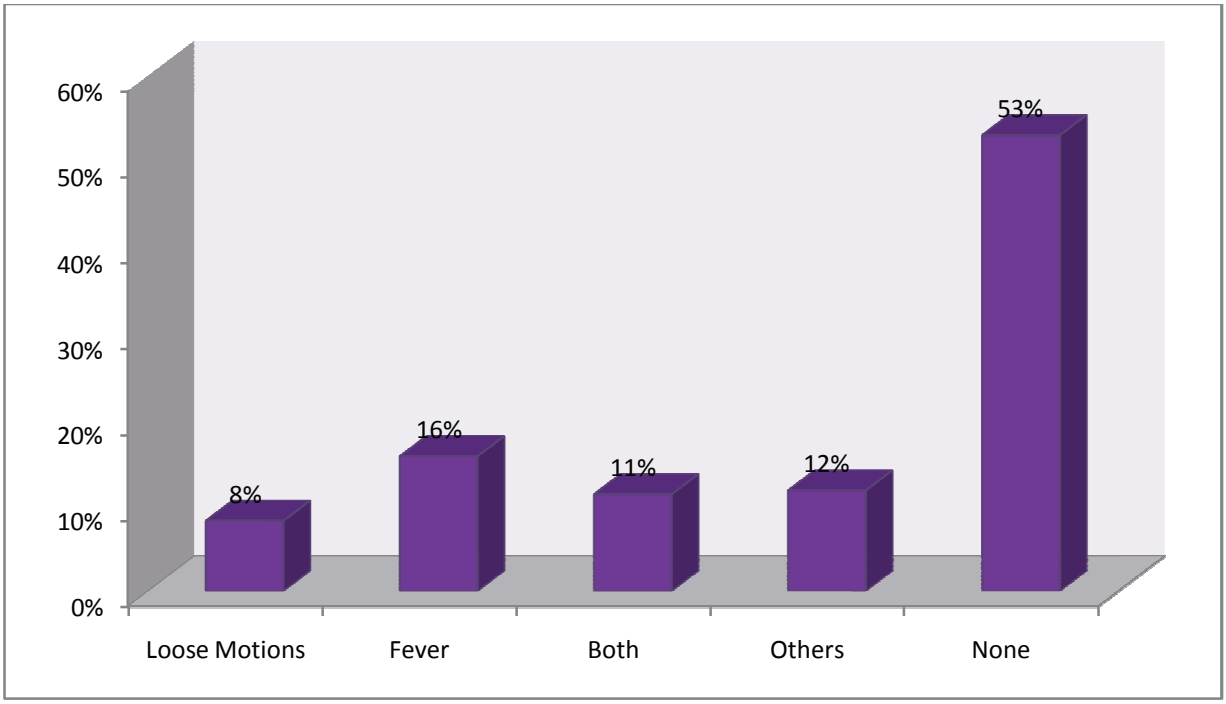
Immunized?		
	Frequency	Percent
BCG	376	64.2%
Polio & DPT	139	23.7%
Vit-A	38	6.5%
None	33	5.6%



It is surprising that 5.7% of these infants did not had any immunization done. However the mothers were not very clear about polio drops. But if it is true, it denotes none of the children had ever polio drops. This is very perplexing information. How is that5.6% of the children have missed the polio drops, in spite of pulse polio programme being implemented very vigorously.

3.4.6 Did Baby Suffer with any specific conditions

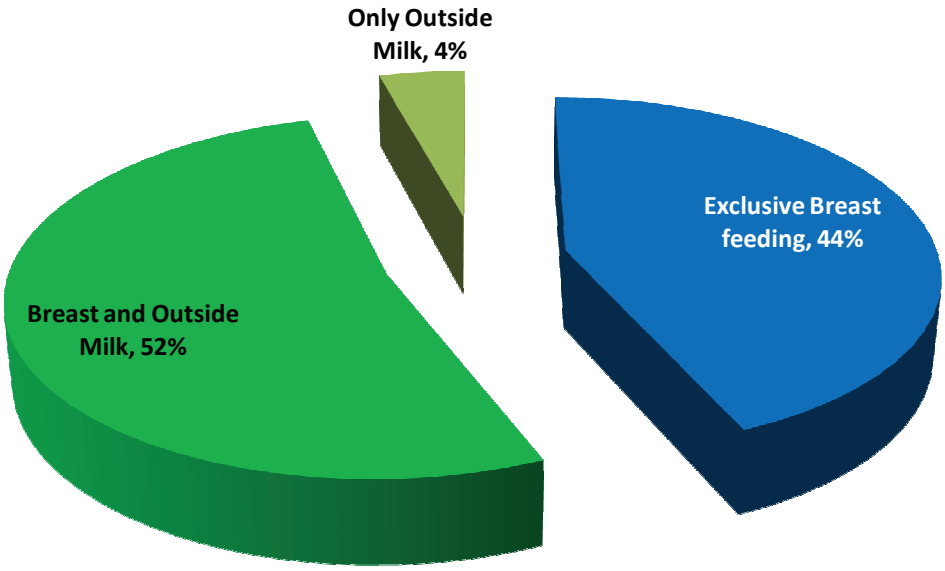
Did Baby Suffer with any specific conditions?		
	Frequency	Percent
Loose Motions	37	8%
Fever	71	16%
Both	51	11%
Others	53	12%
None	235	53%
Total	447	100%



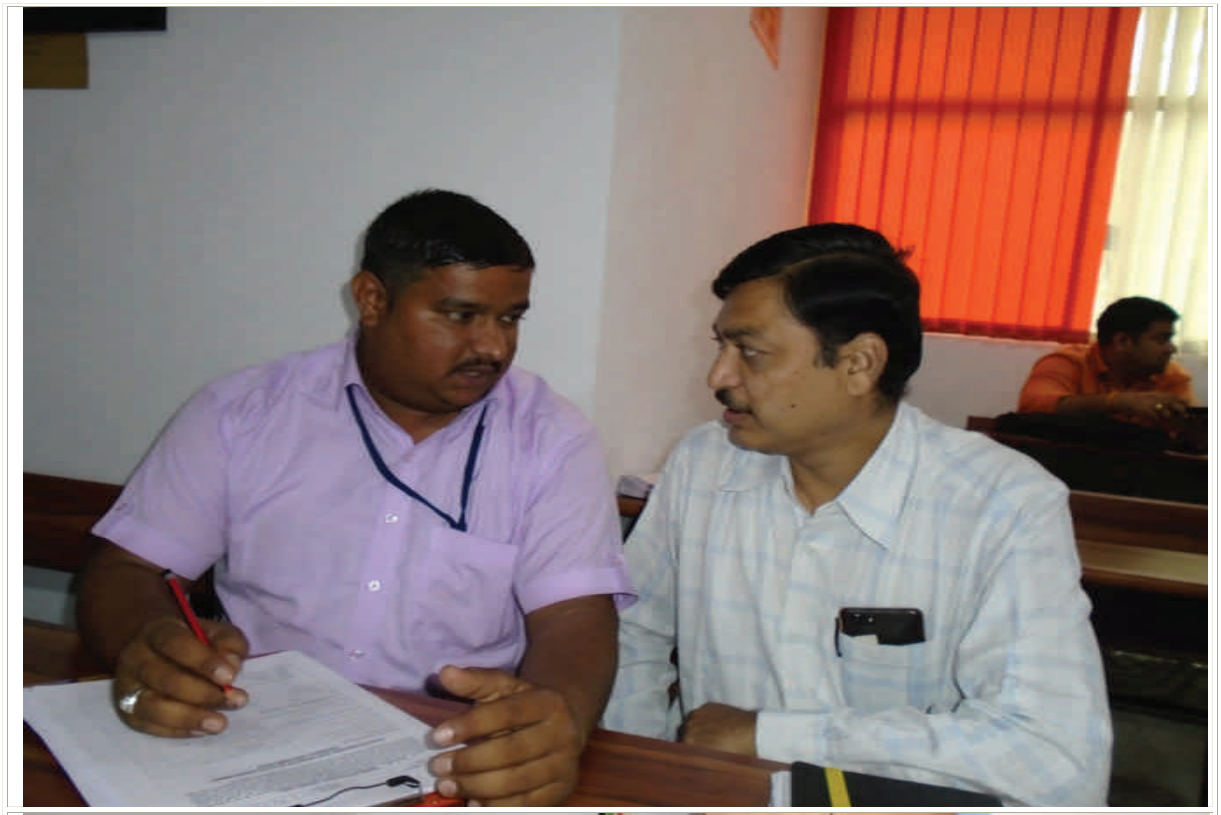
8 % of these infants had an attack of loose motions. 14% of them had attack of one or two of fever. 16% had both fever and loose motions. However, 53% of them had absolutely no attack of fever or loose motions. This gives an indication that, generally the infants are healthy and they do not suffer from any major illness.

*3.4.7*Feeding

Feeding?		
	Frequency	Percent
Exclusive Breast Feeding	195	44%
Breast and Outside Milk	234	52%
Only Outside Milk	19	4%



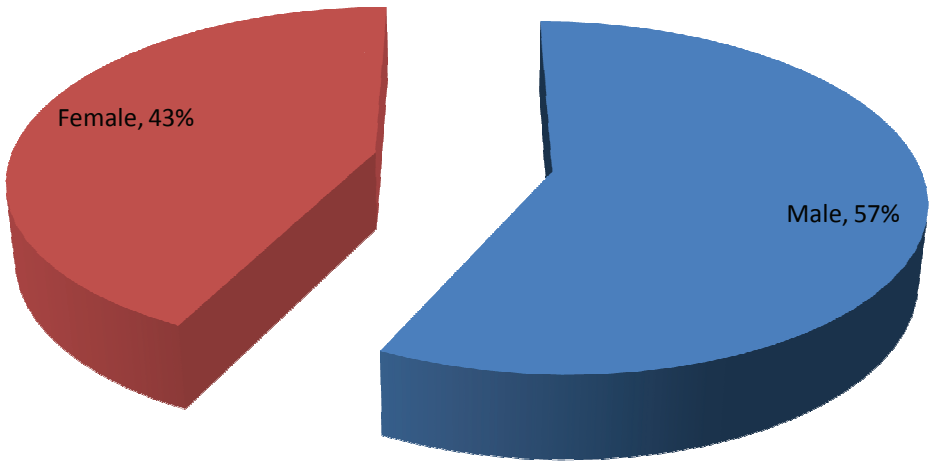
Breast feeding is an important indicator of infants health status. Only 44% of the mothers are giving exclusive breast feeding. This indicates that the child is getting sufficient milk from the mother, another 52% of tem said apart from breast feeding, they supplement with outside milk. This will have a bearing on the child's health.



5.Physical details for Children More than 1year to up to 5years

3.5.1 Gender

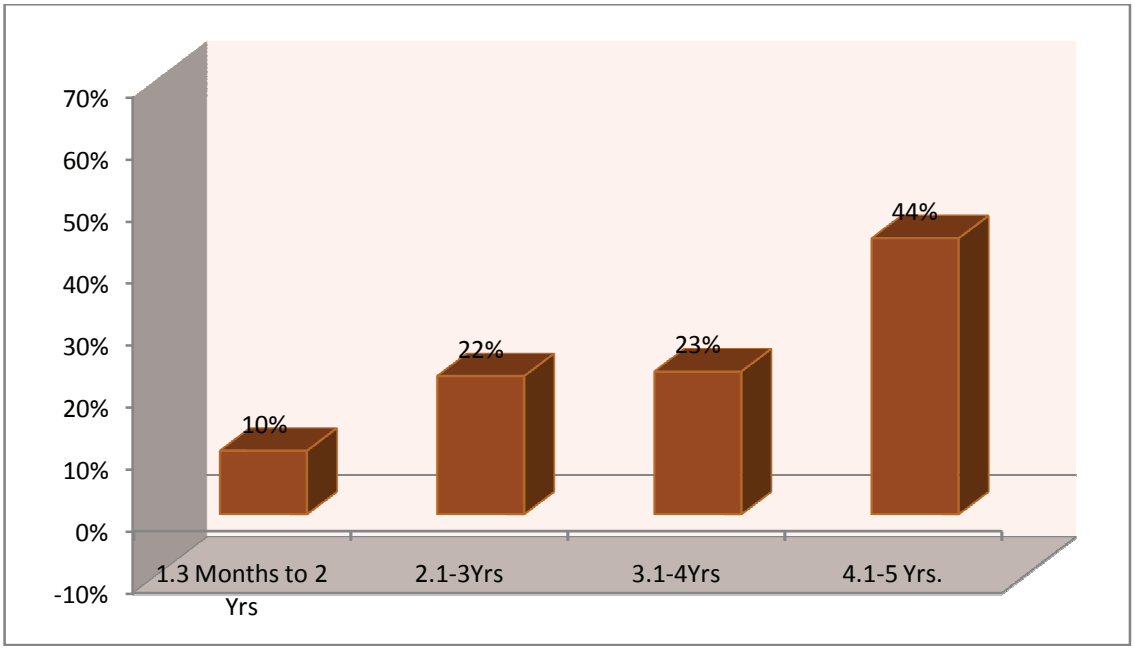
Gender?		
	Frequency	Percent
Boy	850	57%
Girl	636	43%
Total	1486	100%



We have also studied the health status of the children from 1-5 years age group. Surprisingly ever here 57% of the sample population are males, and only 43% of the sample population are females. This is almost similar to the previous age group table. This also indicates that boys are proffered in the society than a girl child.

3.5.2 Age

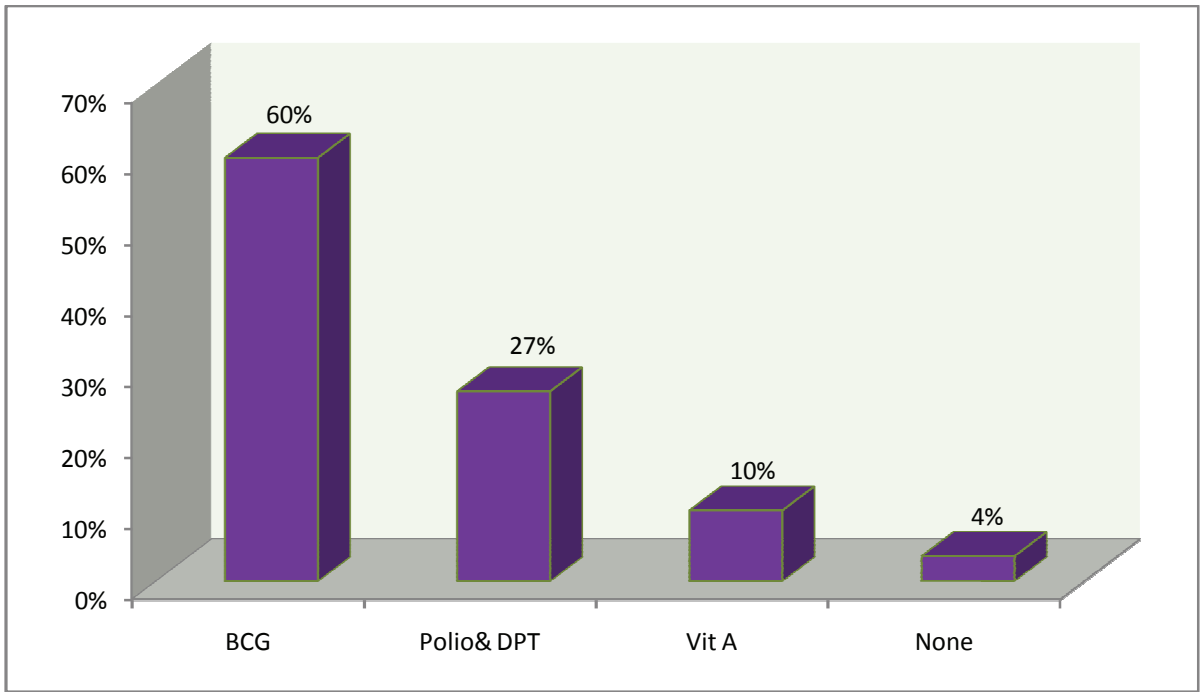
Age?		
	Frequency	Percent
13 Months-2 Yrs	152	*10%*
2.1-3 Yrs	331	22%
3.1-4 Yrs	342	23%
4.1-5 Yrs	661	44%
Total	1486	100%



10% of the sample population are 1-2 years age group frequency. 22% of the sample population are 2-3 years age group frequency. Another 23% of the sample population is between 3-4 years age group frequency and 44% of the sample population is in the age group of 4-5 years.

3.5.3 Immunized

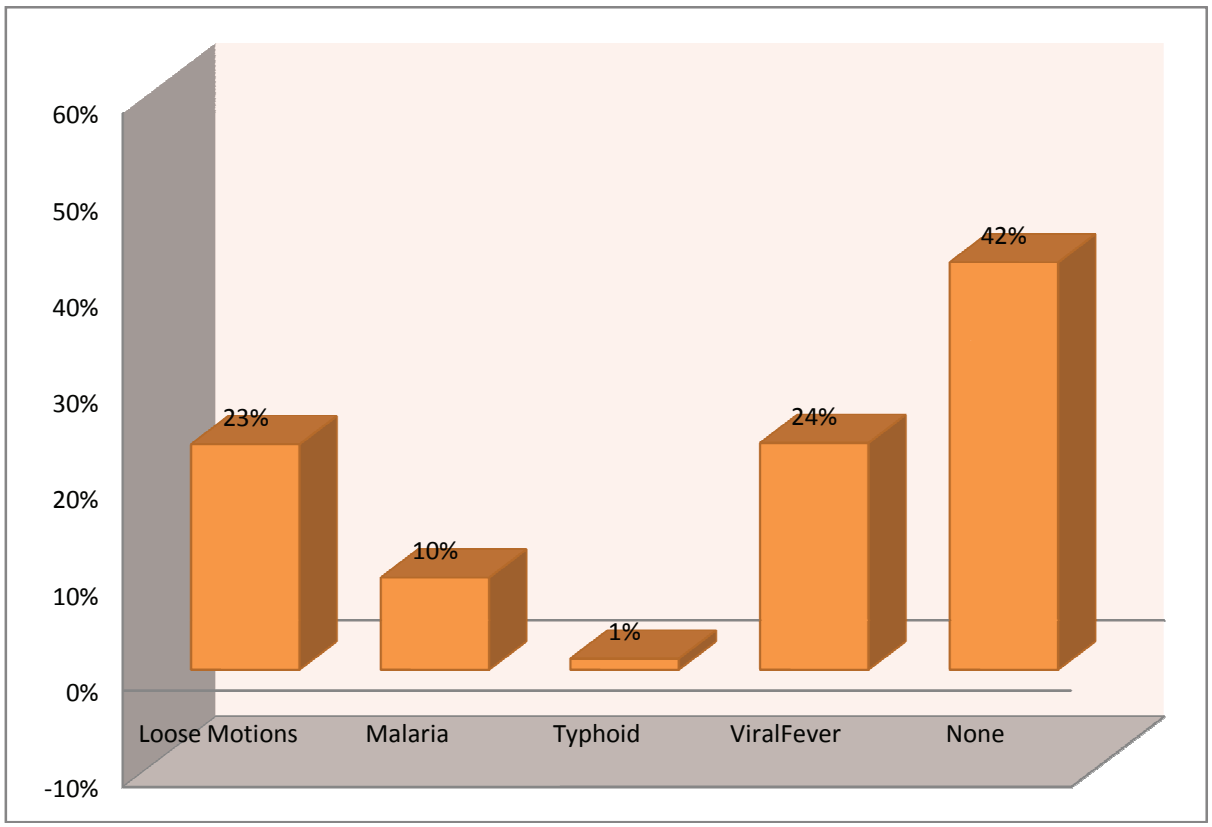
Immunized?		
	Frequency	Percent
BCG	1291	60%
Polio& DPT	579	27%
Vit A	216	10%
None	77	4%



Again in this 1-5 years category of children only 4% of the children are not provided any type of immunization. The frequency of polio drops is misleading because most of the times the pulse polio is administered along with other immunizations. how 4% of the children are missing vaccination is a important finding to be analysed.

3.5.4 Did Child suffer any illnesses in last 3 months

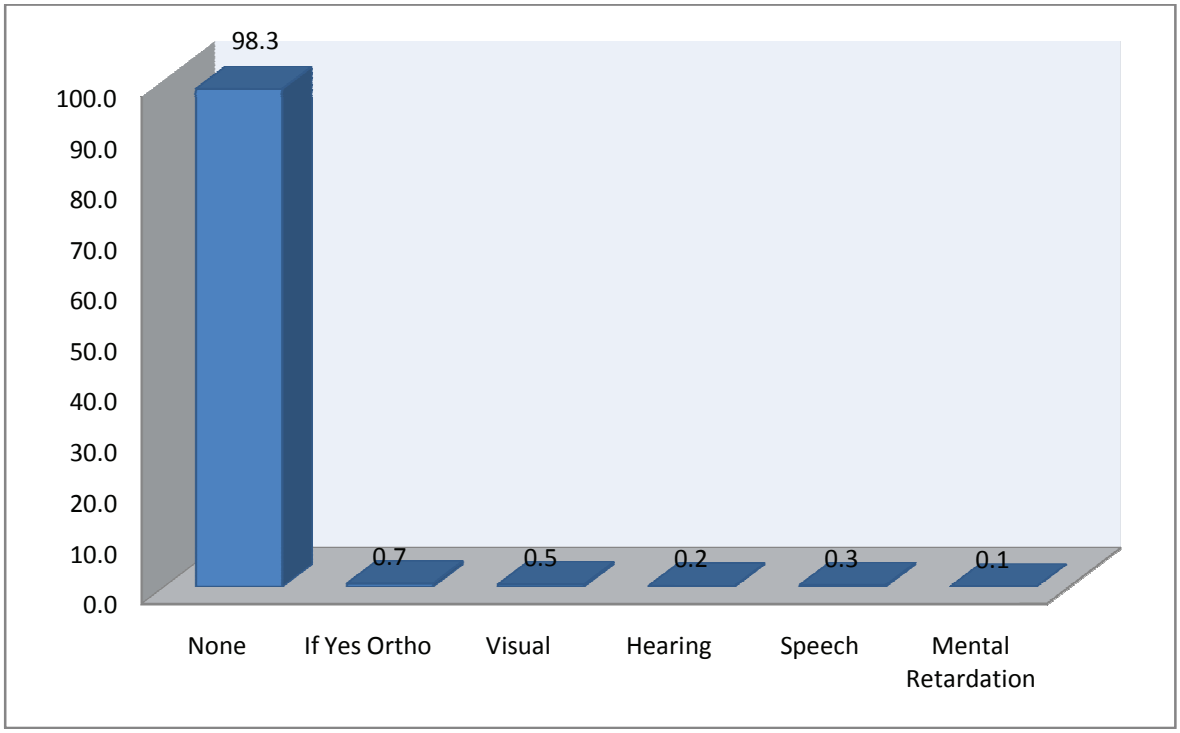
Did Child suffer any illnesses in last 3 months?		
	Frequency	Percent
Loose Motions	348	23%
Malaria	142	10%
Typhoid	17	1%
ViralFever	350	24%
None	629	42%
Total	1486	100%



42% of the children in this group did not suffer with any type of illness in the last one year. 24% of them had an attack of viral fever and 23% of them had an attack or two of loose motions. This indicates the health condition of the children is satisfactory.

3.5.5 Handicaps?

	Frequency	Percent
None	1460	98.3
If Yes Ortho	10	0.7
Visual	7	0.5
Hearing	3	0.2
Speech	5	0.3
Mental Retardation	1	0.1
Total	1486	100%

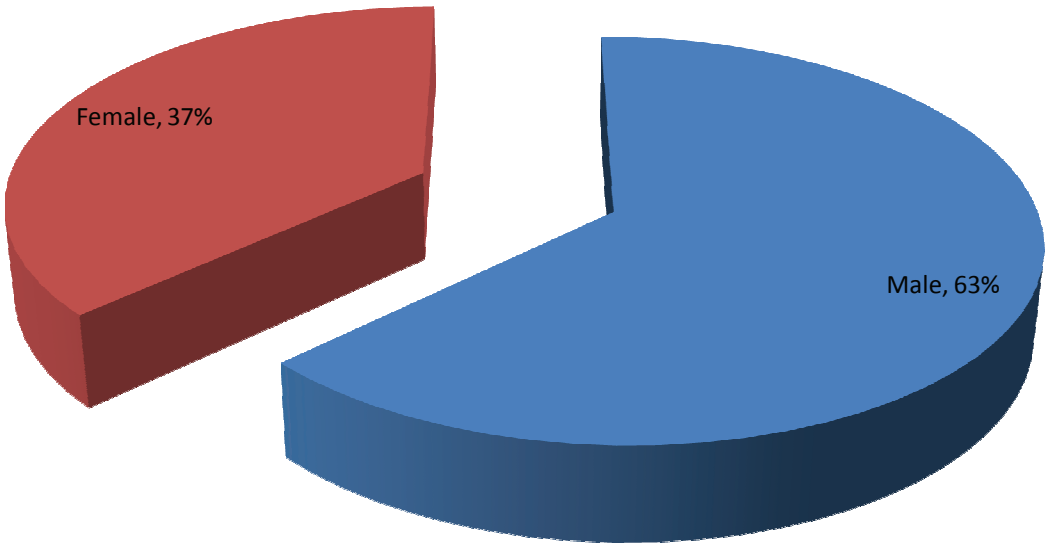


98.35 of the children in this group did not have any physical deformity at birth. the other percentages are not significant.

6. Physical details for Children More than 5year to up to 12years

3.6.1 Gender

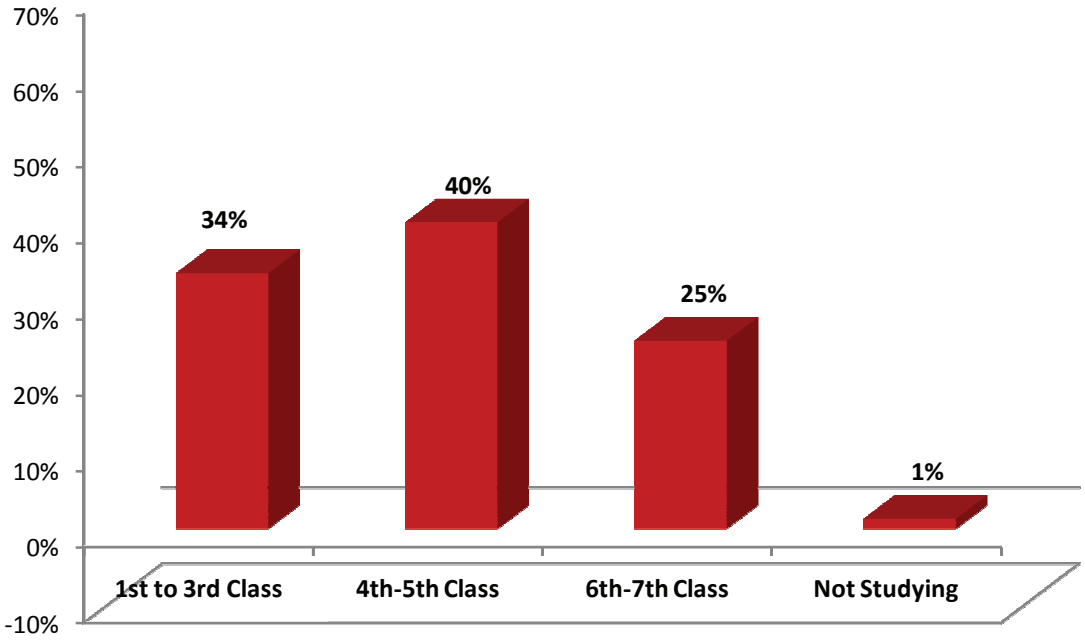
Gender?		
	Frequency	Percent
Boy	1086	63%
Girl	636	37%
Total	1722	100%



In this group there are 1722 children in the total sample collected for the study. Out of this 63% of them are boys and 37% of them are girls. So if we compare with previous age groups the sex ratio is more tilted towards boys than girls. reasons not known.

*3.6.2*Education

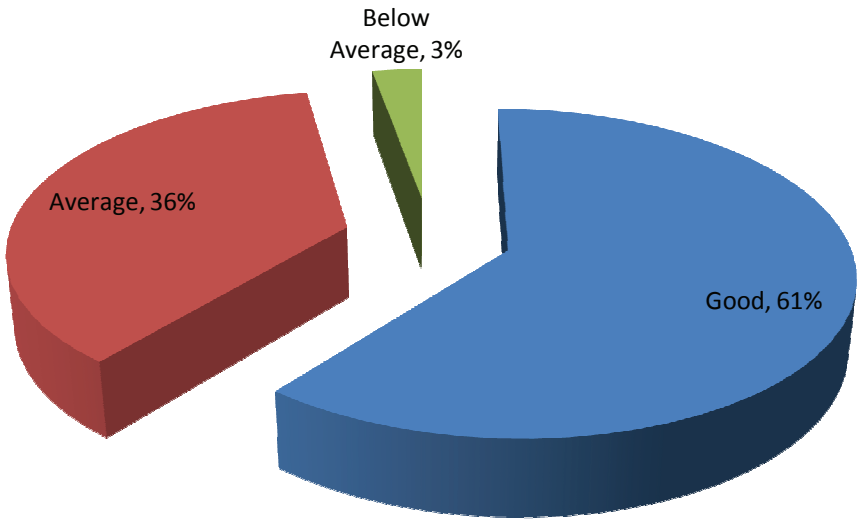
Education?		
	Frequency	Percent
1st-3rd Class	579	34%
4th-5th Class	694	40%
6th-7th Class	426	25%
Not Studying	23	1%
Total	1722	100%



The frequency of education is very important to know the socio economic development of this area. 40% of them are studying 4th or 5th class, 25% of them are studying 6th or 7th class, and only 1% of them in this age group are not going to any school.

*3.6.3*How is your Child at Studies

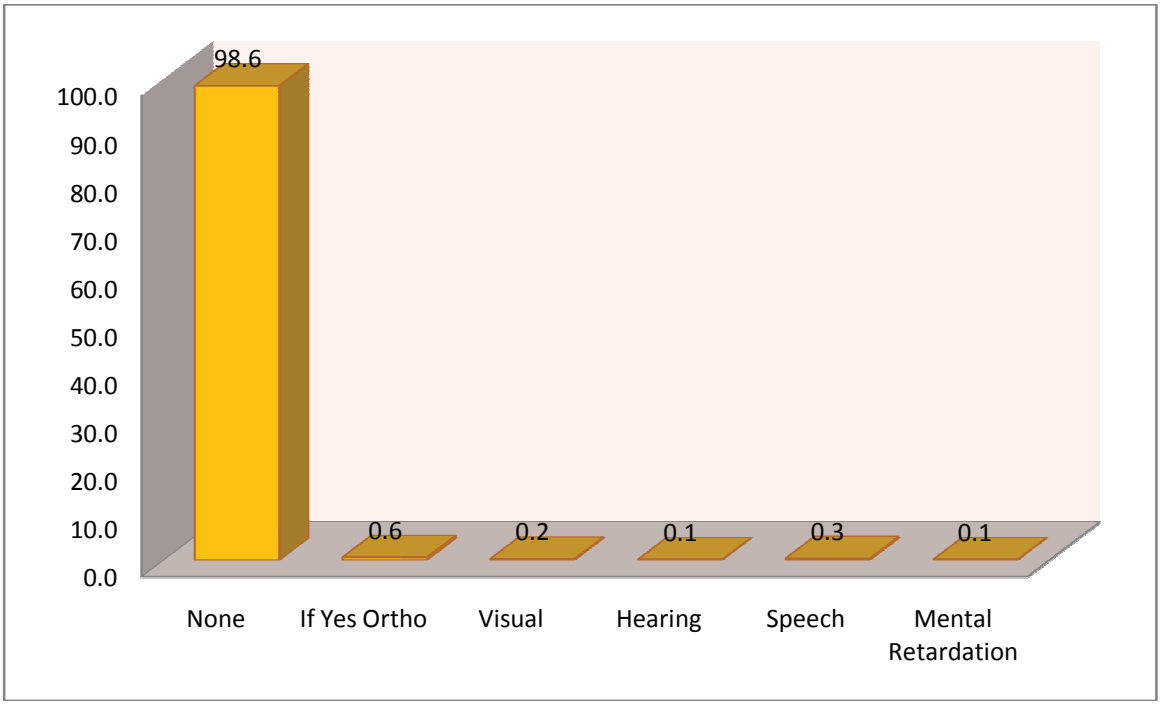
How is your Child at Studies?		
	Frequency	Percent
Good	1048	61%
Avearge	627	36%
Below Average	47	3%
Total	1722	100%



The performance of the child in the school is a good indication of the mental growth and socio economic up liftment of the families. Only 3% of the children were reported below average by the parents. In the remaining group 61% of the students are performing good and 36% of them are performing above average.

3.6.4 Handicaps

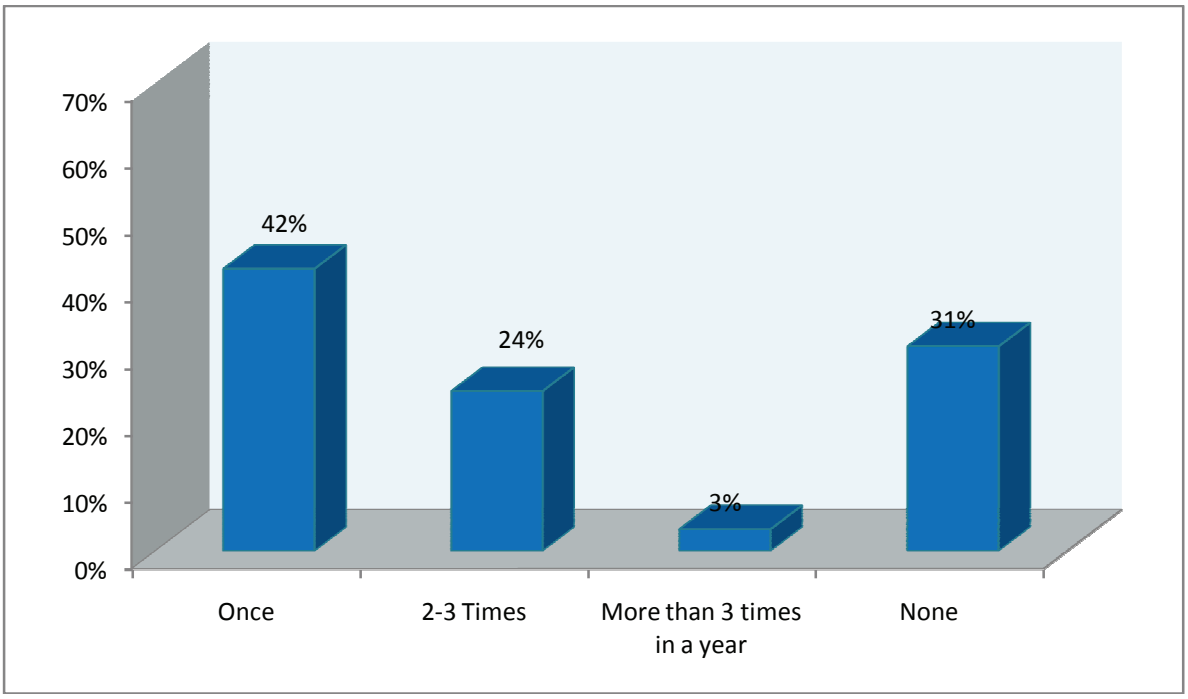
Handicaps?		
	Frequency	Percent
None	1690	98.6
If Yes Ortho	10	0.6
Visual	4	0.2
Hearing	2	0.1
Speech	6	0.3
Mental Retardation	2	0.1



98.6% of the children in this group are physically and mentally normal. Only below 2% of the children in this group are having hearing, visual and speech impairment. This indicates that these are no congenital abnormalities in this group and also no major disabilities developed after birth.

*3.6.5*Suffered with Fever in last one year

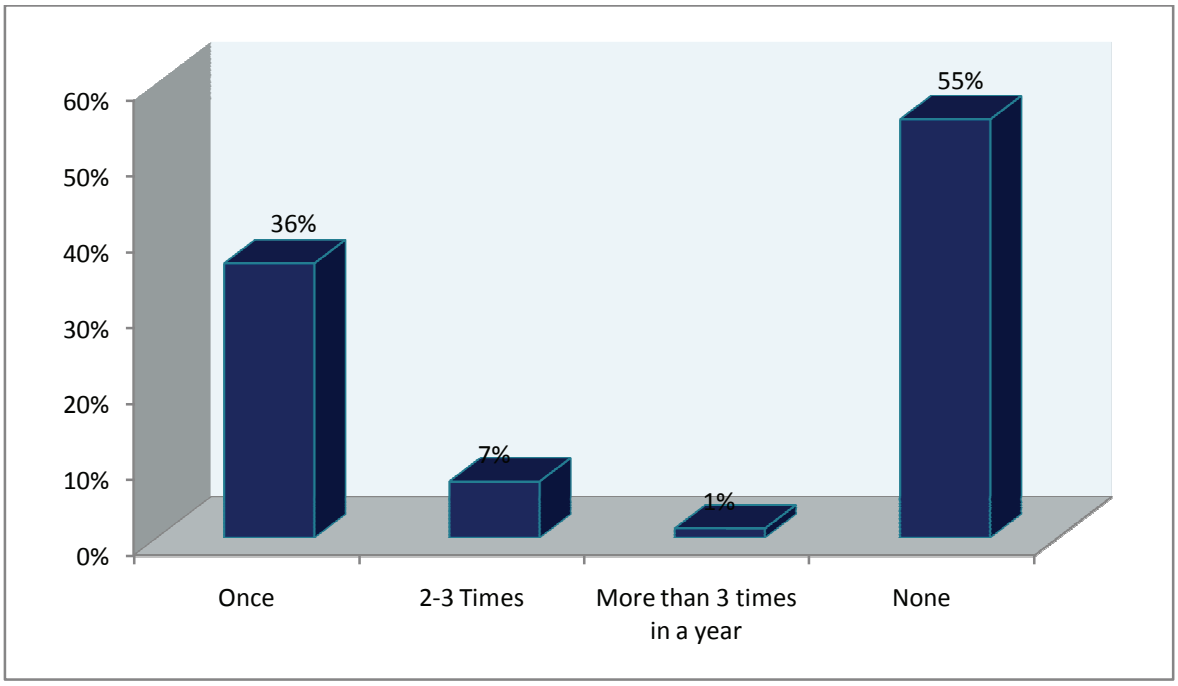
Suffered with Fever in last one year?		
	Frequency	Percent
Once	727	42%
2-3 times	412	24%
More than 3 times in a year	56	3%
None	527	31%
Total	1722	100%



The health of these children who are young and growing is an important indicator of the various factors like socio economic back ground and availability of various services in health care sector. 31% of the young generation did not suffer with any disease in last one year. 42% of them had one attack of fever in last one year and 24% of them had attack of fever 2-3 times and only 3 of the young people had more than 3 times in a year.

*3.6.6*Suffered with Loose Motions in last one year

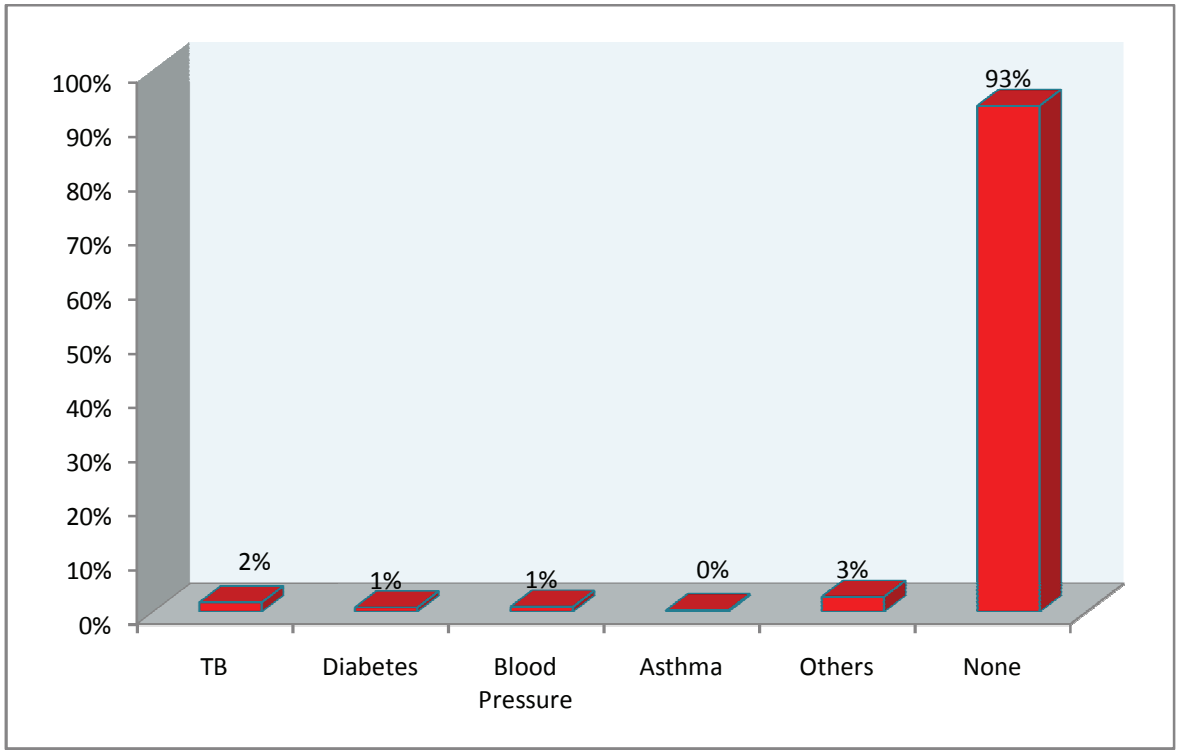
Suffered with Loose Motions in last one year?		
	Frequency	Percent
Once	623	36%
2-3 times	128	7%
More than 3 times in a year	21	1%
None	950	55%
Total	1722	100%



Attack of loose motions is also an important indication of the general health. 55% of these children did not have even a single attack of loose motions in last one year. Only 1% of them had an attack more than 3 times in a year. This means these young children are relatively healthy and maintaining good hygiene practices.

*3.6.7*Suffered with any of them

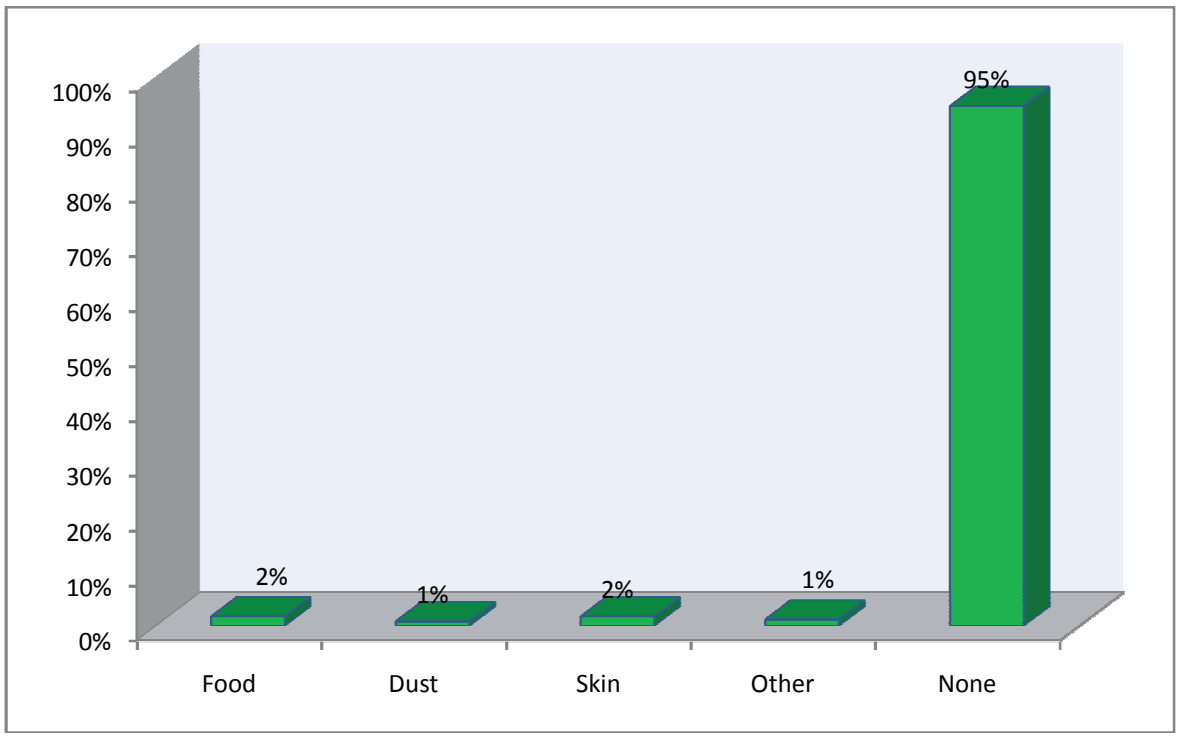
Suffered with any of them?		
	Frequency	Percent
TB	30	2%
Diabetes	14	1%
Blood Pressure	16	1%
Asthma	5	0%
Others	48	3%
None	1609	93%



93% of them did not suffer with any major illness apart from fever and loose motions. Only 2% had an attack of T.B, 1% had attack of diabetes and other ailments are minor in nature and are statistically not significant.

3.6.8 Has any Allergy

Has any Allergy?		
	Frequency	Percent
Food	29	2%
Dust	14	1%
Skin	29	2%
Others	20	1%
None	1630	95%
Total	1722	100%

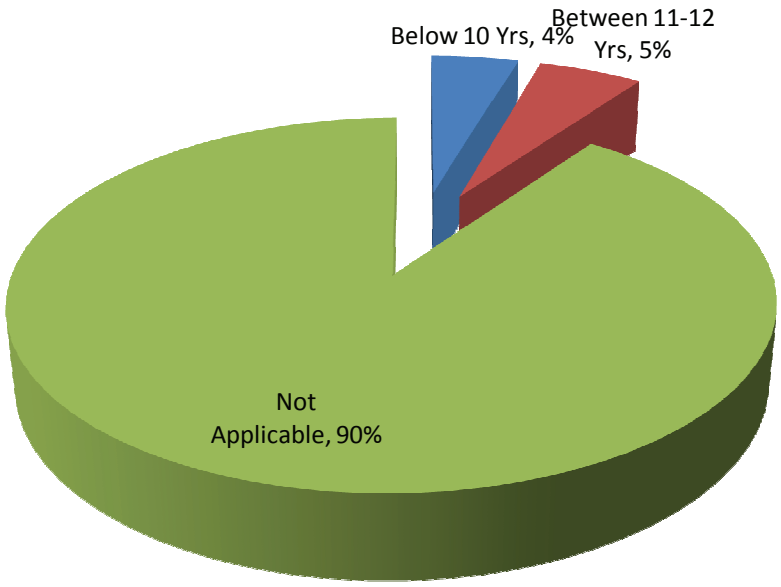


95% of this young generation is not suffering with any allergy. Only 2% had food allergy, 1% had dust allergy, 1% had skin allergy. Hence the external factors like, air, water, food, environment, dust etc. are not influencing the health of this children.

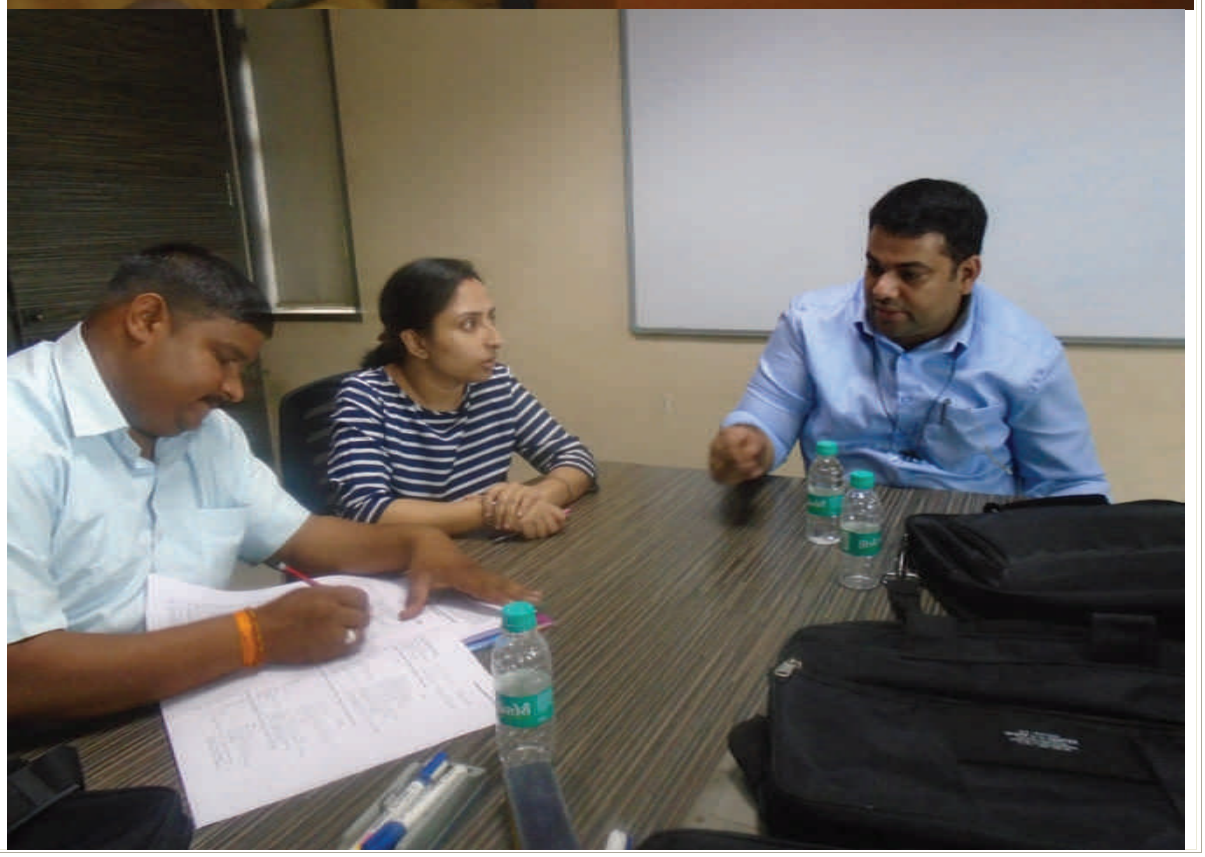
*3.6.9*Age at First Menstruation

For Girls (Up to 12 years)

Age at First Menstruation?		
	Frequency	Percent
Below 10 yrs	26	4%
Between11- 12 yrs	31	5%
Not Applicable	522	90%
Total	579	100%



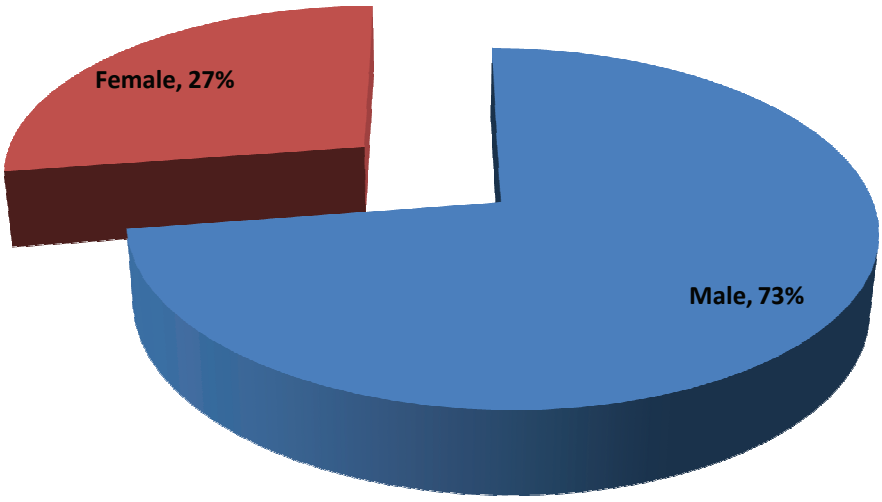
Among this group the girls nearing 12 years of age were identified who constitute 579 of the sample. In this 90% of them not yet attained menarche – not started menstruation, but 5% of them already started menstruation. This is an indication of good hormonal balance and healthy condition.



7. Physical details for Boys, Girls and Unmarried (Male & Female) More than 12year

3.7.1 Gender

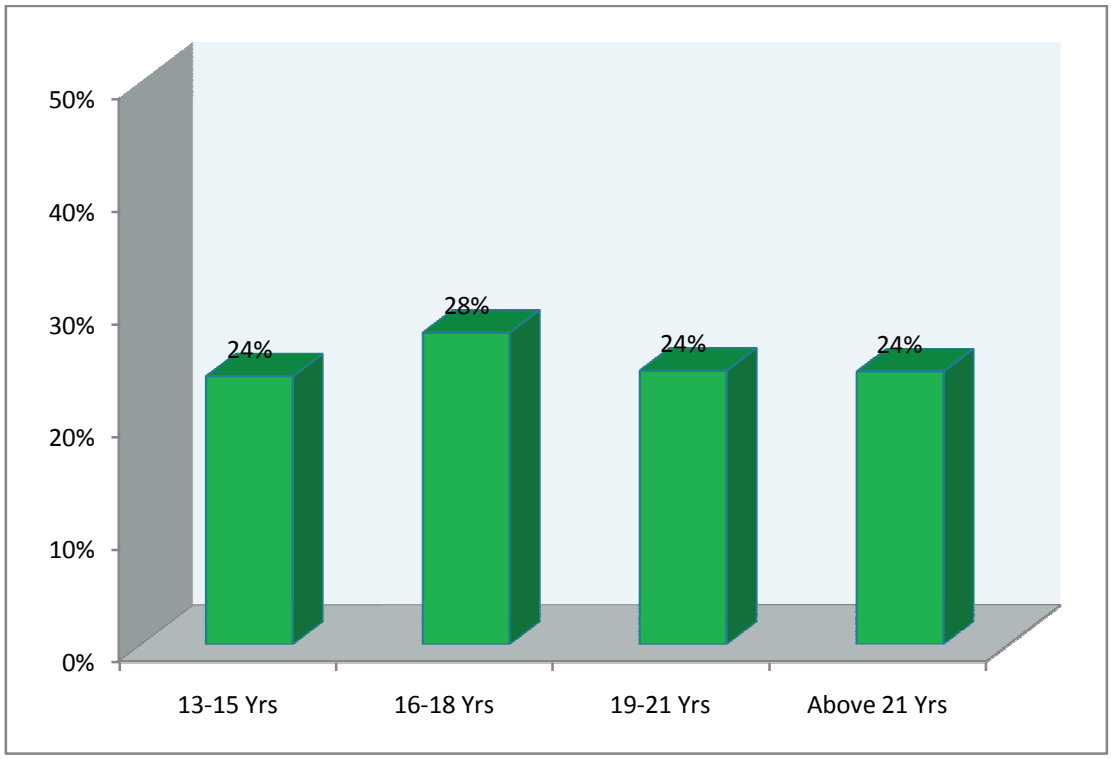
Gender?		
	Frequency	Percent
Boy	1814	73%
Girl	683	27%
Total	2497	100%



The sample is again classified for children above 12 years in the family. There are 2497 children above 12 years in the family. Among them 73% of them are boys and 27% of them are girls. Here again the male-female sex ratio is highly variant may be because majority of the girls in this age group might have got married and not staying in this family.

3.7.2 Age

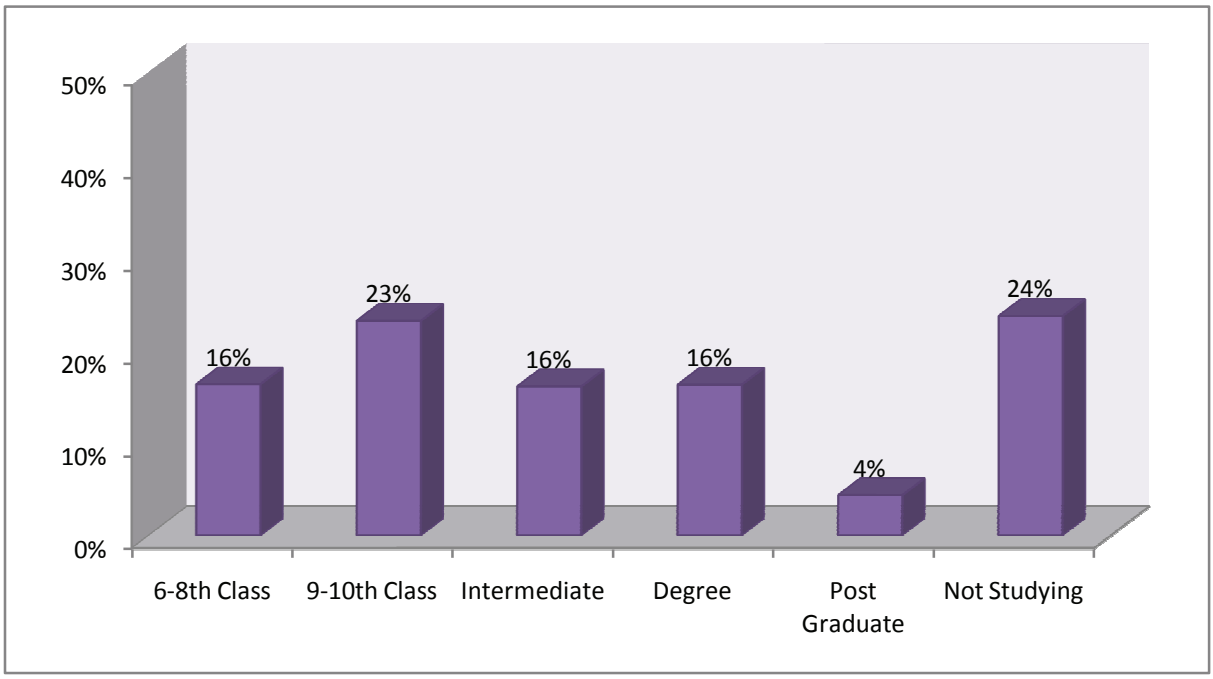
Age?		
	Frequency	Percent
13-15 Yrs	594	24%
16-18 Yrs	691	28%
19-21 Yrs	607	24%
Above21	605	24%
Total	2497	100%



Different age groups in this total category are further analysed. 24% of them are between 13-15 years. 28% of them are 16-18 years, 24% of them 19-21 years and 24% of them are above 21 years.

3.7.3 Class in Which Studying

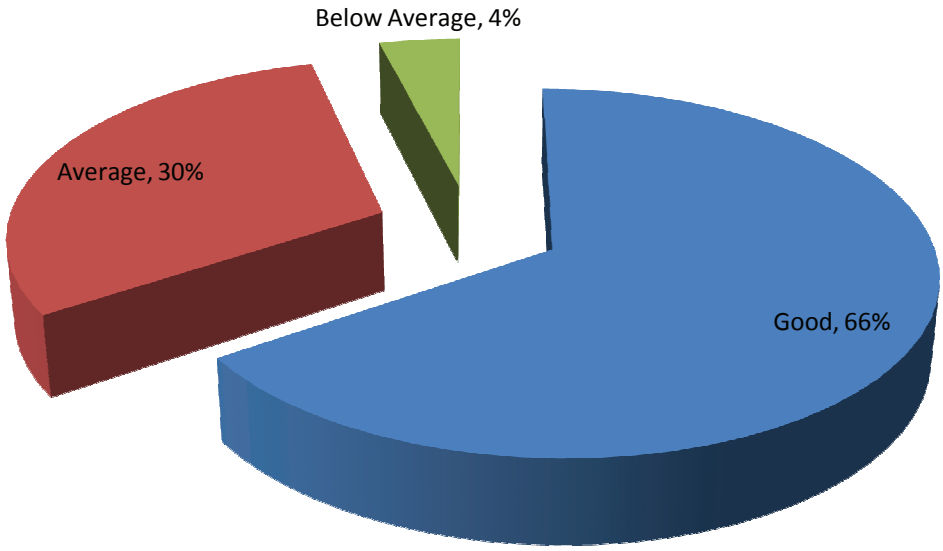
Class in Which Studying?		
	Frequency	Percent
6-8th Class	408	16%
9-10th Class	579	23%
Intermediate	402	16%
Degree	407	16%
Post Graduate	109	4%
Not Studying	592	24%
Total	2497	100%



16% of them are studying in 6th – 8th class. 23% of them are studying 9th- 10th class. 22% of them are studying intermediate. 16% of them are studying Degree, and 4% of them are studying Post Graduation. However, 24% of them are not studying. This means they stopped the studies, or self employed or going to work or sitting at home and waiting for a job.

3.7.4 How is your Child at Studies

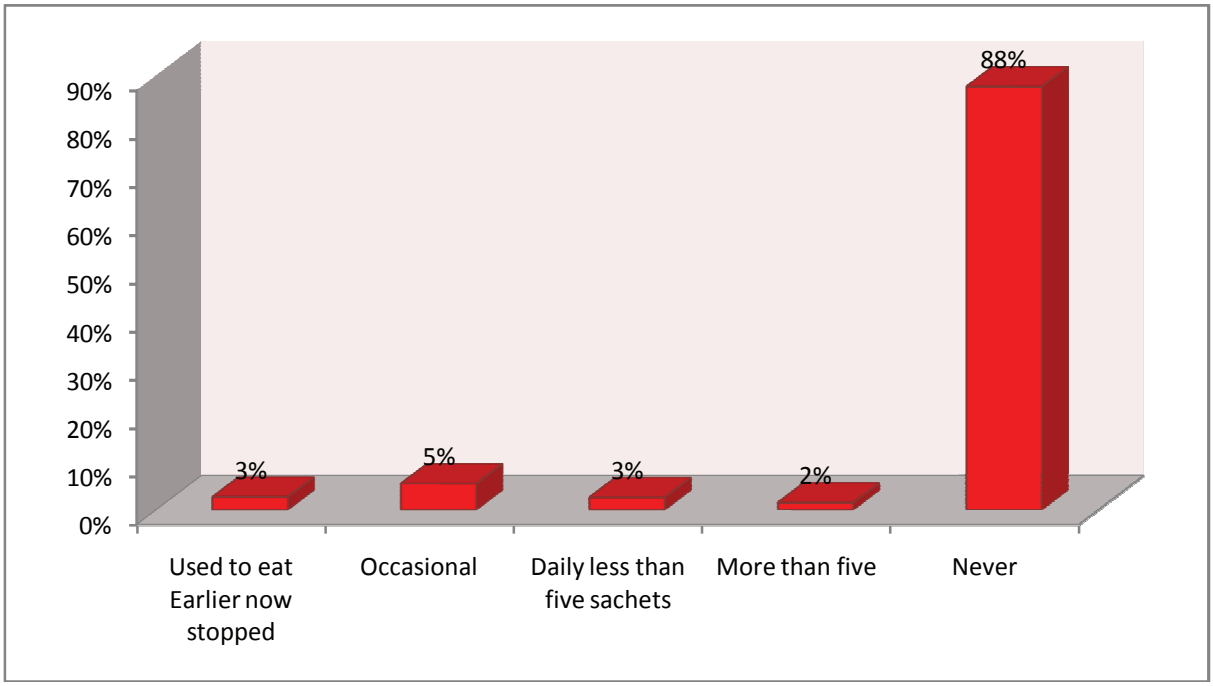
How is your Child at Studies?		
	Frequency	Percent
Good	1253	66%
Average	581	30%
Below Average	75	4%



Only 4% of the children who are going to school or college are below average in studies. All others are good or above average. This indicates the academic performance of the group is relatively satisfactory.

3.7.5 Eats Gutka / Zarda pan (Tobacco in any farm)

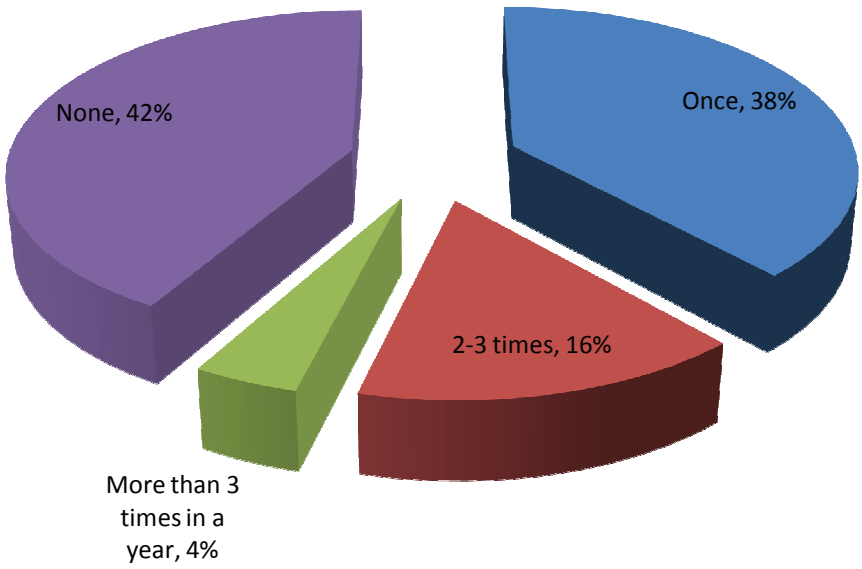
Eats Gutka / Zarda pan (Tobacco in any farm) ?		
	Frequency	Percent
Used to Eat Earlier now Stopped	67	3%
Occasional	136	5%
Daily less than five sachets	65	3%
More than five	38	2%
Never	2191	88%
Total	2497	100%



Consumption of oral tobacco is an important health indicator and effect on health. Though 88% of them have not admitted that they consume any oral tobacco product only 12% of them openly admitted that they consume oral tobacco in different quantity for different durations. However, we observed that more than 12% of them were found consuming oral tobacco in large quantity.

3.7.6 Suffered with Fever in last one year

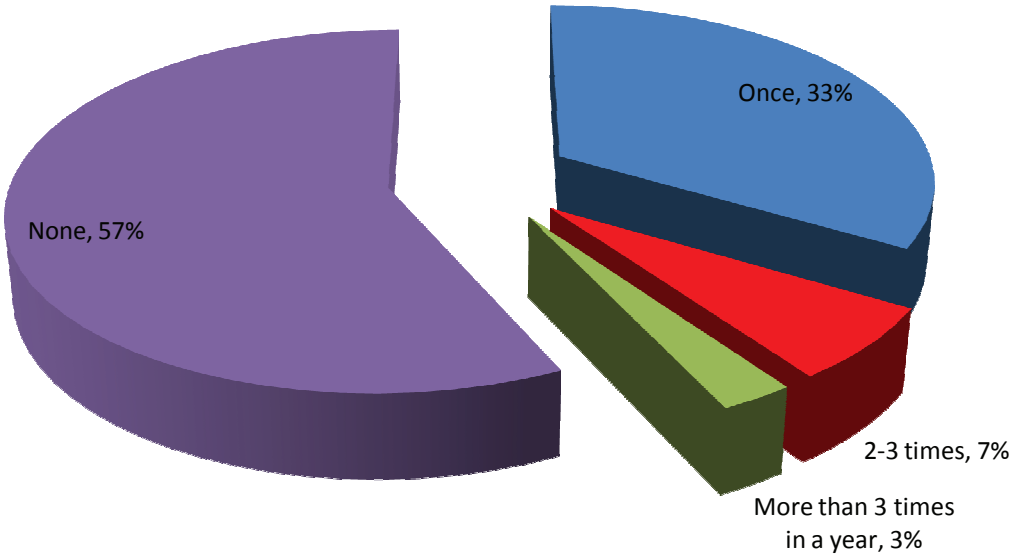
Suffered with Fever in last one year?		
	Frequency	Percent
Once	957	38%
2-3 times	390	16%
More than 3 times in a year	106	4%
None	1044	42%
Total	2497	100%



42% of them never suffered any attack of fever in last one year. Remaining people had one or two attacks in a year. 4% of them had more than 3 times an attack of fever in last one year.

3.7.7 Suffered with Loose Motions in last one year

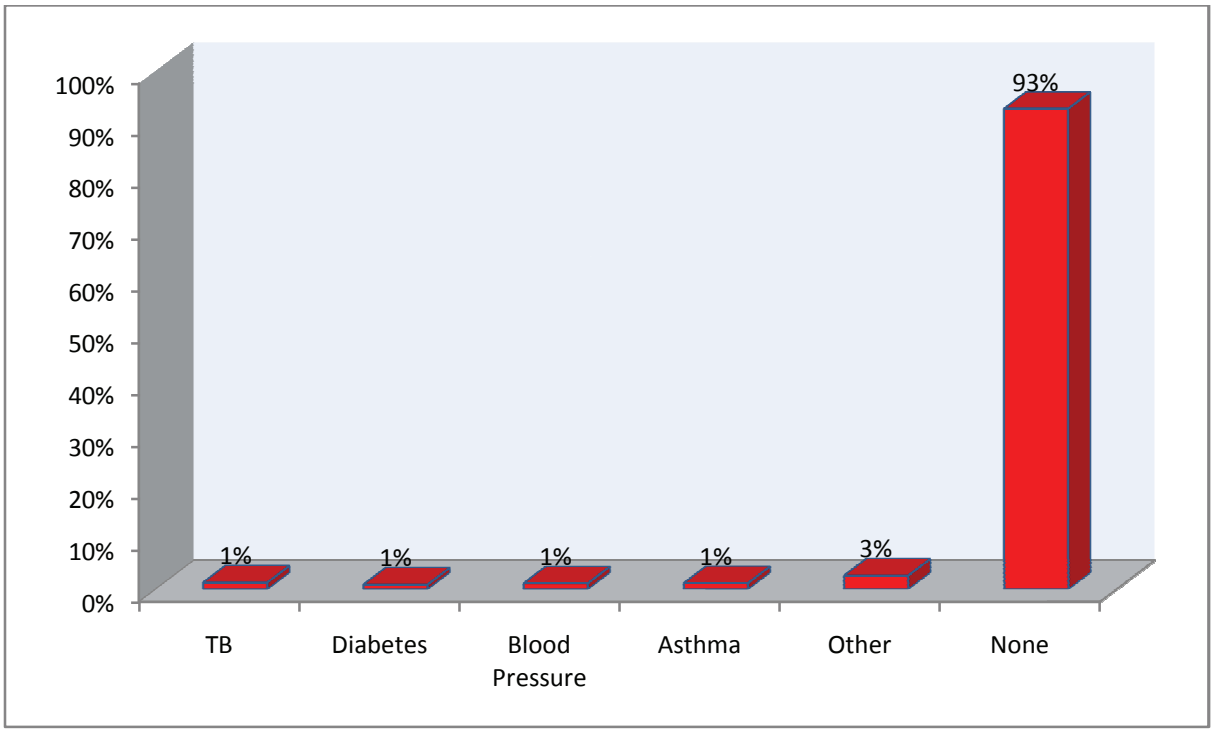
Suffered with Loose Motions in last one year?		
	Frequency	Percent
Once	836	33%
2-3 times	166	7%
More than 3 times in a year	69	3%
None	1426	57%
Total	2497	100%



57% of them did not suffering any attack of loose motions. Remaining people had few attacks of loose motions and only 3% of them had loose motions more than 3 in last one year.

3.7.8 Suffered with any of them

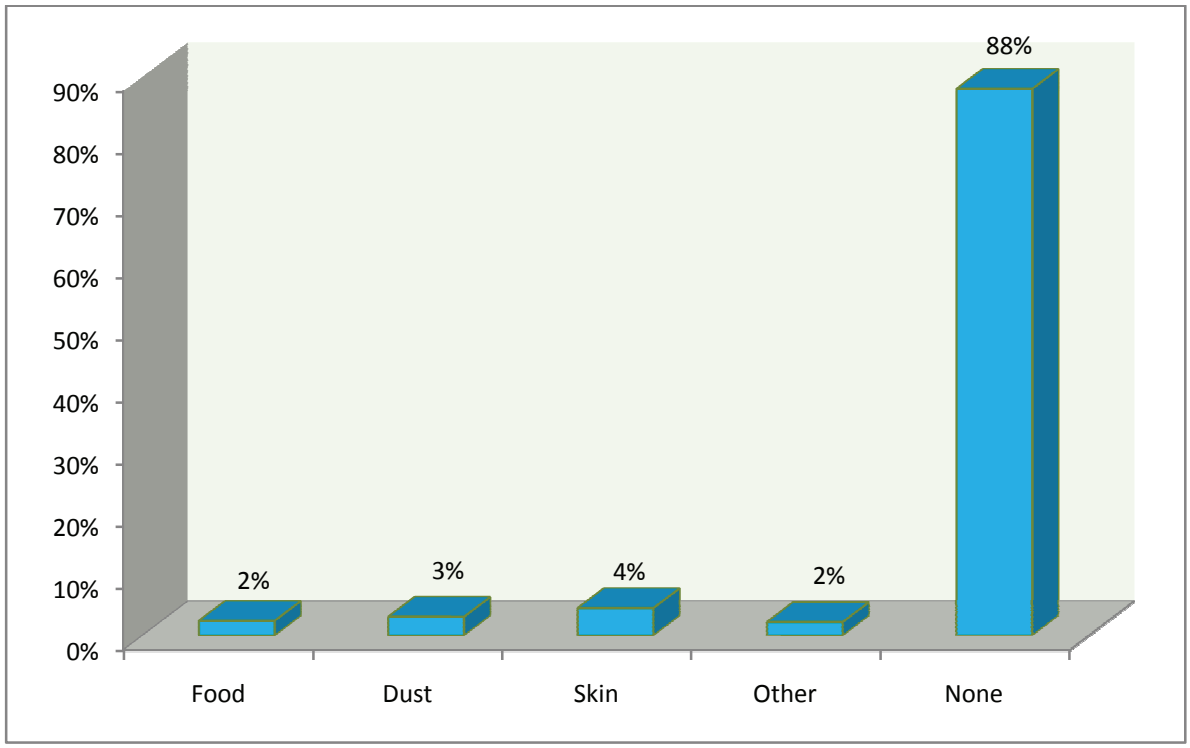
Suffered with any of them?		
	Frequency	Percent
TB	33	1%
Diabetes	23	1%
Blood pressure	29	1%
Asthma	30	1%
Others	66	3%
None	2316	93%
Total	2497	100%



93% of them are not suffering with any major recognizable diagnosed diseases. Only 1% had TB, 1% had diabetes, 2% had high blood pressure, 1% only have Asthma.

3.7.9 Has any Allergy

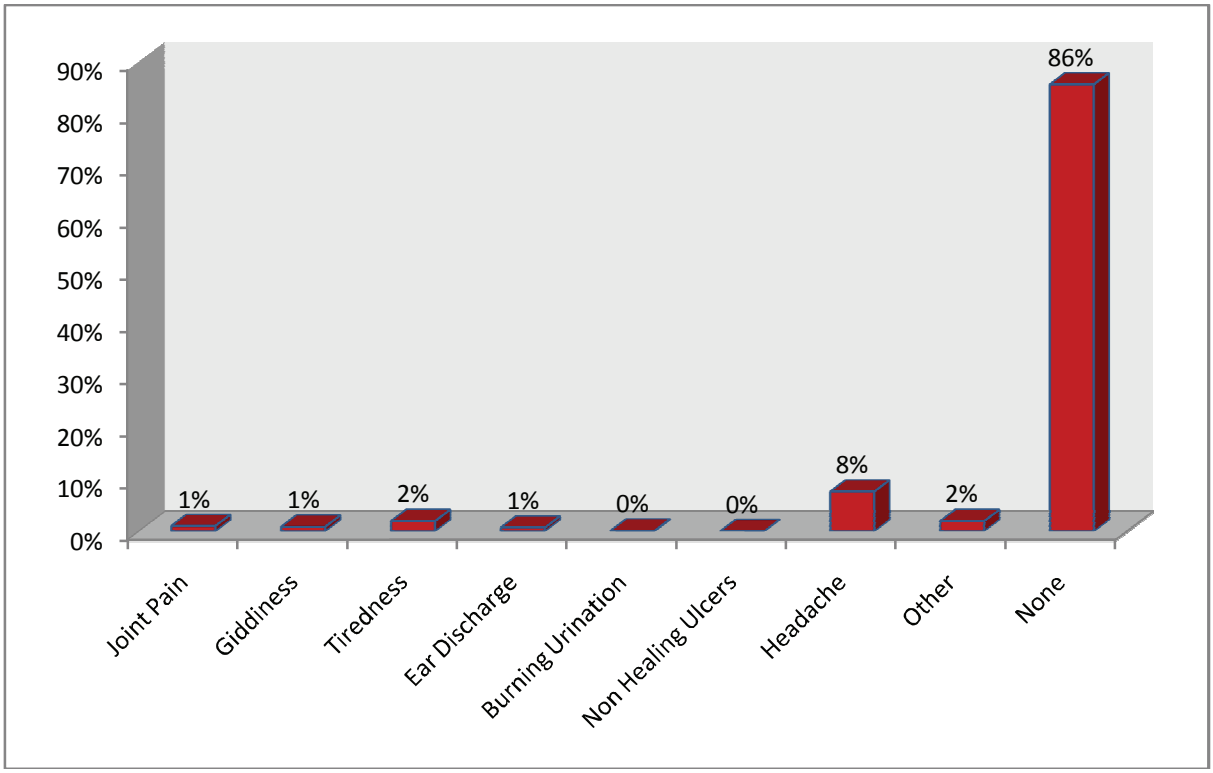
Has any Allergy?		
	Frequency	Percent
Food	59	2%
Dust	75	3%
Skin	110	4%
Others	54	2%
None	2199	88%
Total	2497	100%



88% of them had no allergy and 12% only have different types of allergy with which they are suffering.

3.7.10 Has you any complaints about Health

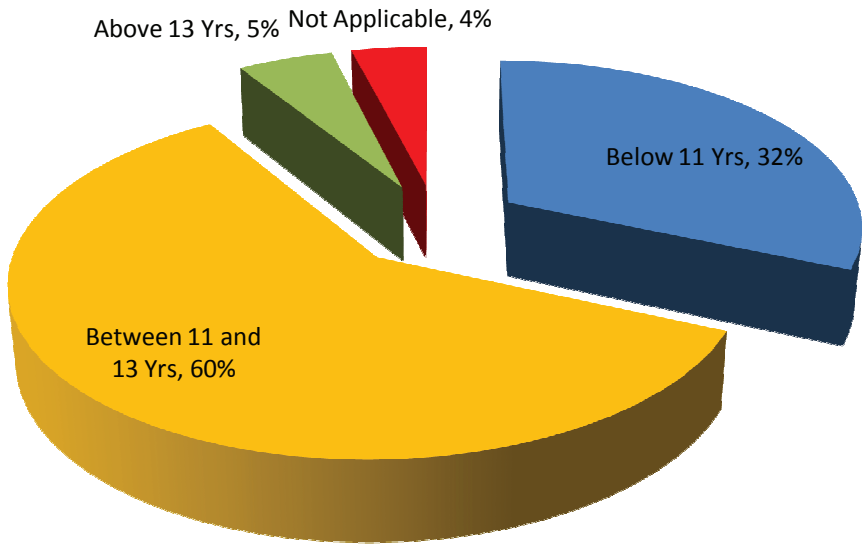
Has you any complaints about Health?		
	Frequency	Frequency
Joints Pain	26	1%
Giddiness	22	1%
Tiredness	49	2%
Vision defect	18	1%
Burning urination	3	0%
Non-healing ulcers	1	0%
Headache	190	8%
Others	49	2%
None	2139	86%
Total	2497	100%



86% of them have no health complaints which can impair their working ability. Very few people are suffering with joint pains, giddiness, tiredness, vision different etc.

3.7.11 Age at First Menstruation
For Girls (13 – 18 years and above)

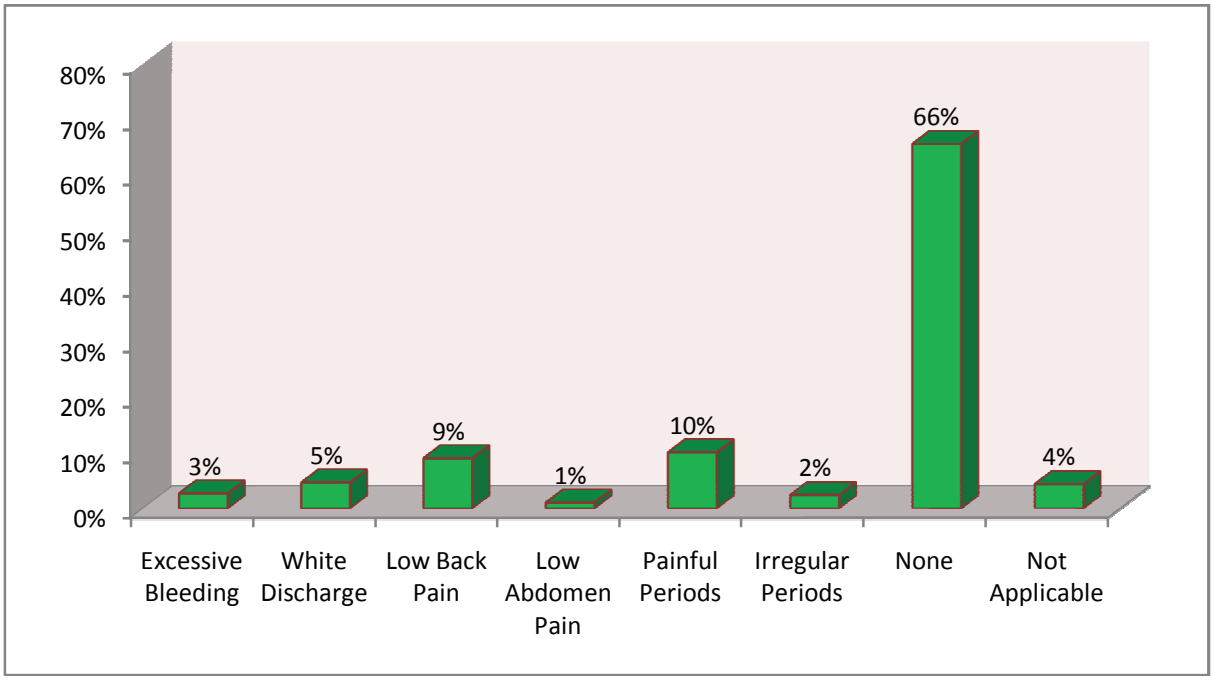
Age at First Menstruation?		
	Frequency	Percent
Below 11 yrs	209	32%
Between 11 and 13 yrs	395	60%
Above 13 yrs	33	5%
Not applicable	26	4%
Total	663	100%



96% of the girls in this age group had their menarche attained. In this 32% below 11 years and 60% 11-13 years, and only 5% beyond 13 years. That means there are no delayed menarche in the study sample and no hormonal problem.

3.7.12 Has she any Gynaec Complaints

Has she any Gynaec Complaints?		
	Frequency	Percent
Excessive Bleeding	18	3%
White Discharge	31	5%
Low Back Pain	60	9%
Low Abdomen Pain	7	1%
Painful Periods	67	10%
Irregular periods	16	2%
None	435	66%
Not Applicable	29	4%
Total	663	100%

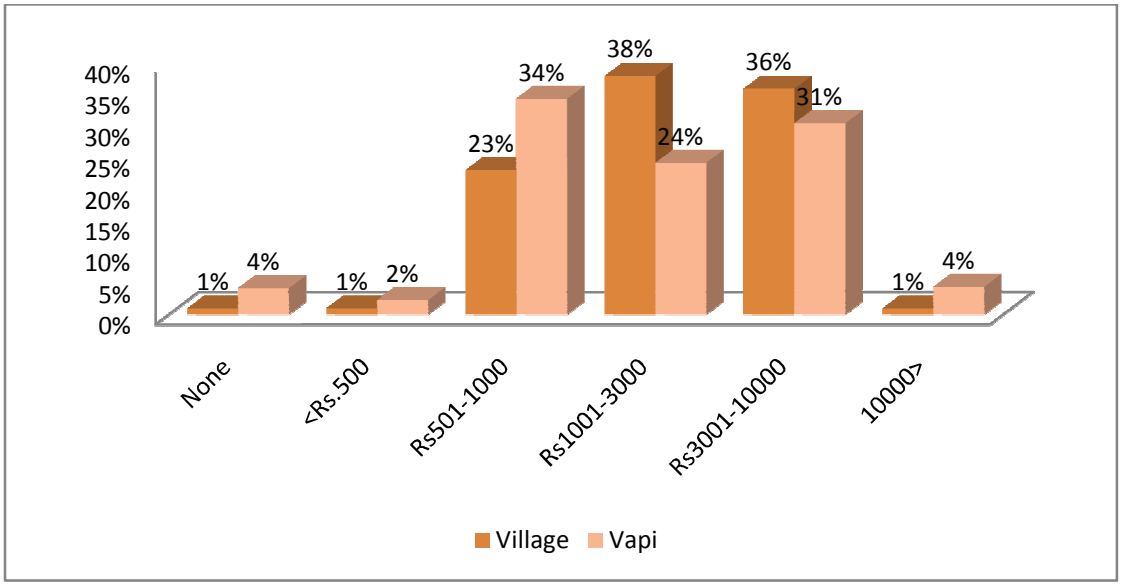


66% of the girls in this age group did not have any menstrual or gynecology problem. 3% had excessive bleeding, 5% had white discharge, 1% low back pain, 10% painful periods and only 2% irregular periods.

IV RESEARCH AND ANLYSIS FINDINGS:COMPARISION BETWEEN STUDY AND CONTROL GROUPS

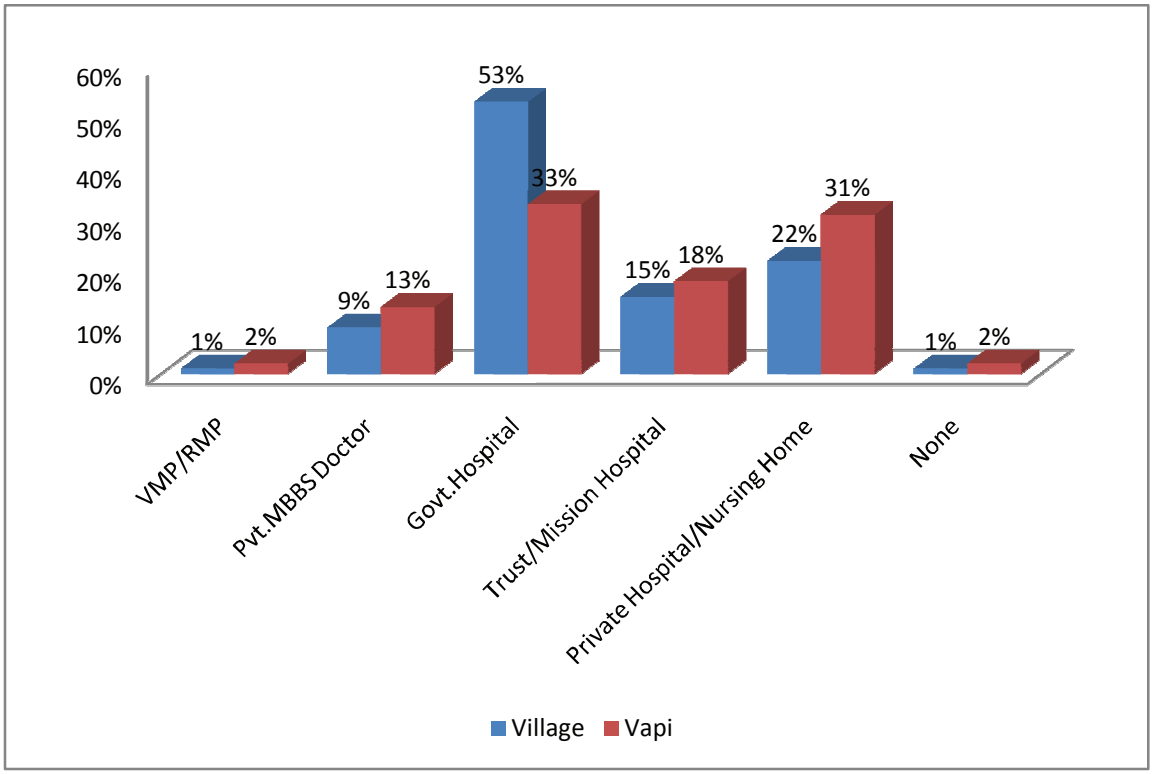
1.GENERALINFORMATION

4.1.1 How much money was spent last time for any ill health (last 3 years) for total family



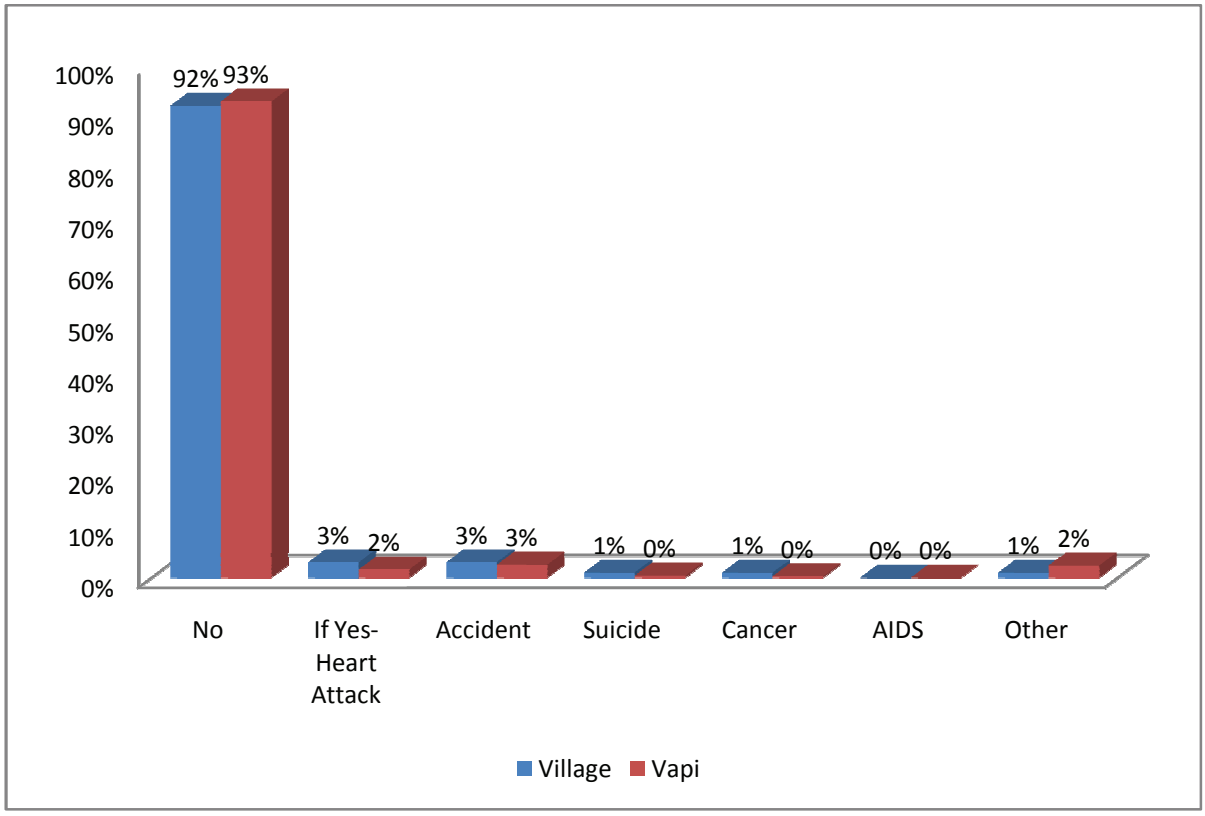
Some of the important health indicators were compared with sample collected from villages. These villages are outside the industrial area, and are not affected by the industrial environment. The sample from the villages is termed as control group. So the money spent on illness for last one year is an indication of the health status. The control group nearly 38% of the population has spent Rs.1000/ to 3000-, whereas in study group it is only 24%. even the people who have spent nearly 10,000/- in last one year is approximately the same. It indicates more number of villagers are spending money for illness than study group.

4.1.2 Where do you get Medical Aid



53% of the control group use Government hospital for medical aid and 38% of the study group use the same. And 22% of the villages are using private hospital for their health needs, where as 31% of the study groups are using the private hospitals. This indicates, the financial condition of the study group is much better and their affordability is much higher than the control group.

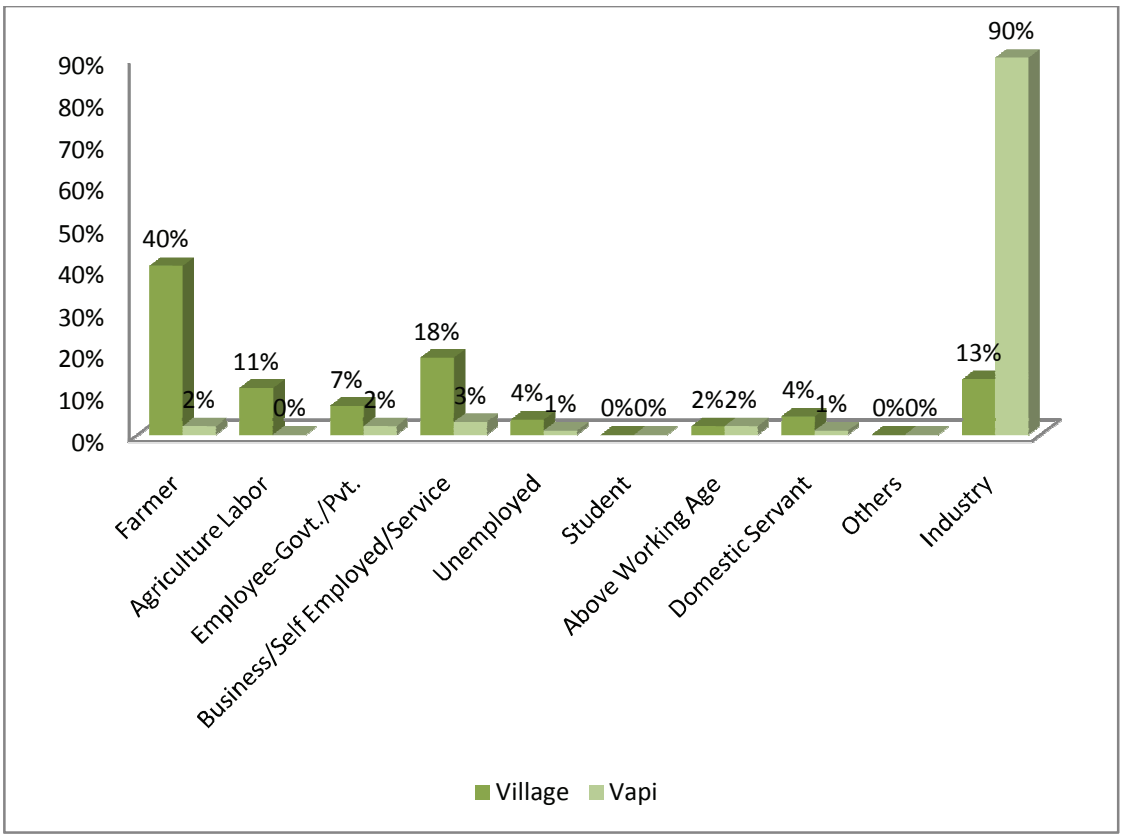
4.1.3 Did any of your family members die in the last 2yrs



3% of the control group had heart attacks, whereas it is only 2% in study group. Whereas 30% of control group had accidental deaths, but it is 2% in study group.all other causes of death among both study group and control groups are mostly the same, and small variations are not statistically significant. 92-93% of the both the populations did not report any death in the family.

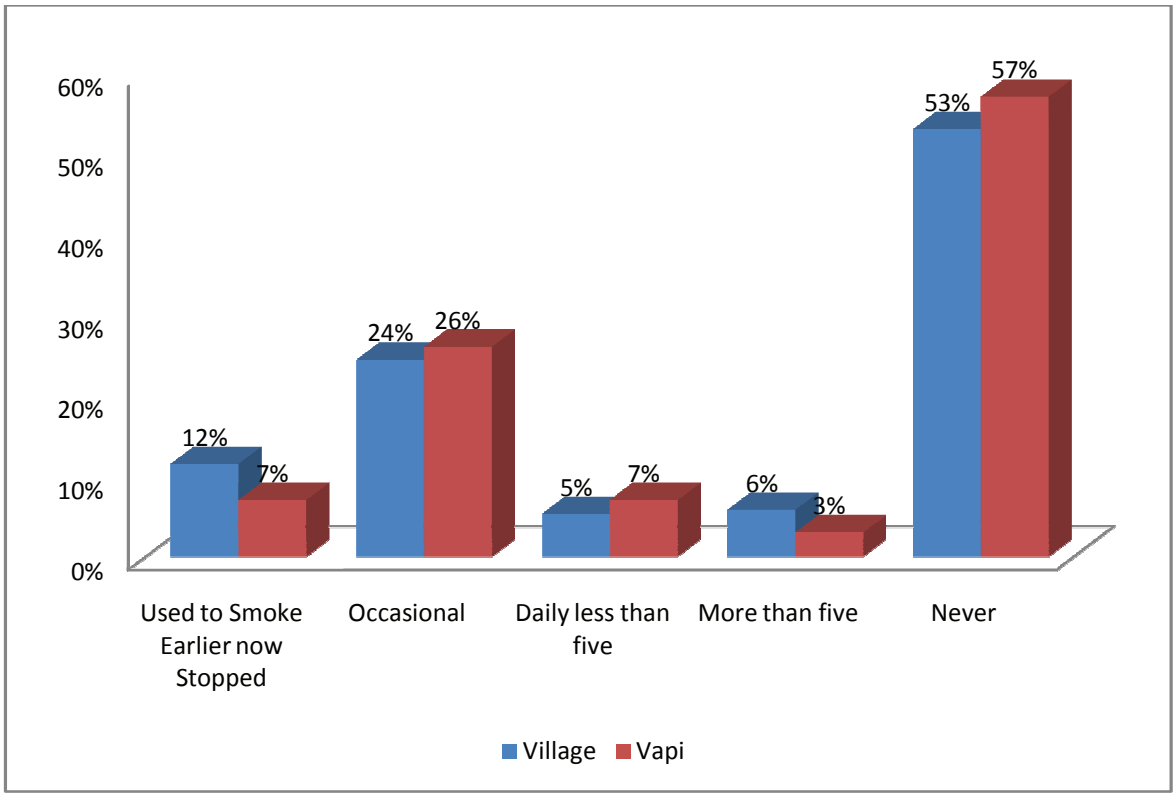
2 .Physical Details of Men

4.2.1 Occupation



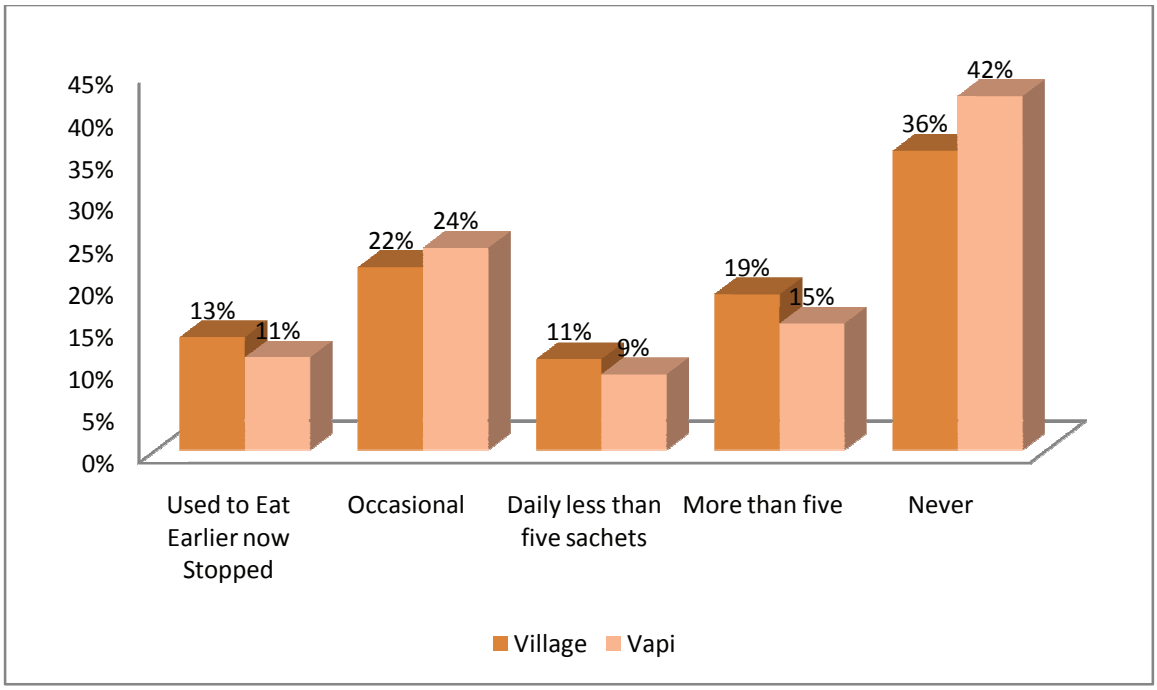
In the control group villages only 13% are dependent on industry for their livelihood, whereas it is 90% in study group. Most of the villagers are engaged in various other professions, whereas the remaining population of the study groups are engaged in similar occupations. 40% of the control group are in farming and 18% of them are self employed.

2.1 Smokes (Cigarettes, Beedi, any others)



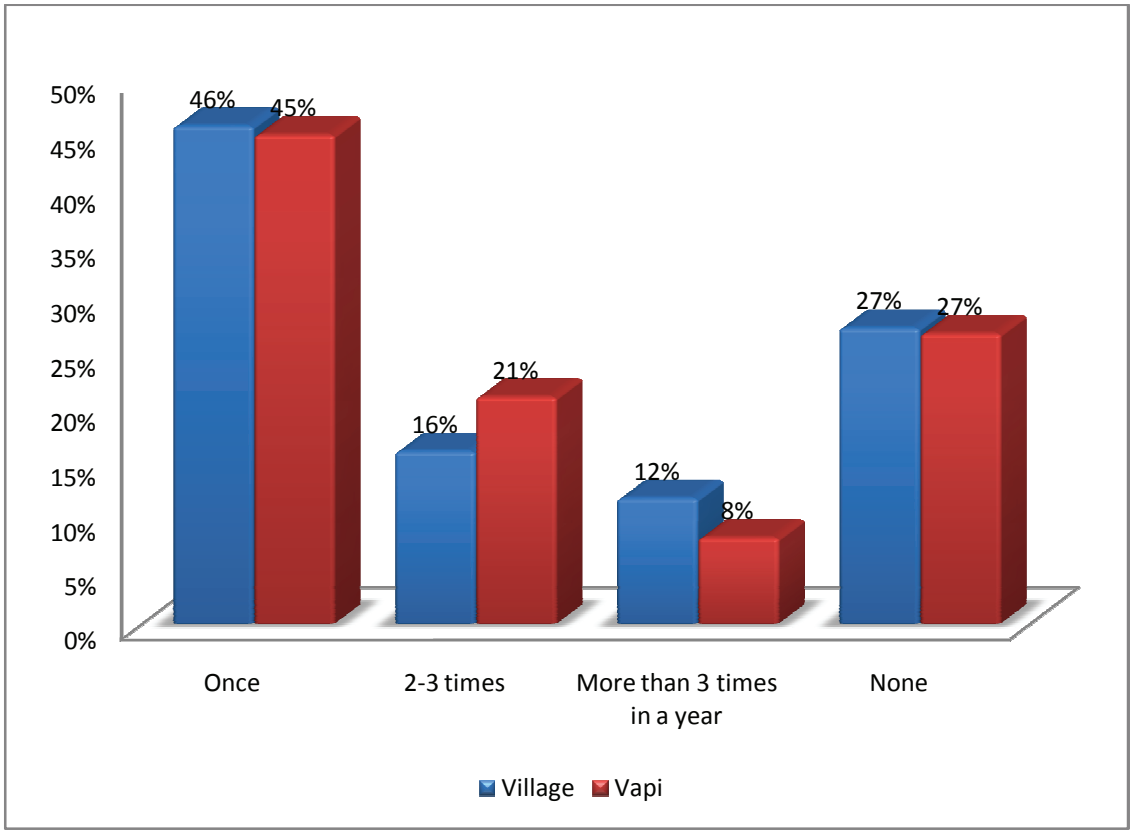
Surprisingly smoking different types of tobacco products is almost same in both groups. This shows that the habit of smoking is universal, and the occupation, economic status, geographical variation has absolutely no bearing on the habit of smoking.

4.2.2 Eats Gutka / Zardapan (Tobacco in any farm)



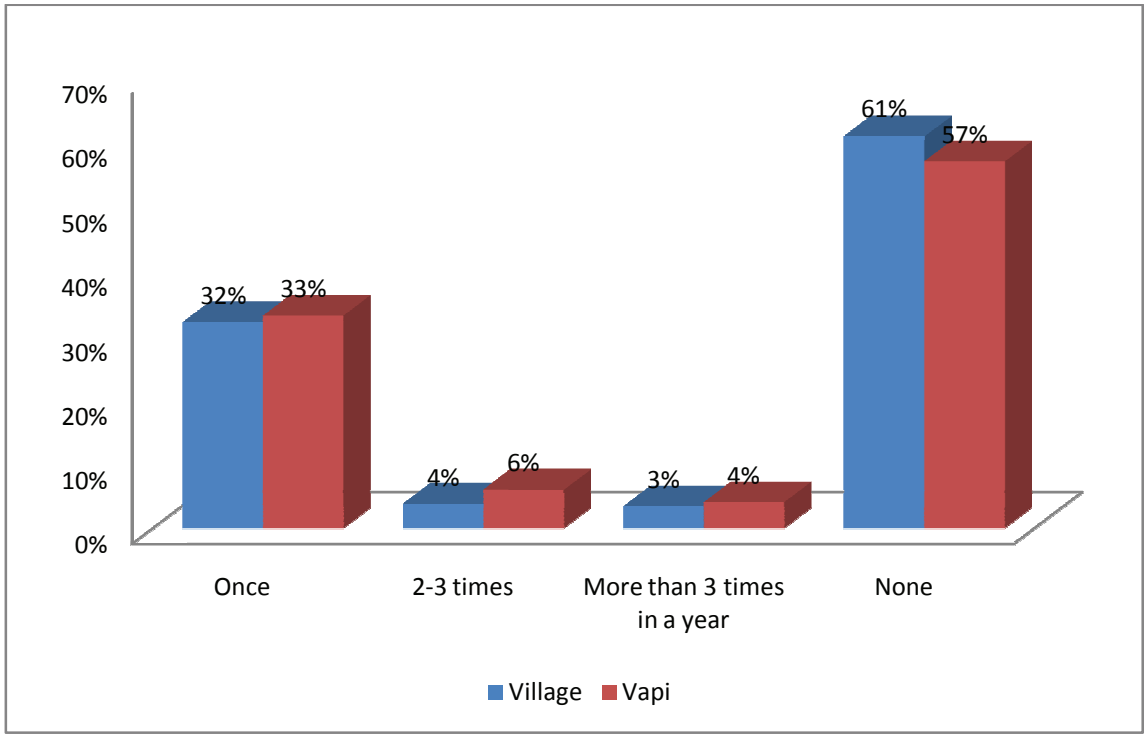
Like smoking even consumption of oral tobacco in the form of gutka or pan masala or zarda, is same percentage in both control group as well as study group. Nearly60- 65% of all men are found to be consuming oral tobacco products in variable quantity. Though nearly 36-42% of people in both groups expressed that they do not consume any type of oral tobacco, in reality our field staff have found out that more number of people are consuming oral tobacco in larger quantity than recorded.

4.2.3 Suffered with Fever in last one year



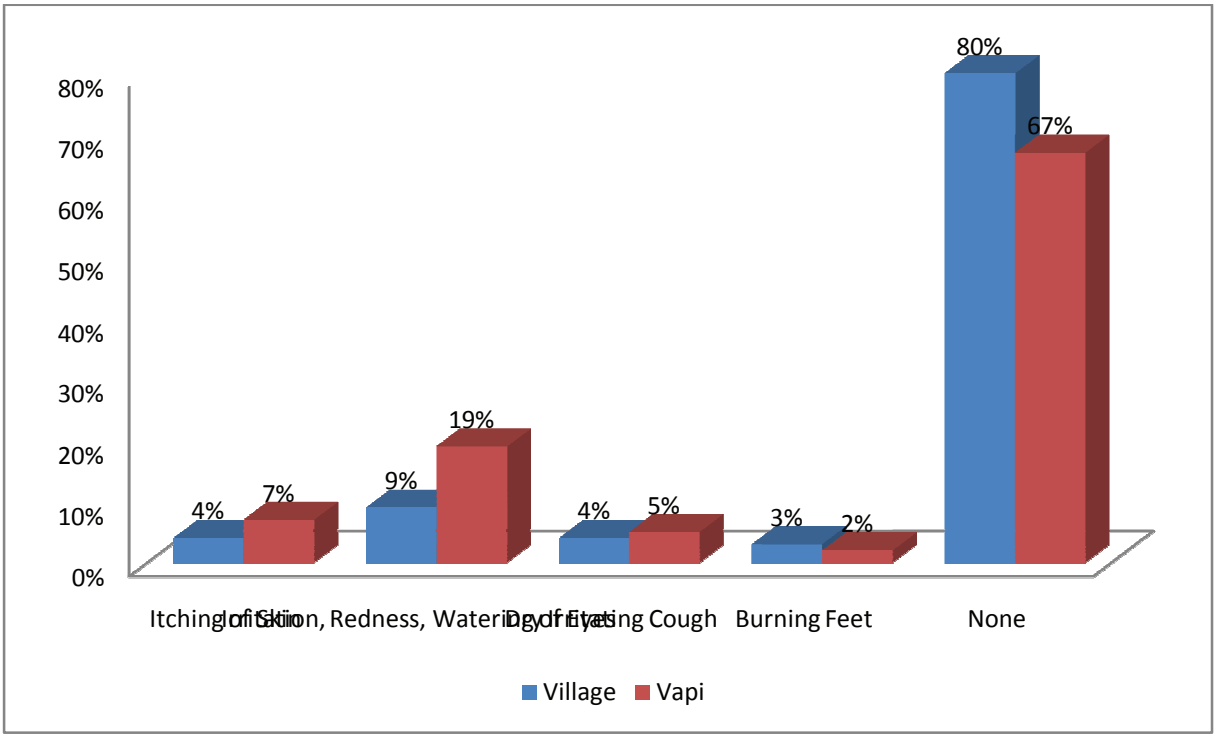
The study purpose is to find out whether the people in industrial area has more health problems than the villagers who are agriculture dependant. But is to be observed that same percentage of attack of fever either once or more than once is observed in both groups. This indicates the study population does not suffer from any extra incidence of viral fever in comparison to control group.

4.2.4 Suffered with Loose motions in last one year



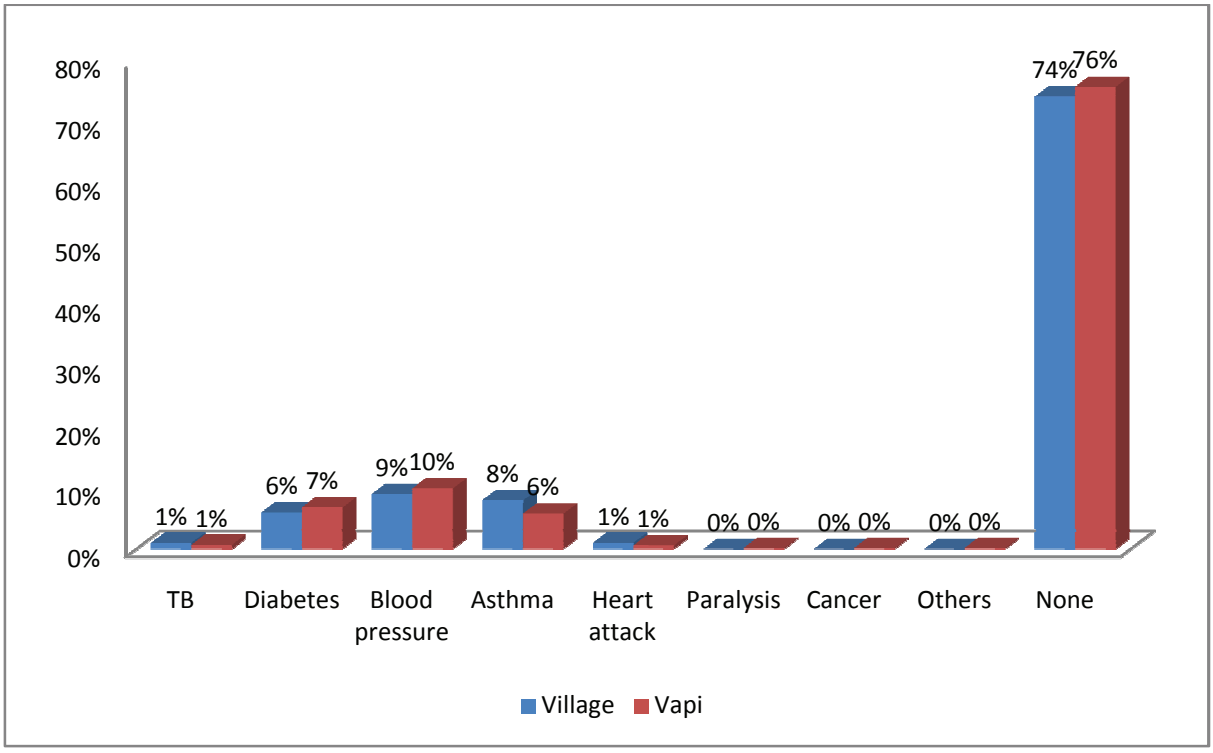
The attack of loose motions is a index of safe water availability by the govt.it also indicates the hand hygiene. However it is observed that the number of attacks of loose motions either once or twice in a year is almost same in both study group and control group.a minor variation in the percentage is not statistically significant.

4.2.5 Do you suffer with any of them



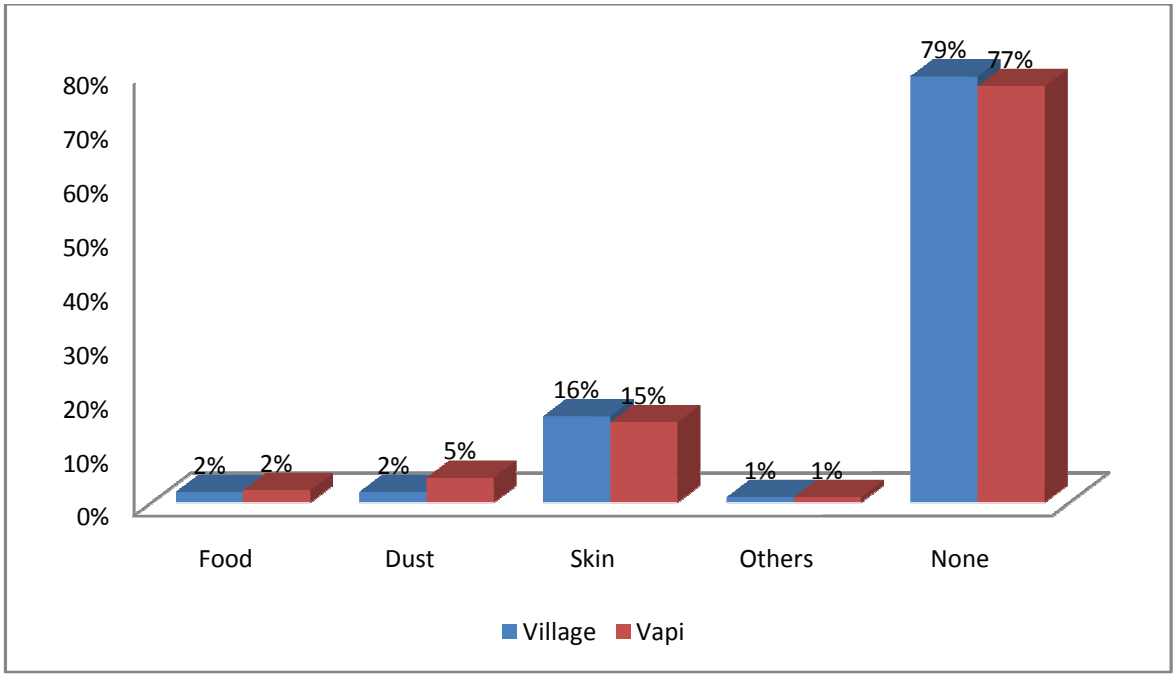
Itching of the skin, burning sensation of eyes, dry irritating cough, burning feet are mainly occupational hazards. As majority of the study population is working in chemical or dye based industry the percentage of people suffering with the above complaints is little more than the villagers. The respective industry management has to initiate appropriate occupational safety measures to reduce this problem.

4.2.6 Did you Suffer any time with



Non communicable diseases which are mainly related to life style like TB, diabetes, blood pressure etc.are almost same in study group and the control group. This may be mainly due to work stress. No large variations are observed. this indicates that lifestyle diseases are same in this geographical area and diseases which are supposed to be due to industrialization are not much in incidence comparing to the control group.

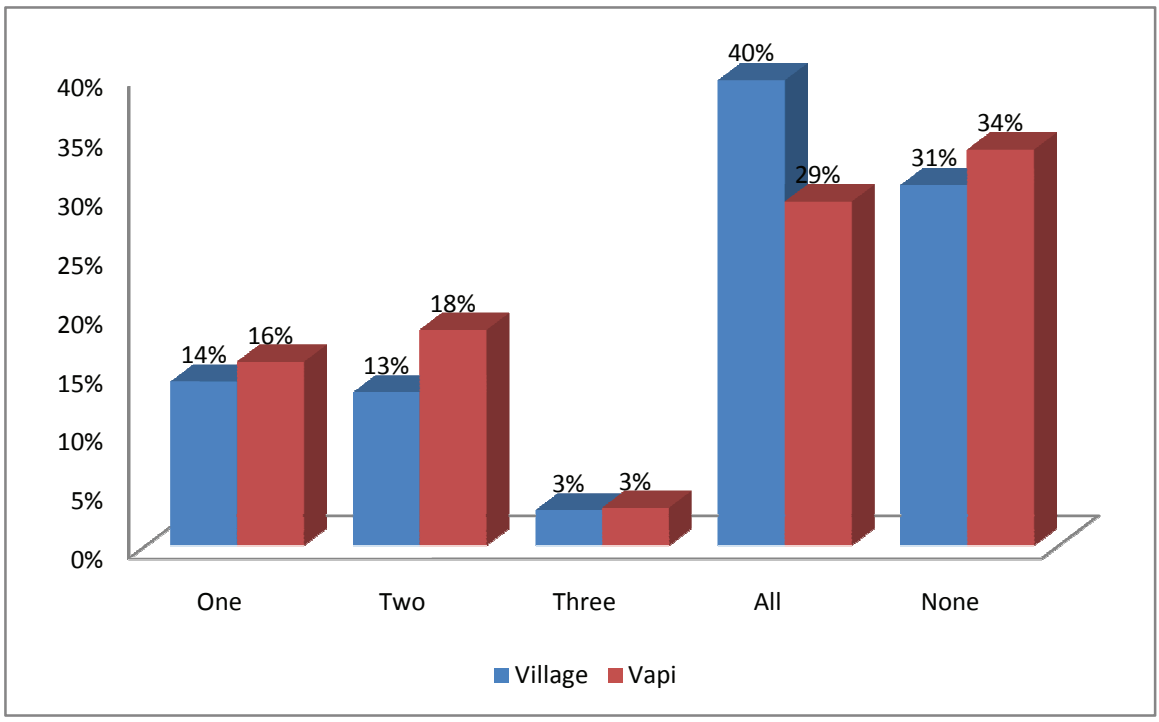
4.2.7 Has any Allergy



Allergy due to food, dust, skin are mainly due to environment and quality of air. Surprisingly All the allergic conditions are same in both control group and study group.Hence we can reasonably conclude that the environment in the industrial area of vapi is no different than villages which are nearly 20km away from the industrial zone. and all the incidences are in negligible numbers.

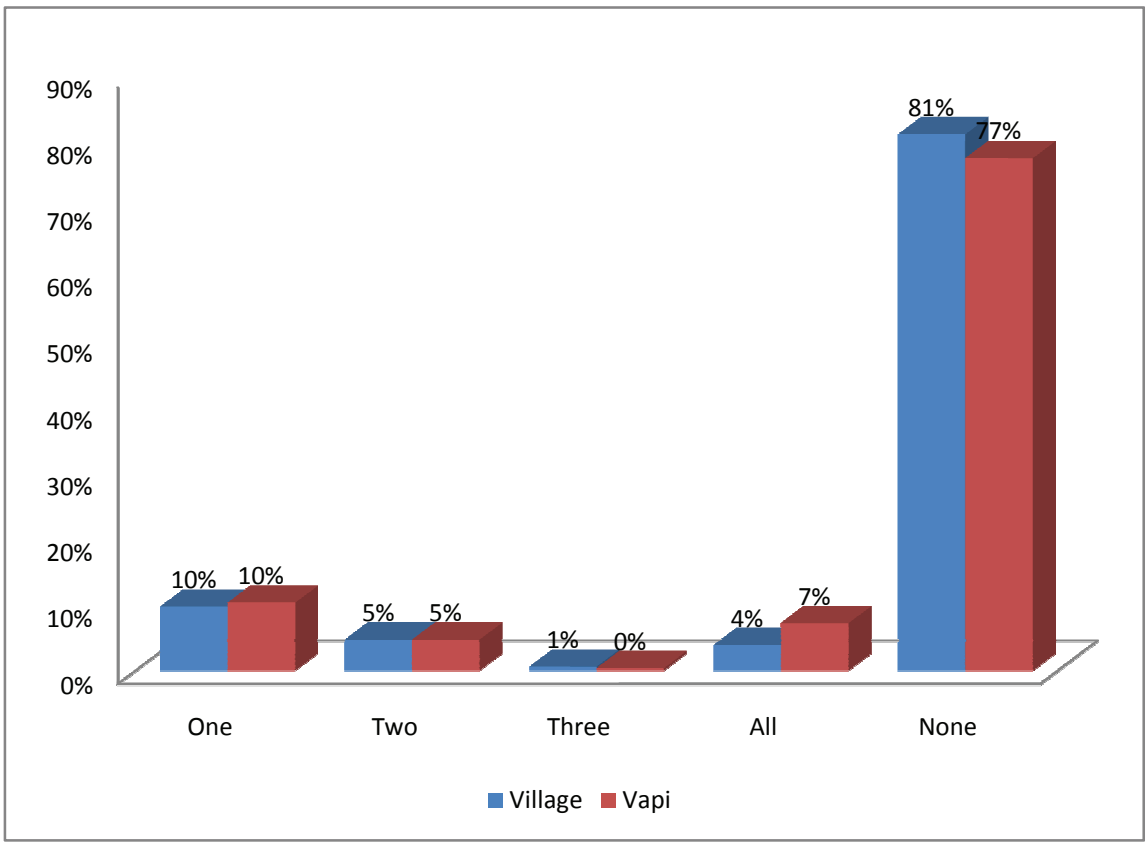
Physical details for Women

4.3.1 No. of Normal Deliveries



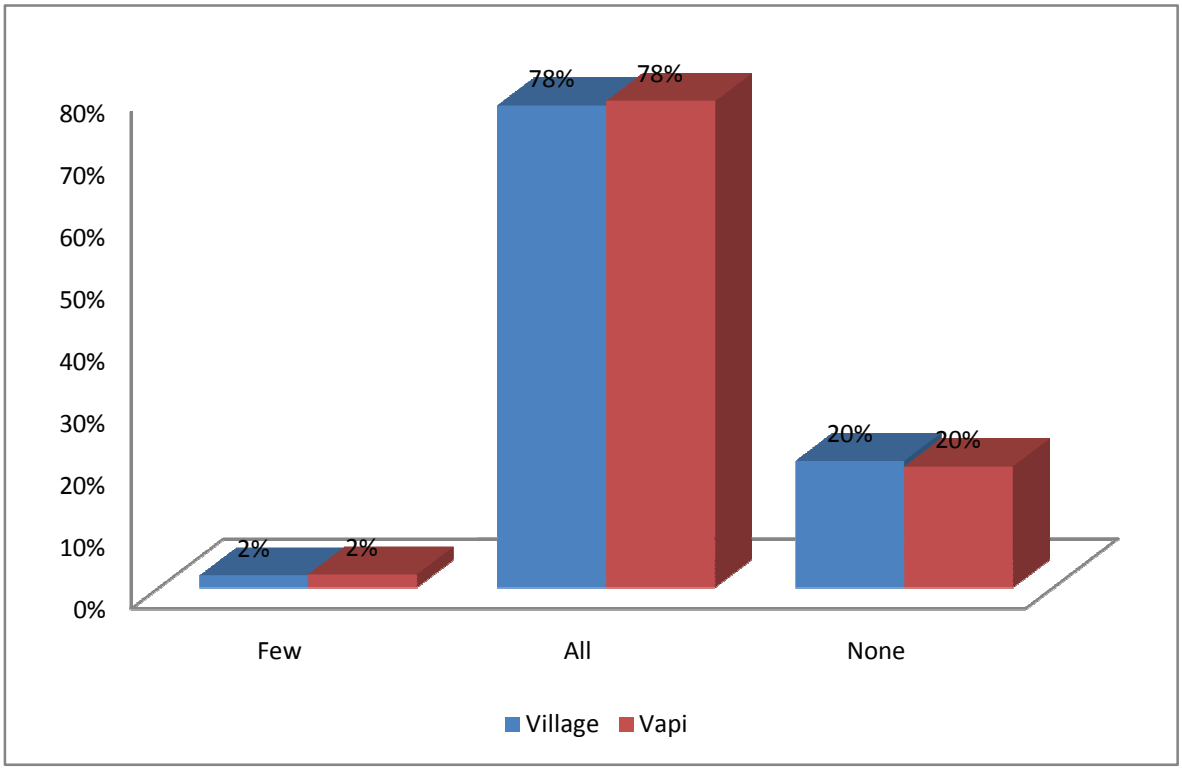
With respect to the women in the houses, whether the industrial area is affecting their gynecology health condition, type of delivery is a good indication. It is to be observed that both control group women population and study group population the number of normal deliveries are same. Here the industry environment has not made any impact. With a slight increase in incidence of normal deliveries in rural population than industrial town.the incidence of normal deliveries of one,two and three is same in both the groups.

4.3.2 No. of Caesarian Deliveries



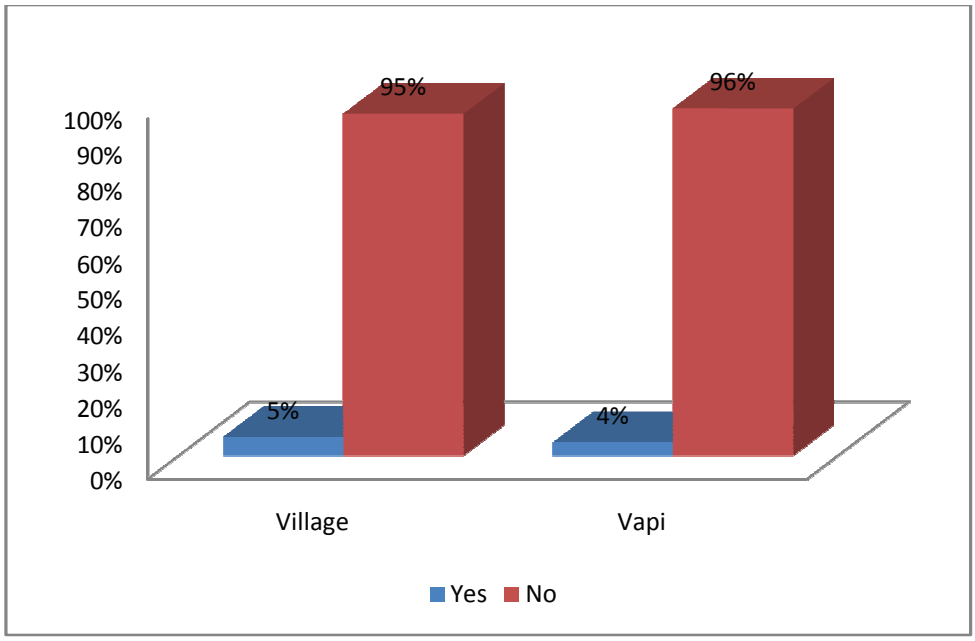
Similarly the number of caesarean deliveries also absolutely same percentage in both the groups. This indicates that the industrial environment has not made any impact on the women's obstetrics, menstrual health and the antenatal health services are absolutely same in both the situations and in both the regions.

4.3.3 No. of Deliveries in Hospital



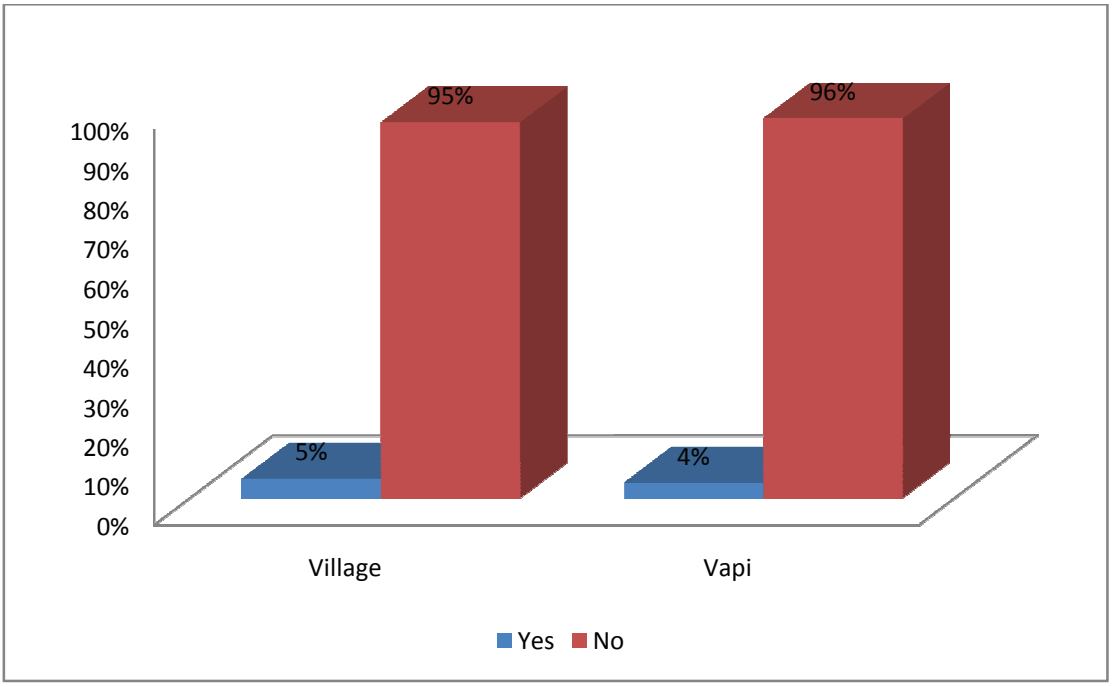
The number of deliveries taking place in hospital is a good index of antenatal and mother and child health services. Almost similar percentage of all categories can be observed in this finding. Hence there is absolutely no difference in the number of deliveries been conducted in hospital either of the groups.

4.3.4 Number of Abortions



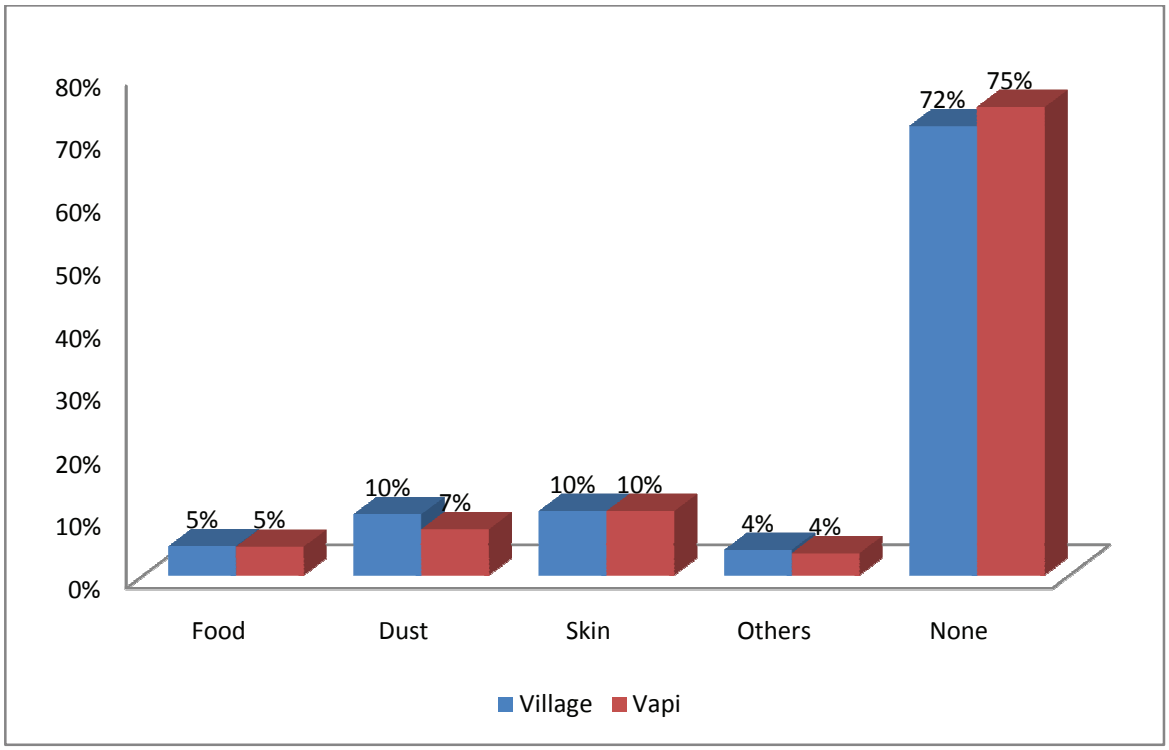
Number of abortions is a good indicator of hormonal imbalance, imperfect antenatal services, inefficient mother and child health services. It is to be observed that in both control group and study group 95% of them did not experience any abortions. This observation is same in both groups and lack of any difference in both the groups indicate good hormonal balance and perfectly similar antenatal and mother and child health services.

4.3.5 Any child died after Birth/Still births?



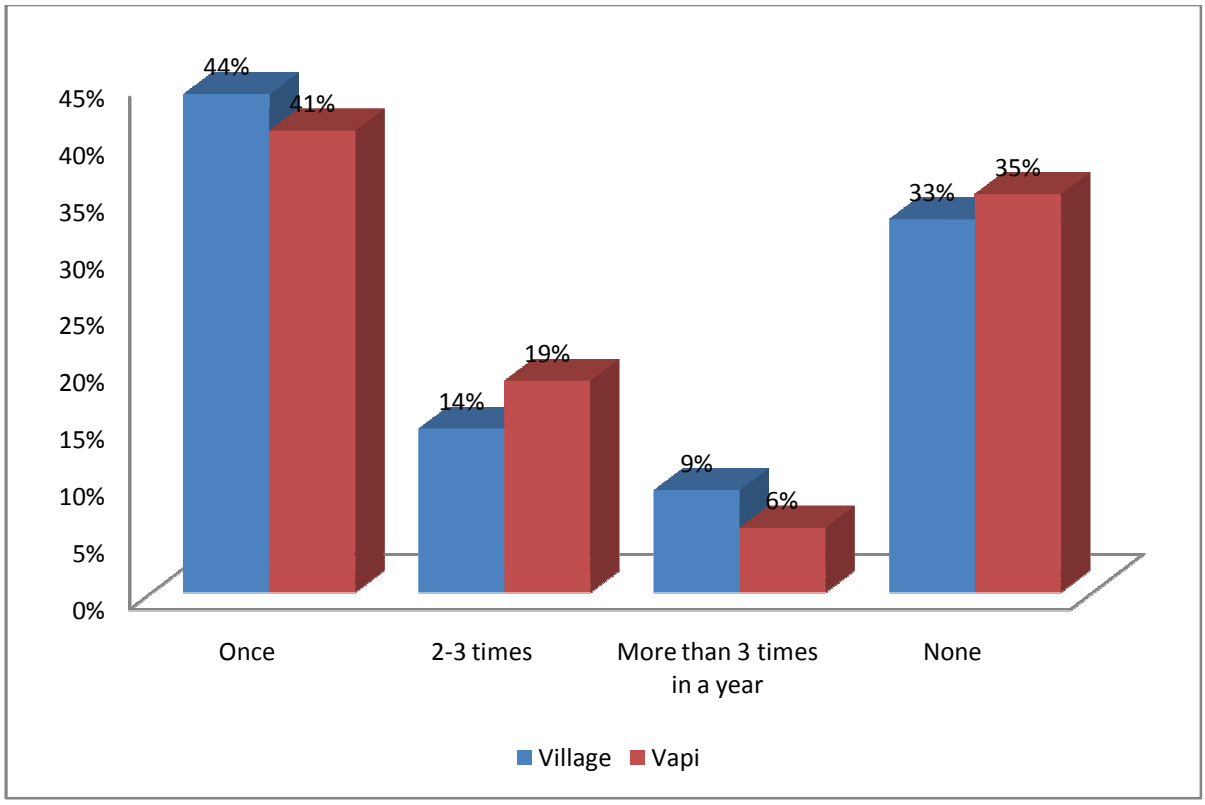
Death of a child either during delivery or immediately after delivery, either in hospital or at home is a good indication of hormonal, antenatal, nutritional condition, delivery facilities available at the appropriate time and place. However it is to be observed that in both the groups 95% of the women did not face any still birth or infant mortality, and absolutely same percentage in both the groups indicative of similar environment and medical facilities.

4.3.6 Has any Allergy



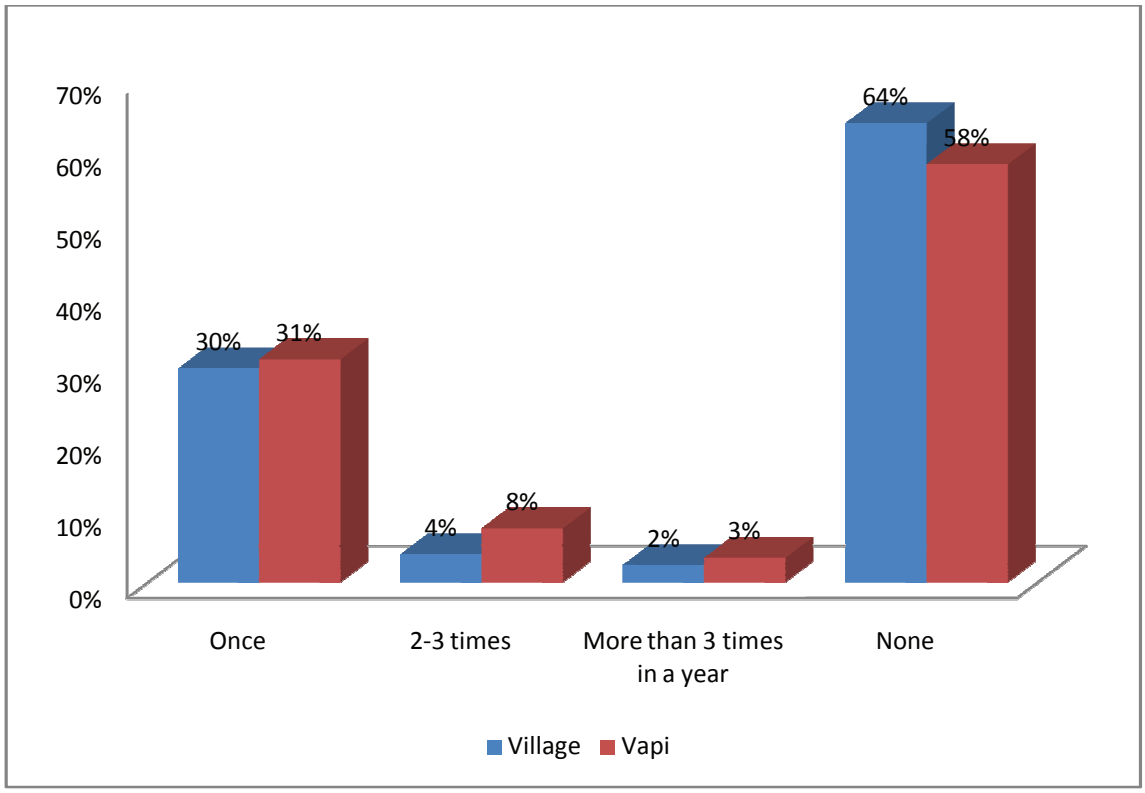
Surprisingly the women in both the groups has absolutely not suffering with any extra incidence of allergy, i.e. nearly 72-75% and other allergic conditions like food, dust, skin is same in both the groups. This finding is in quite contrast to the men who are working in the industry where majority of them are suffering with skin allergy. Hence it is the occupational hazard of the industry mainly dye and chemical industry rather than the environmental pollution.

4.3.7 Suffered with Fever in last one year



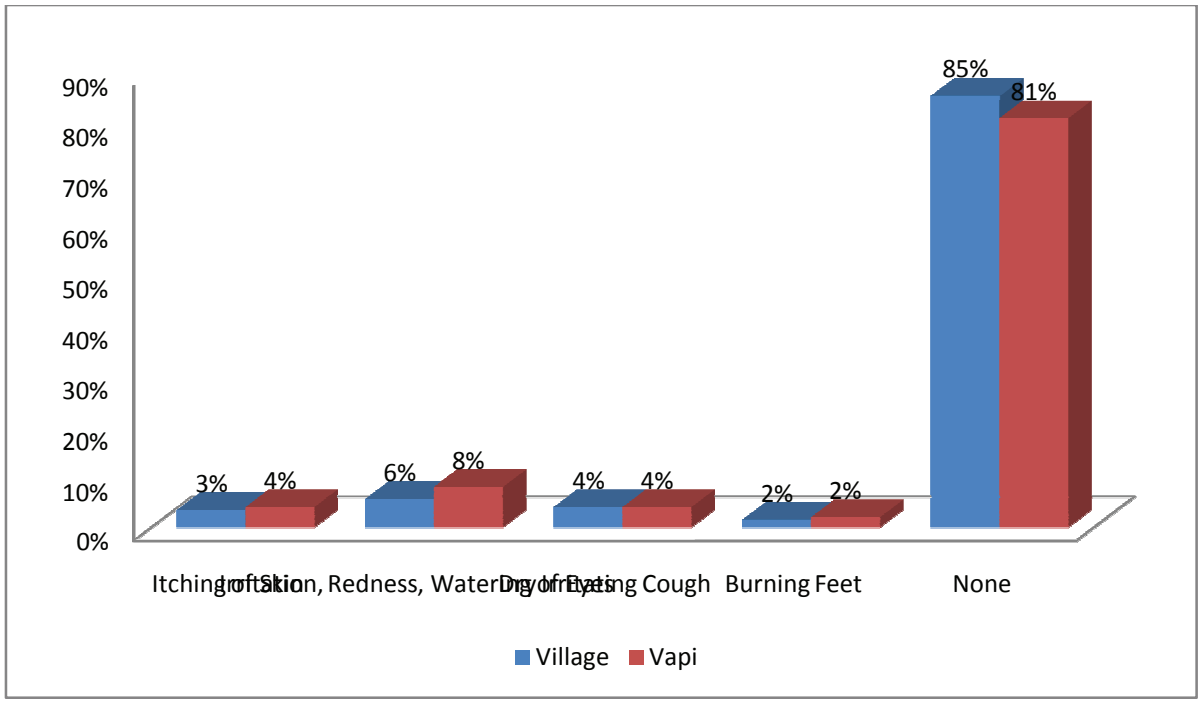
Attack of fever among the women sample in both the control group and study group is also absolutely same. People who were attacked once by fever are 44% in control group and 41% in study group. People with 2-3 times fever attack were mere 14% in control group and 19% in study group, 33-% of the control group population never had any attack of fever, and as it is only 35% in study group. One attack of fever in the season is a normal phenomenon.

4.3.8 Suffered with Loose motions in last one year



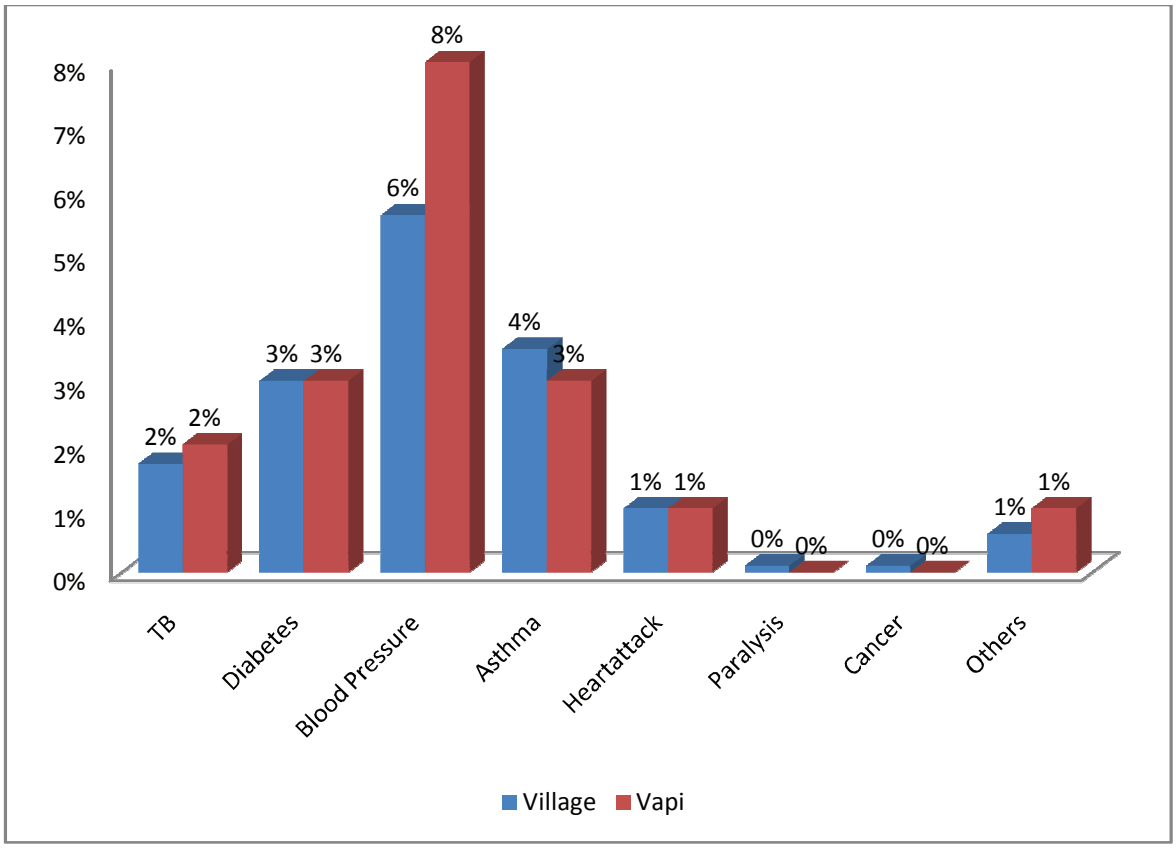
Attack of loose motions in a year is alsonot varying in each category in both control group and study group. People who had 2-3 attacks in a year are 4% in control group and only 8% in study group. Similarly people attacked for more than 3 times in a year are 2% in control group and mere 3% in study group. People who never had any attack are 64% in control group and 580% in study group.

4.3.9 Do you Suffer with any of them



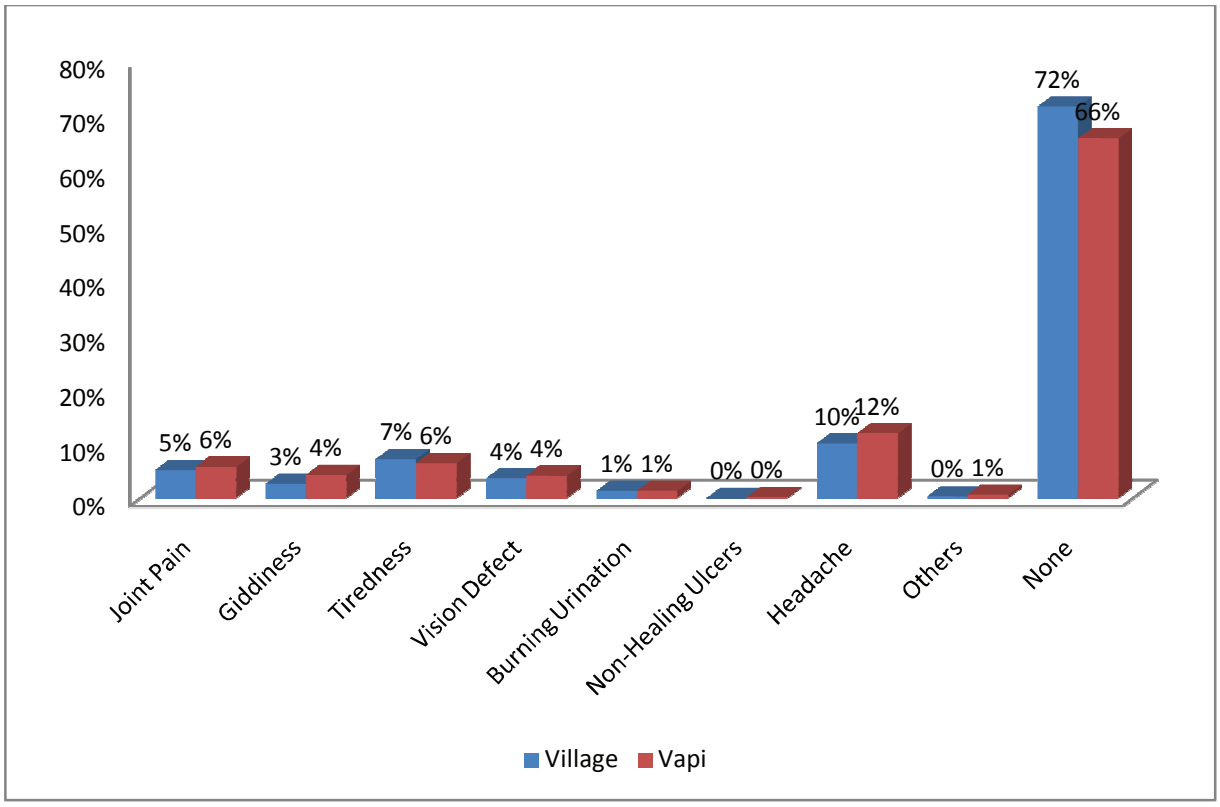
Unlike men in the sample data from both control group and study group, the data from the women is quite different. Itching skin, irritation, redness, watering eyes etc are same percentage in both groups and is in insignificant number. Those who do not have any complaint about these irritant factors are 85% in control group and 81% in study group. This indicates that the exposure of women in both the groups is same and the effect is minimal.

4.3.10 Suffered with any of them



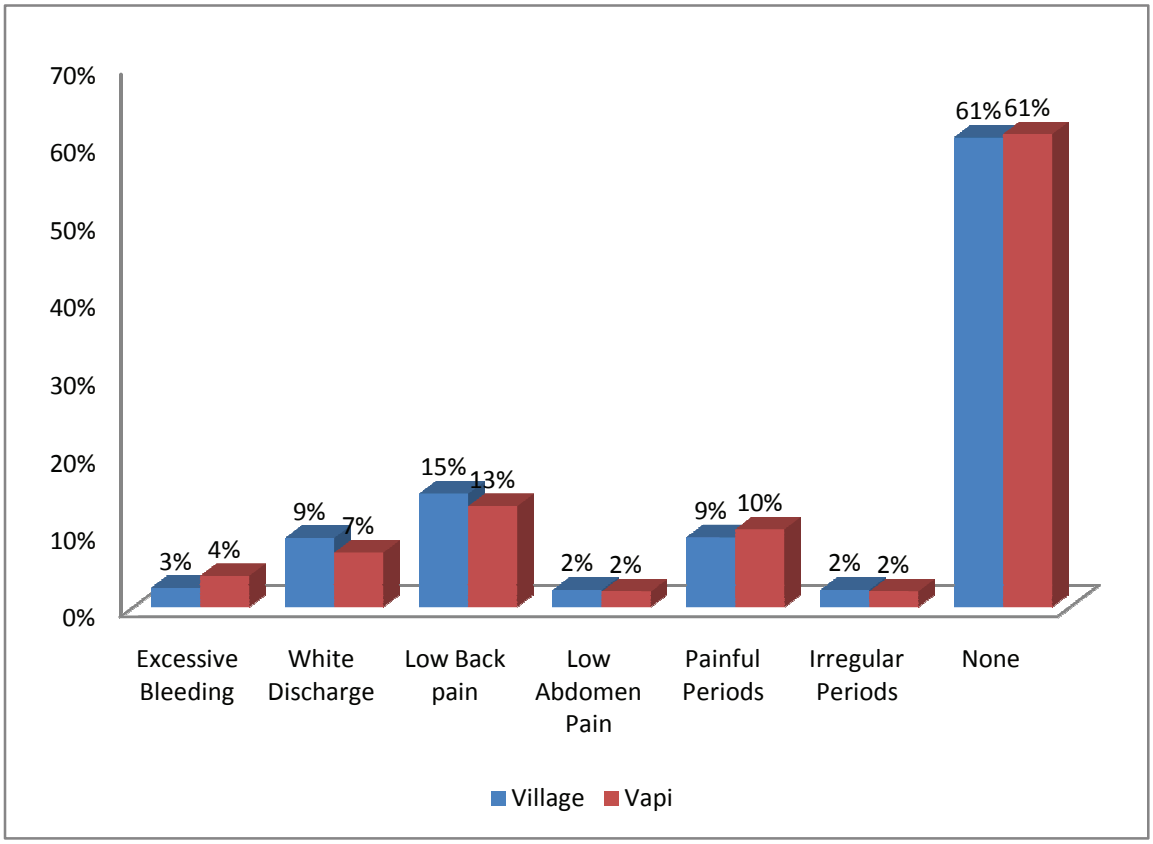
Chronic diseases among the women in both the groups isanalysed. Only 2% of both the groups are suffering with TB. . However 8% of the disease affected people have an increased blood pressure and it is 6% in control group. All other diseases are insignificant percentages and the variations are statistically not valid.

4.3.11 Do you have any of the following Health Complaints



Vague, undiagnosed, general health complaints among both the groups is also elicited in the questionnaire. Joint pains, giddiness, tiredness, vision defect etc are almost same in both the groups. However 10% of the women in control group are suffering from headache and only 12% are having similar problem in study group all other percentages are insignificant.

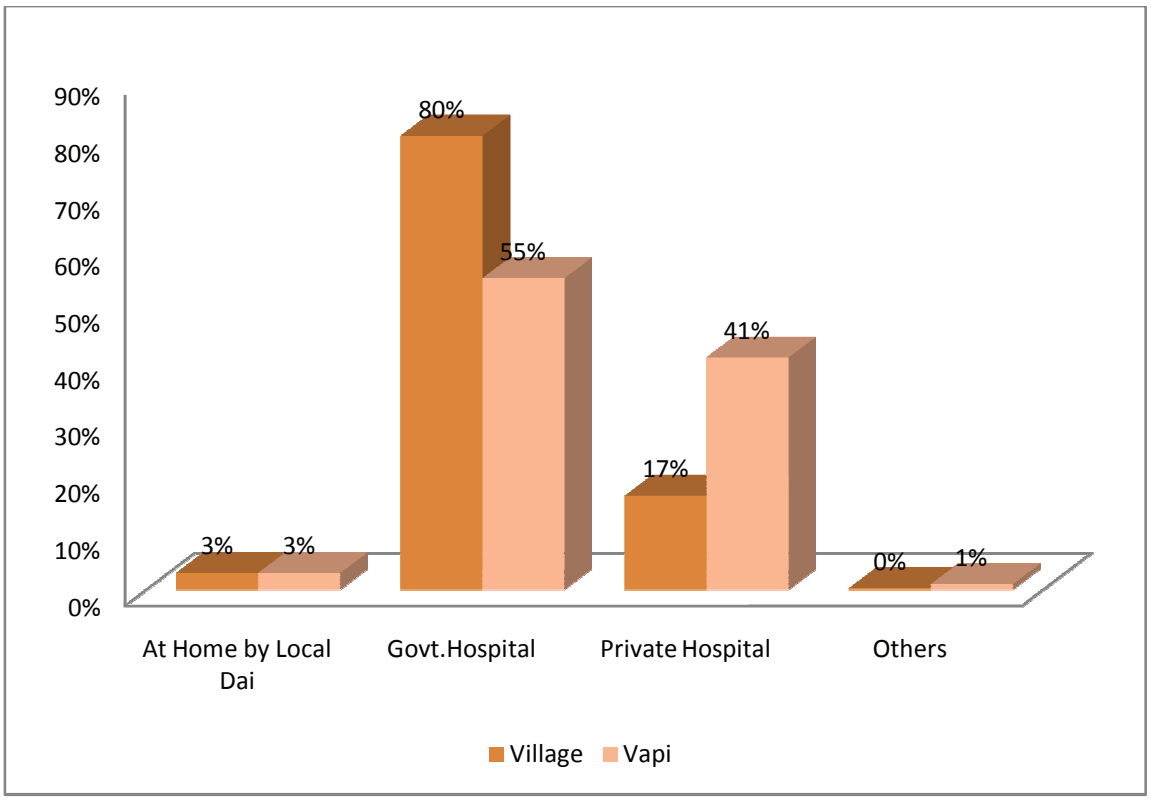
4.3.12 Has she any Gynaec Complaint



The gynecology complaints like excessive bleeding, white discharge, low back pain, painful periods, irregular periods are almost same percentage in both the groups. Only slight variation is observed. The variations recorded are statistically not very significant and can be concluded that the gynecological health of the women in both groups is satisfactory and not many people have any perceivable, notable complaints in this regard.

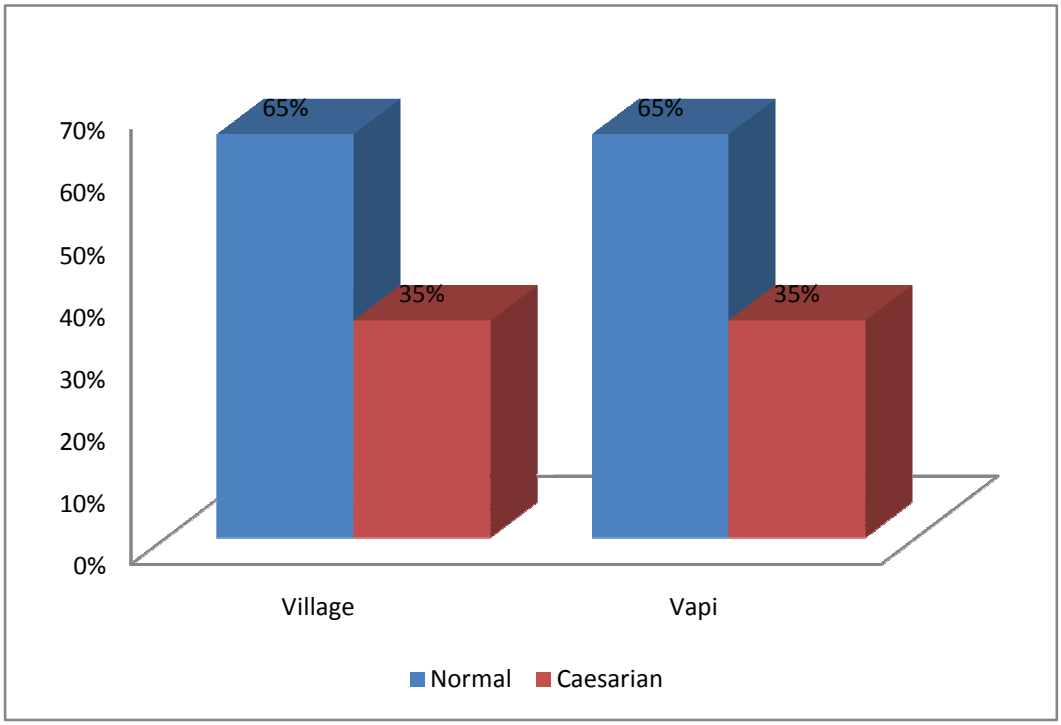
4.Physical details for Children aged up to one year

4.4.1 Born



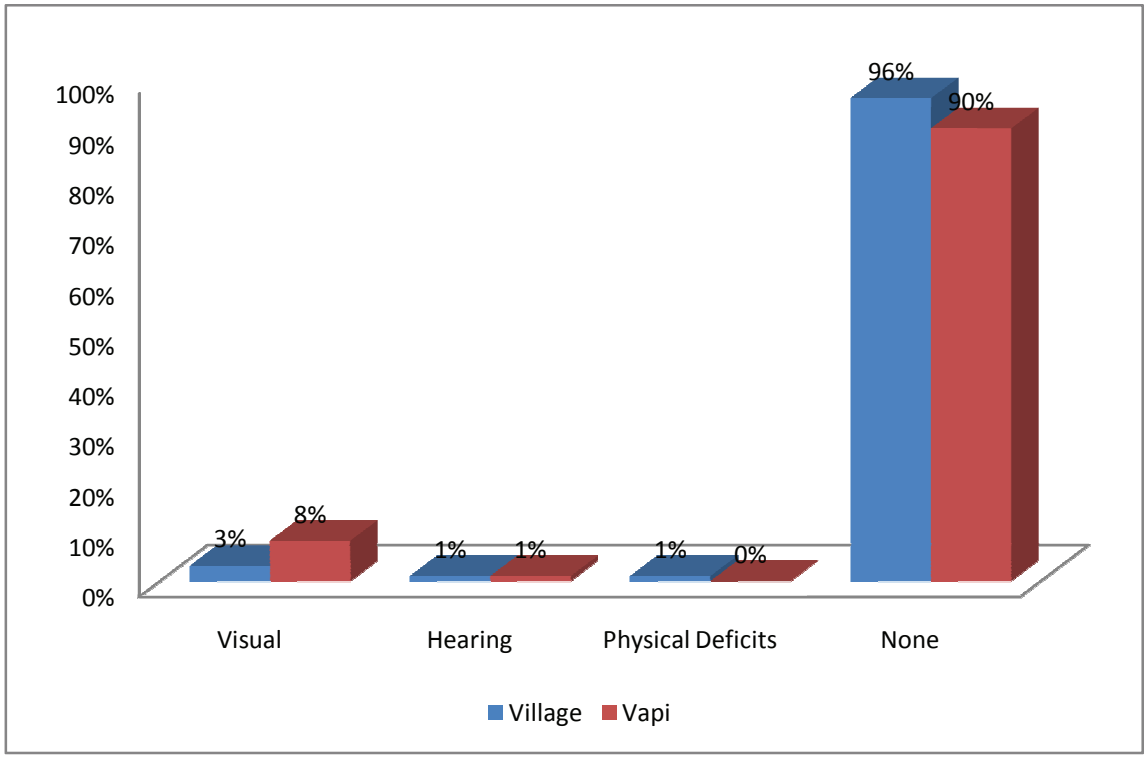
The sample of children below the age group of 1 year from both the groups is also collected and analysed for various information pertaining to health. One of the important indicators of health indices is utilization of hospital or trained staff for conducting the deliveries. It is to be observed that deliveries at Government hospital is 80% in villages and only55% respectively. Similarly deliveries at private hospital is 17% in villages and 41% in vapi town.

4.4.2 Type of Delivery



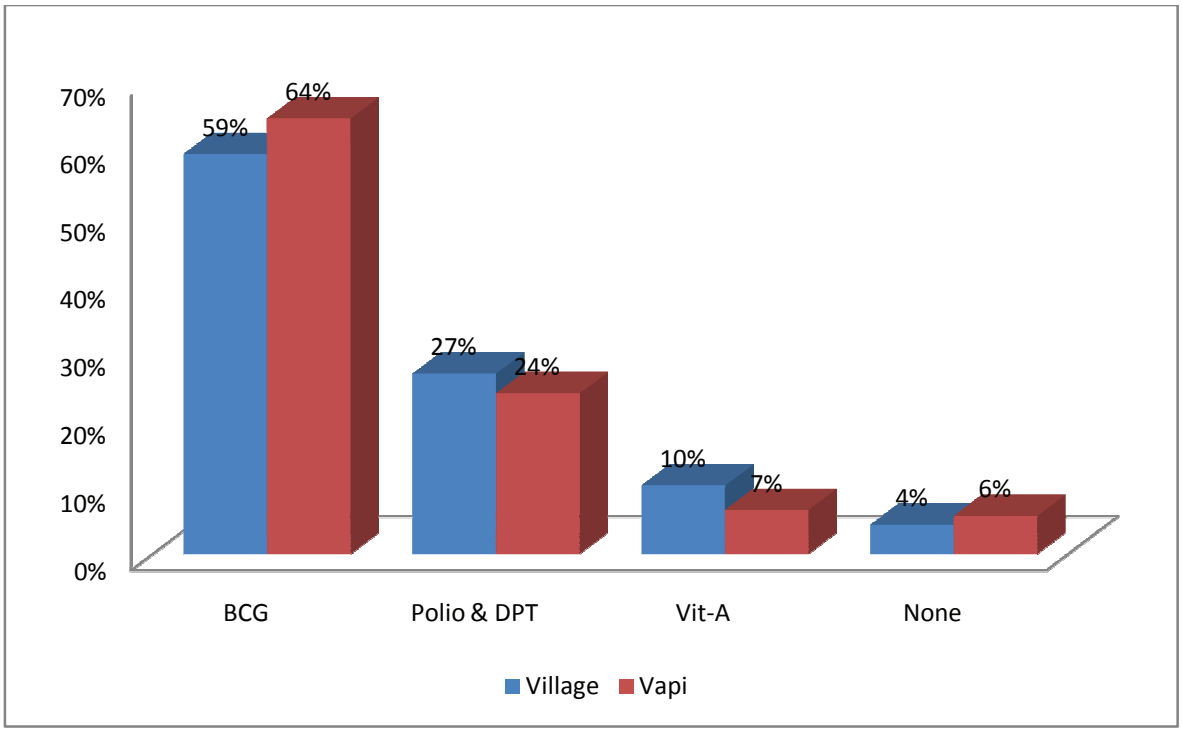
It is observed that in villages 65%of the women had normal deliveries and only 35% had cesarean section. whereas it is to be observed that exactly similar percentage was recorded even in vapi town. this indicates that either villagers are also coming to town for deliveries and if they seek medical aid at a private hospital the same incidence will be observed.

4.4.3 Was baby born with any health Deficits



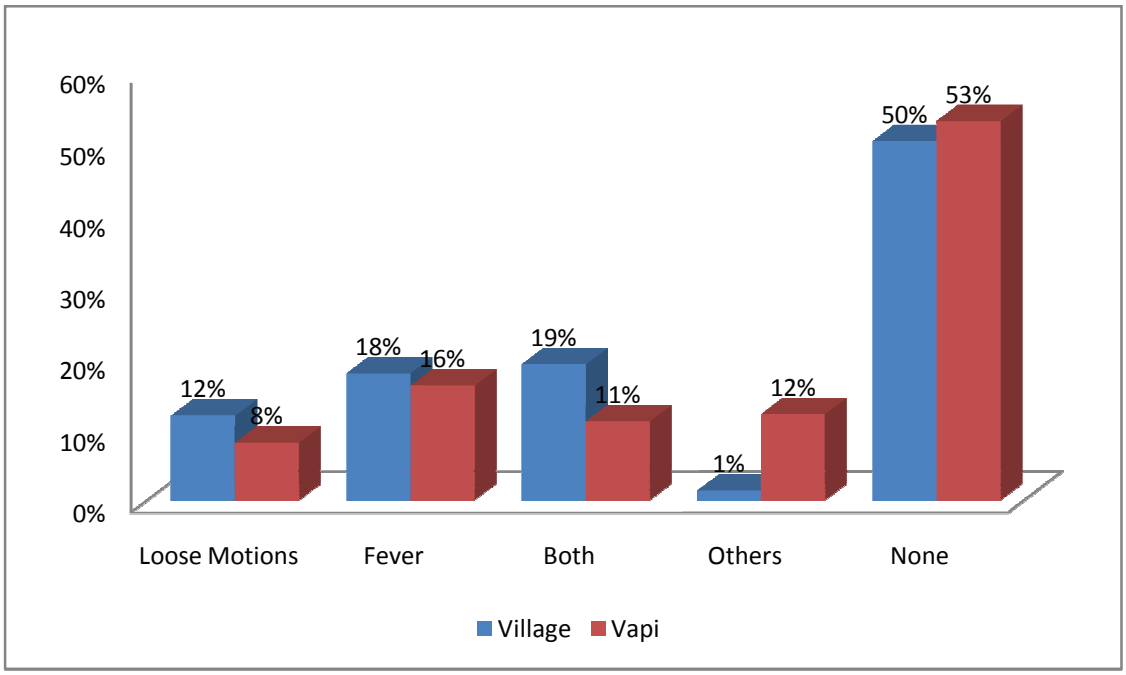
Congenital defects denotes various external and internal factors affecting the pregnant women health. Several times the environment in the industrial area is alleged to be causing even birth defects to the newly born children. To repudiate this false allegation this important indicator is recorded. It is to be noted that both groups have similar number ofno birth defect children born, i.e. 96% among control group and 90% among study group. All the defects noted are also same percentage. However 8% among the study froup is also significant for further analysis.

4.4.4 Immunized



The percentage of children who are immunized is also a very important health indicator which is having a bearing on the health of the infants. It is to be noted that 96% of all children are immunized in control group i.e. villagers and 94% of all the children are immunized in study group i.e. children in the industrial area. However 4-6% of all children not getting immunized in both the groups is a very important finding to be worried and the public health officials should be alerted in this aspect.

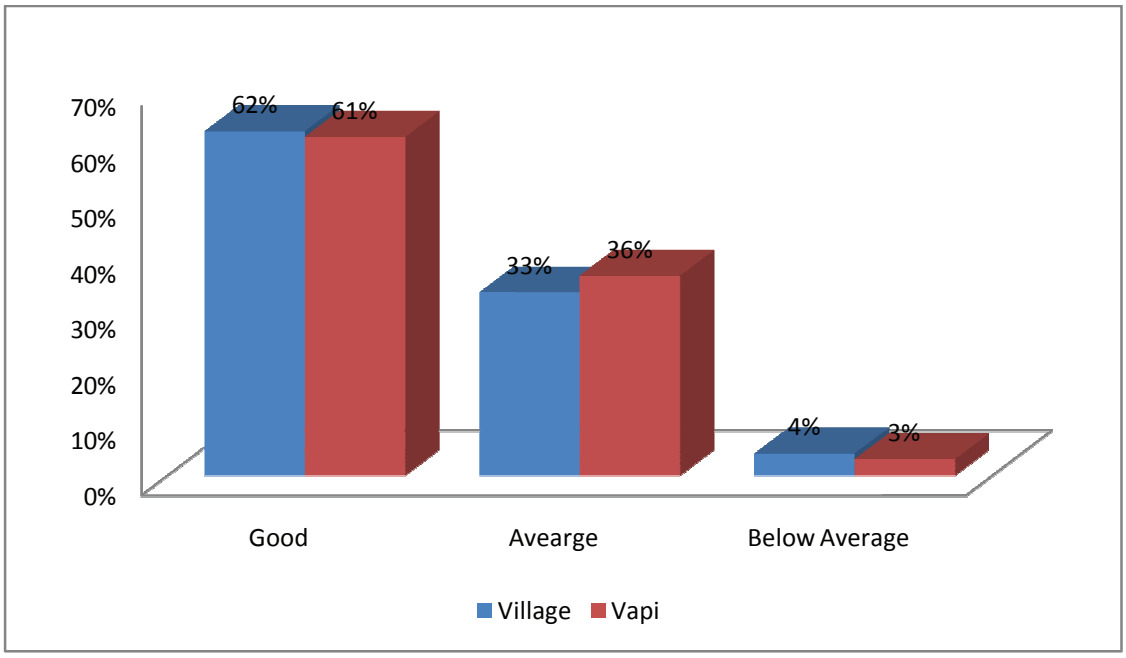
4.4.5 Did Baby Suffer with any specific conditions



The health of the child during the first one year of the age is also an important indicator of the environment and good child health services and public health services. However whether it is loose motions, malaria, typhoid or viral fever similar percentage of affected children is observed in both the group and there is absolutely no difference is recorded. This clearly indicates that the environment has absolutely no impact on health of the infants.

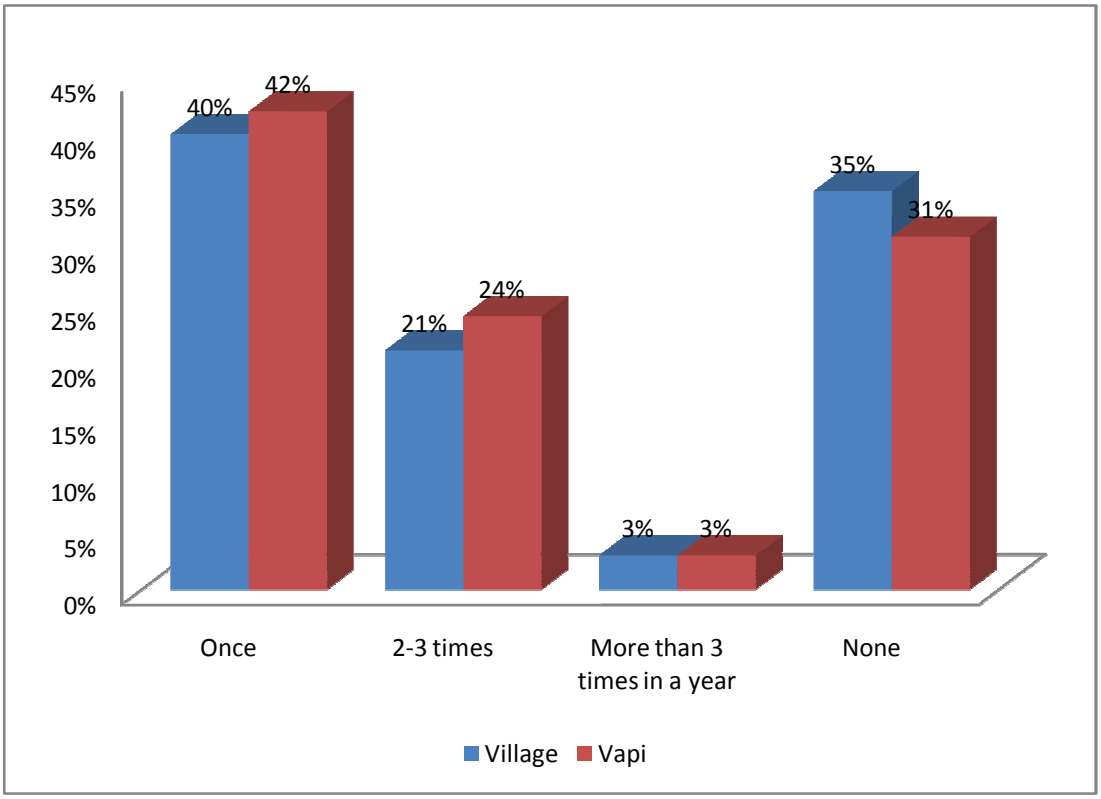
Physical details for Children More than 5year to up to 12years

4.5.1 How is your Child at Studies



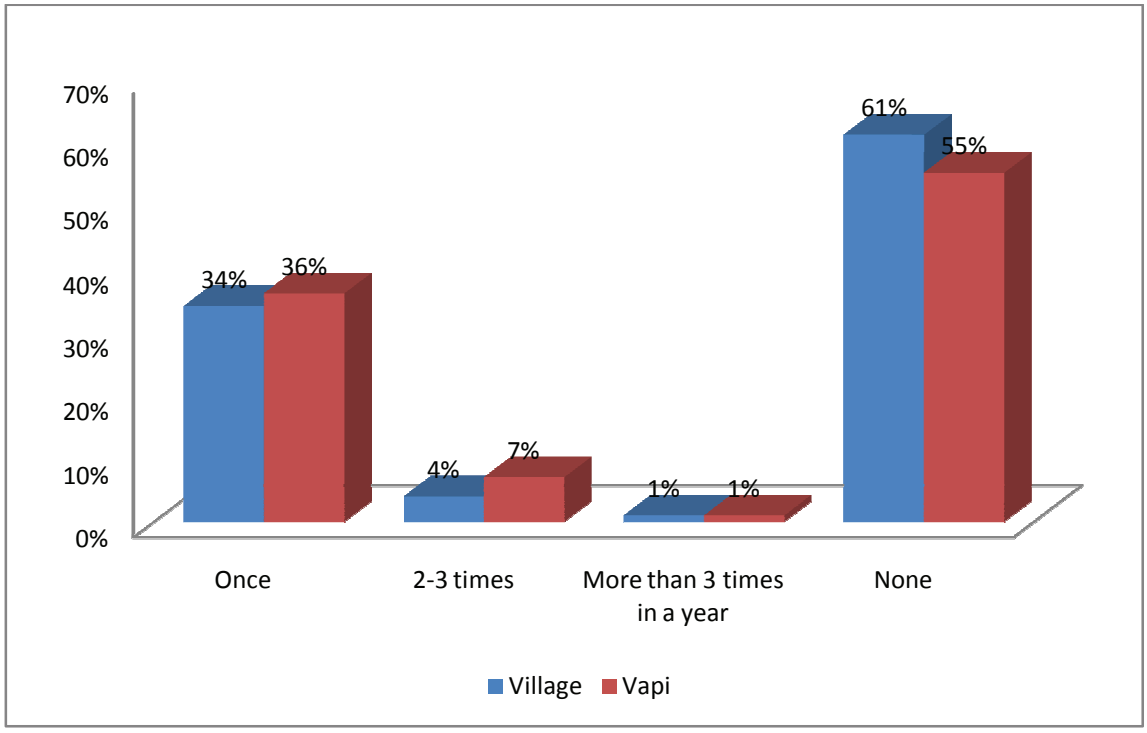
The academic performance of the children is a good indicator of the mental growth. In view of several false allegations being circulated in various media that industrial environment is causing mental retardation of the children, a comparative analysis of the academic performance of the school going children in both control group and study group is recorded. It is to be observed and noted that the performance of the children in both the groups is absolutely the same and no difference whatsoever is observed.

4.5.2 Suffered with Loose Motions in last one year



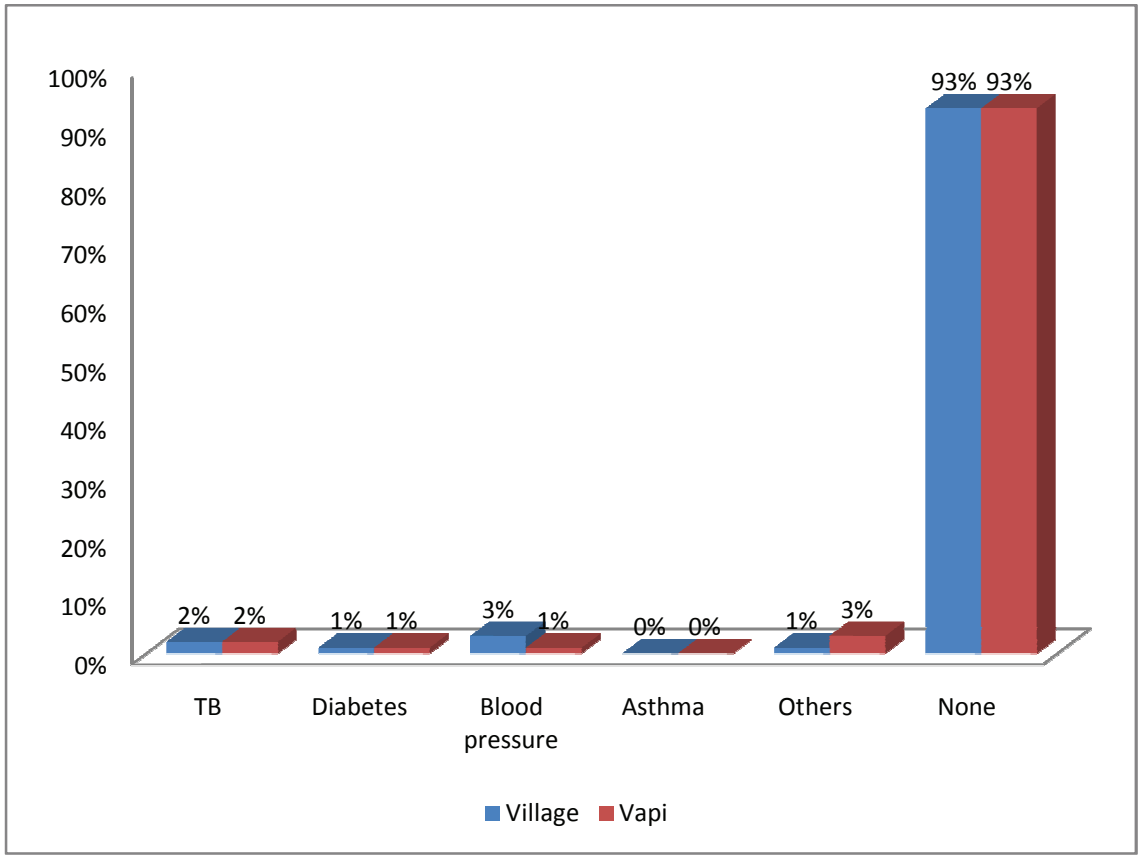
Attack of loose motions is an important indicator of immunity, public health and hygiene. This also indicates the food safety and safe drinking water availability. It is to be noted that there is absolutely no difference of number attacks of loose motions among control group and study group. Similarly the number of attacks also not varying in both the groups. This clearly indicates both control group and study group are facing some environmental factors relating to their health.

4.5.3 Suffered with Fever in last one year



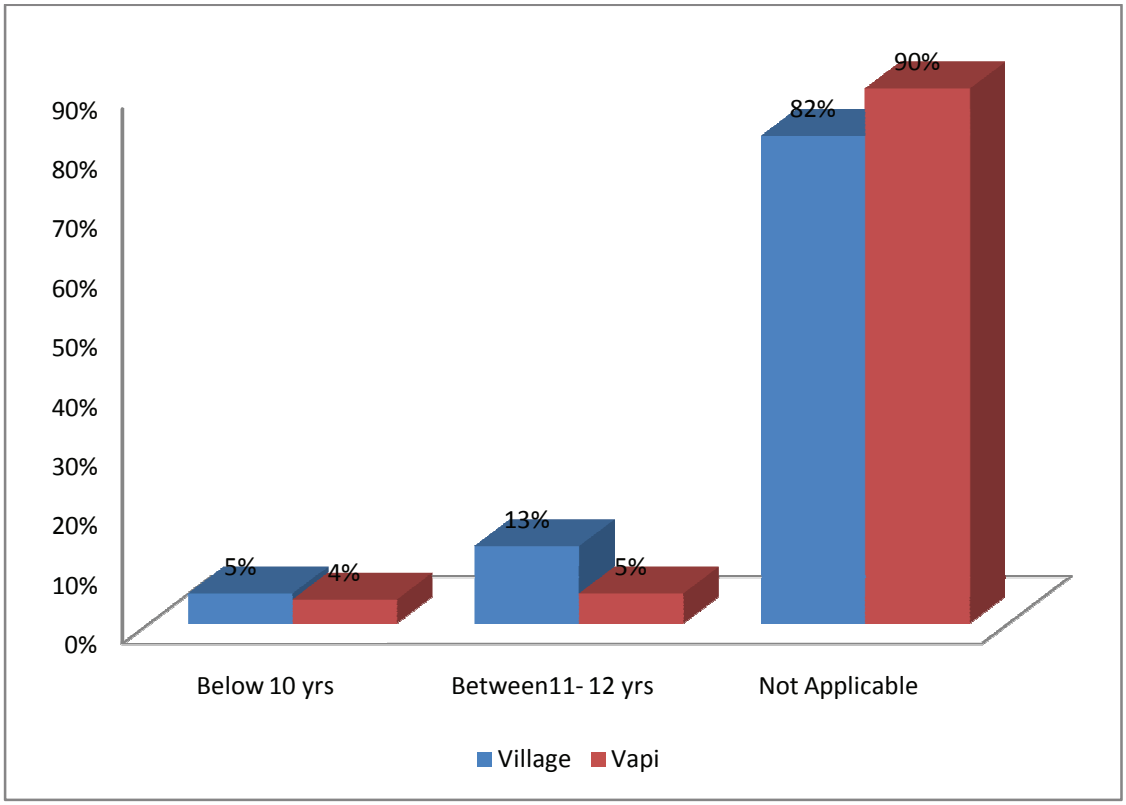
Like number of attacks of loose motions number of attacks of fever is also an important indicator of immunity and factors affecting the health. Even here also the percentages are similar in both the groups, and slight variations observed are statistically not significant. This data also reiterate and reinforce the statement that the external environmental factors affecting the health are similar in nature in both the situations.

4.5.4 Suffered with any of them



The incidence of major ailments like Tb, diabetes, hypertension, asthma is absolutely same in both the groups and no deviation or difference is noted. The incidence of Tb is only 2% of the population among both the groups and hypertension is only 1% in both the groups in this category.

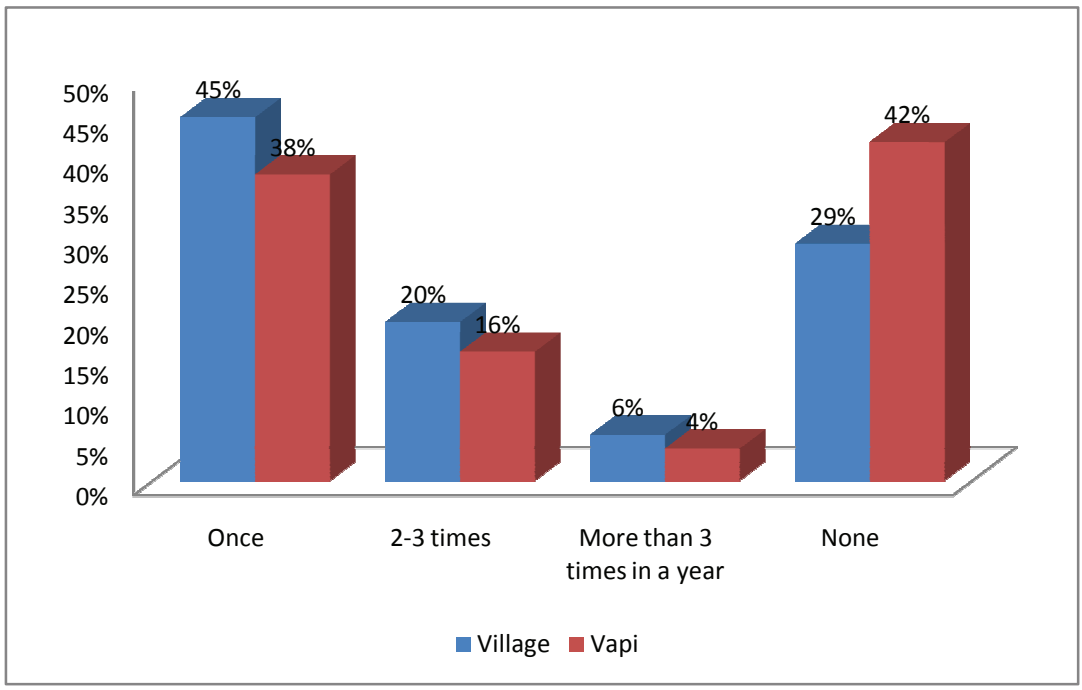
4.5.5 Age at First Menstruation



Among the girl child below 12 years age group in this frequency, age at first menstruation is an important indicator of hormonal imbalance. It is several times alleged that the young girls have delayed menarche due to industrial pollution, because of hormonal disturbance. But it is observed from the above group that there is absolutely no truth in this allegation and both the control group and study group young girls have similar adolescent features.

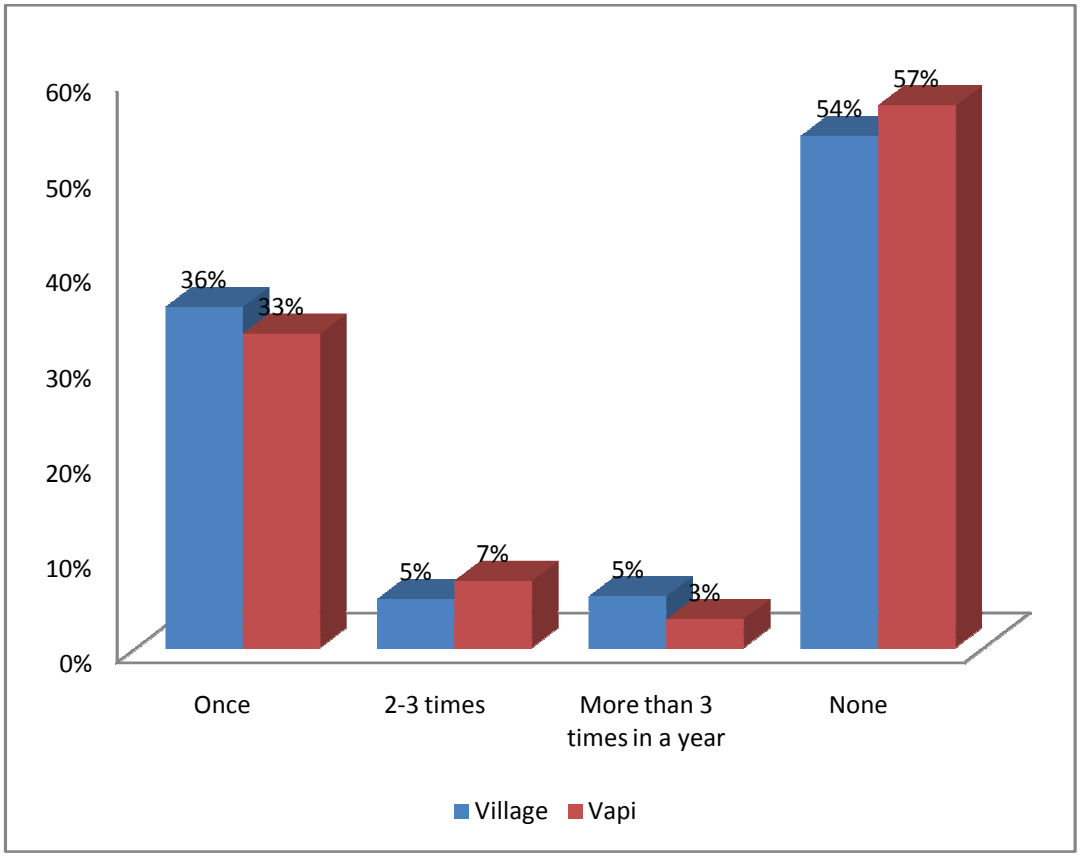
6. Physical details for Boys, Girls and Unmarried (Male & Female) More than 12year

4.6.2 Suffered with Fever in last one year



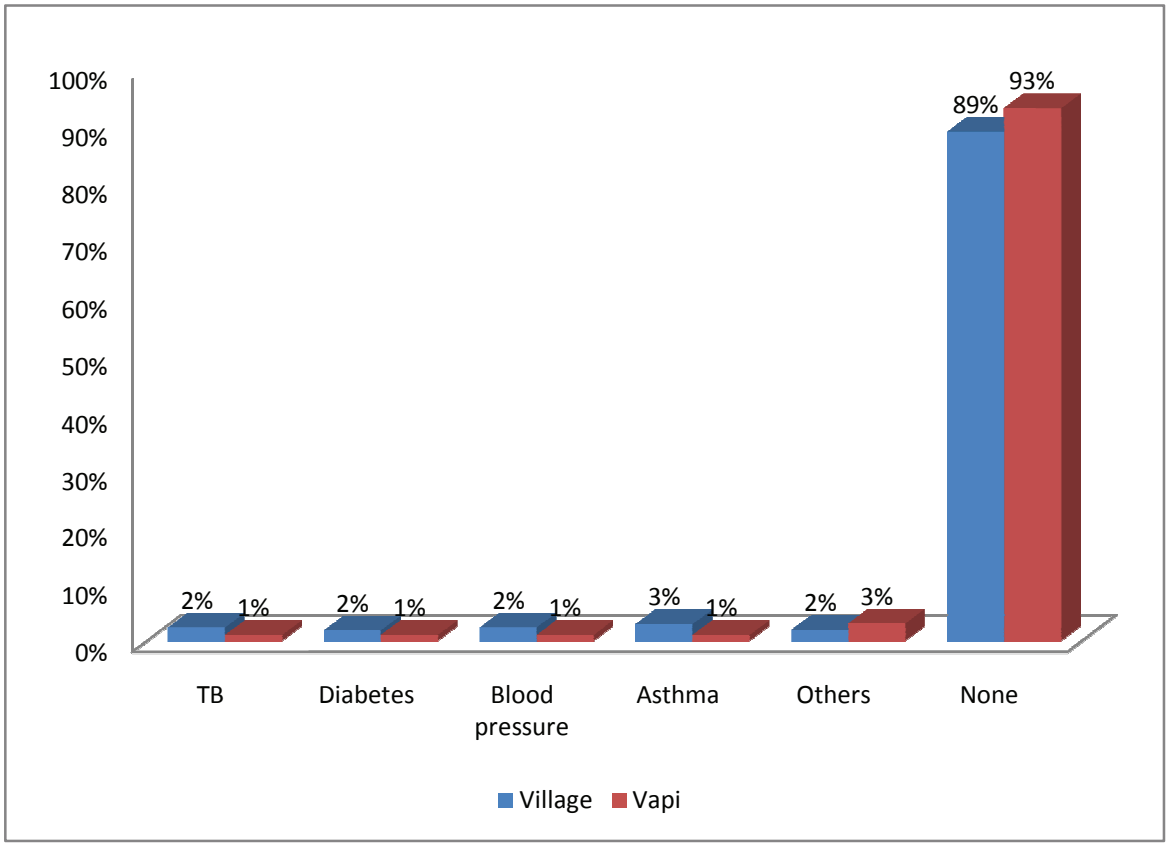
Similar to other group of children, the immunity status of the children are also compared to the control group. Here also all the number of attacks of fever is same in both the control group and study group. Hence it can be concluded that the immunity status of both the groups is same and the children health is also same in all aspects. 29%among villagesrs did not suffer with any attack of fever but 42% of study group did not suffer with any attack .this shows that the study population had better immunity status and environment than villages.

4.6.3 Suffered with Loose Motions in last one year



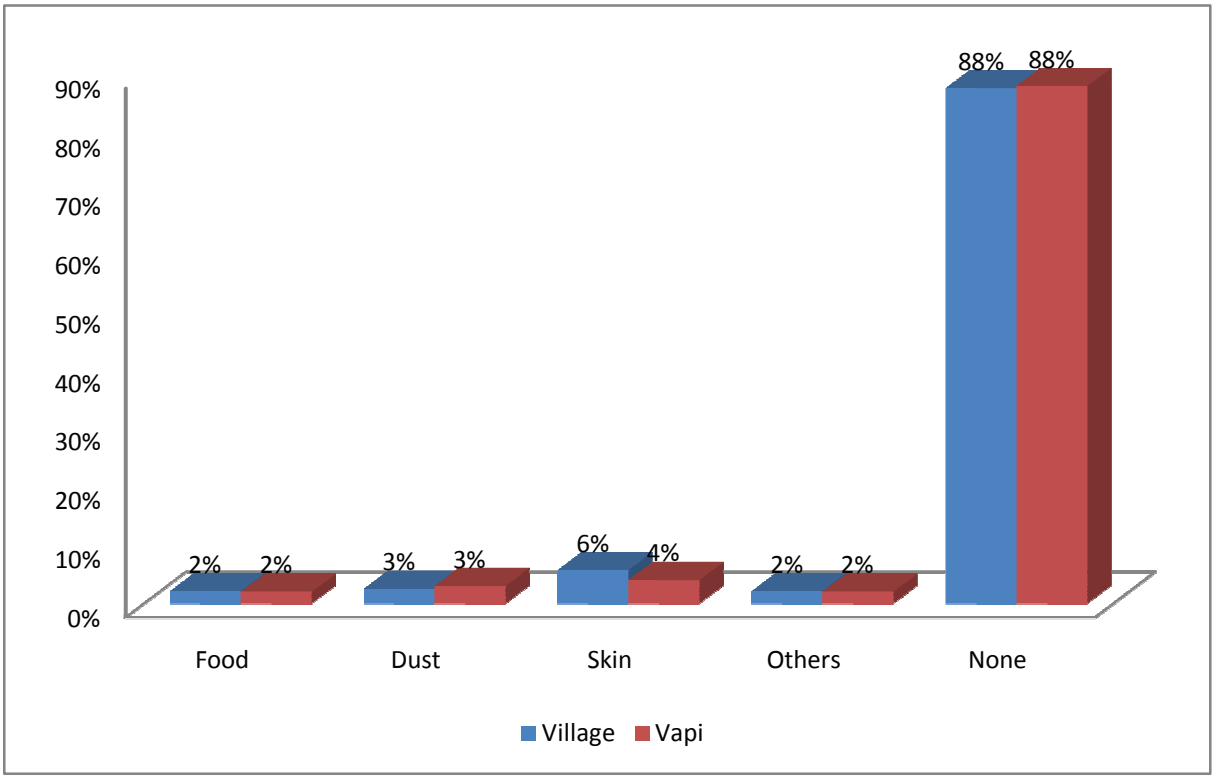
Like attack of fever, number of attacks of loose motions, like previous age group is also very important indicator. Here also it is observed that all the frequencies of number of attacks is absolutely similar in both the control group and study group and no difference is recorded.

4.6.4 Suffered with any of them



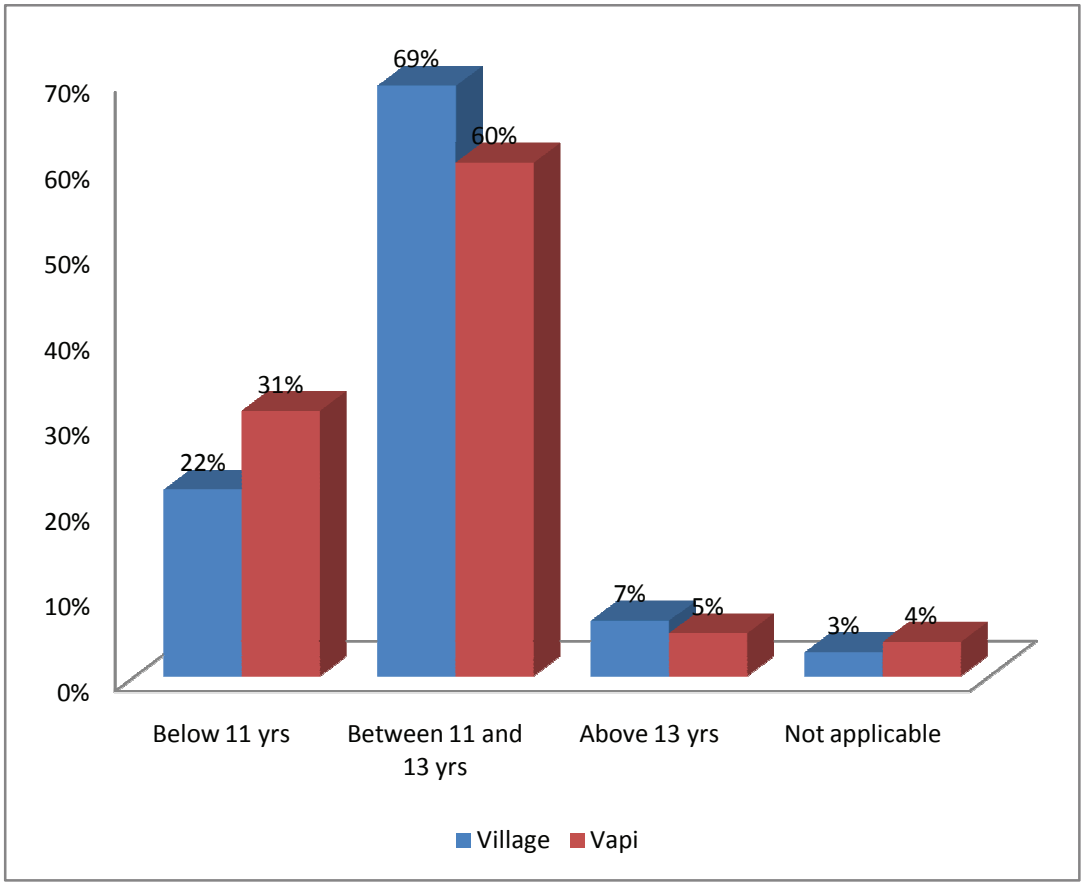
The incidence of various diseases like Tb, diabetes, hypertension, asthma in this young children in both control group and study group is absolutely similar and very minimal incidence of these diseases is noted. This also gives a overall indication that the health status of the population of control group and study group is totally similar and no variation or increase incidence of any diseases what so ever is observed.

4.6.5 Has any Allergy



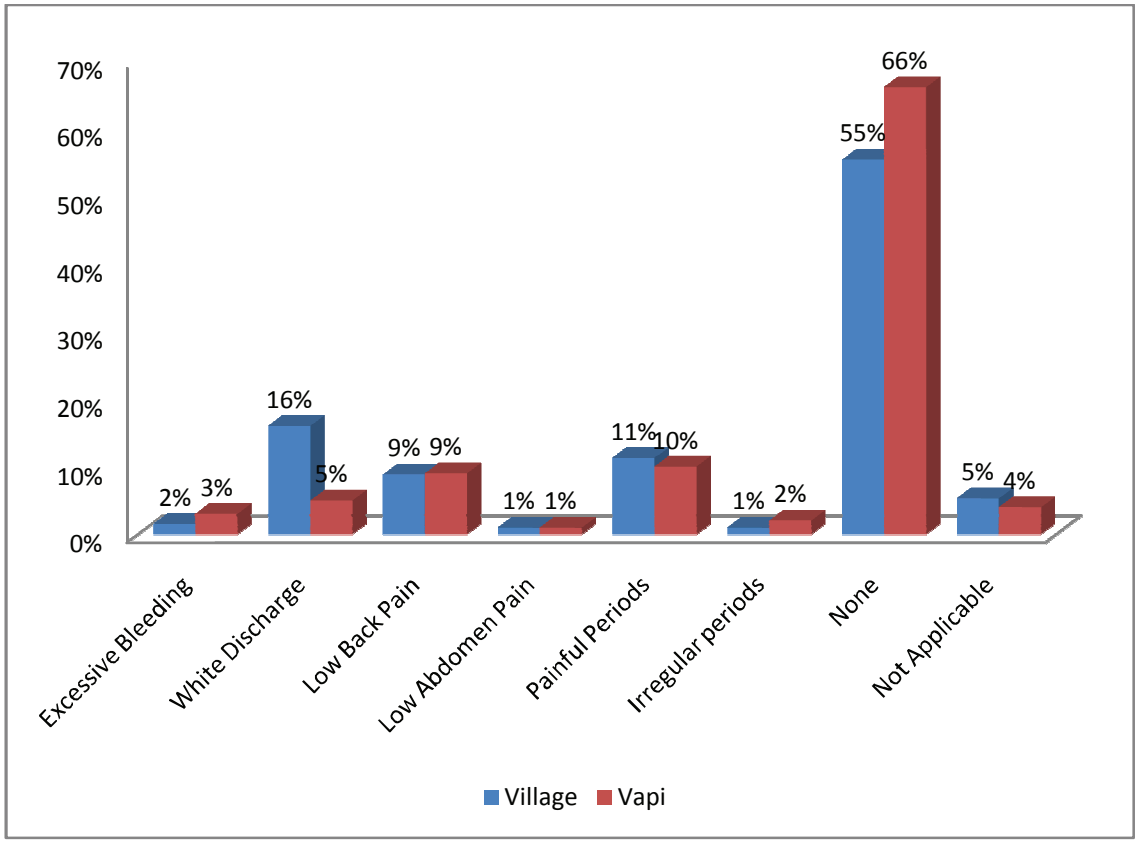
The various allergic factors alleged to be produced due to industrial environment are to be recorded as it is regularly claimed that these allergic causative factors are more in environment at the industrial town comparing to the village atmosphere. However it is observed from the above graph that there is no extra risk of any allergic agents being present in industrial area comparing to the natural habitat and atmosphere at villages.

4.6.6 Age at First Menstruation



Age at menstruation of the female children above the age of 12 years also recorded and it is observed that there is no big difference is observed in control group and study group, and there is no hormonal imbalance due to environment pollution affecting the genetic health of this young children.

4.6.7 Has she any Gynaec Complaints

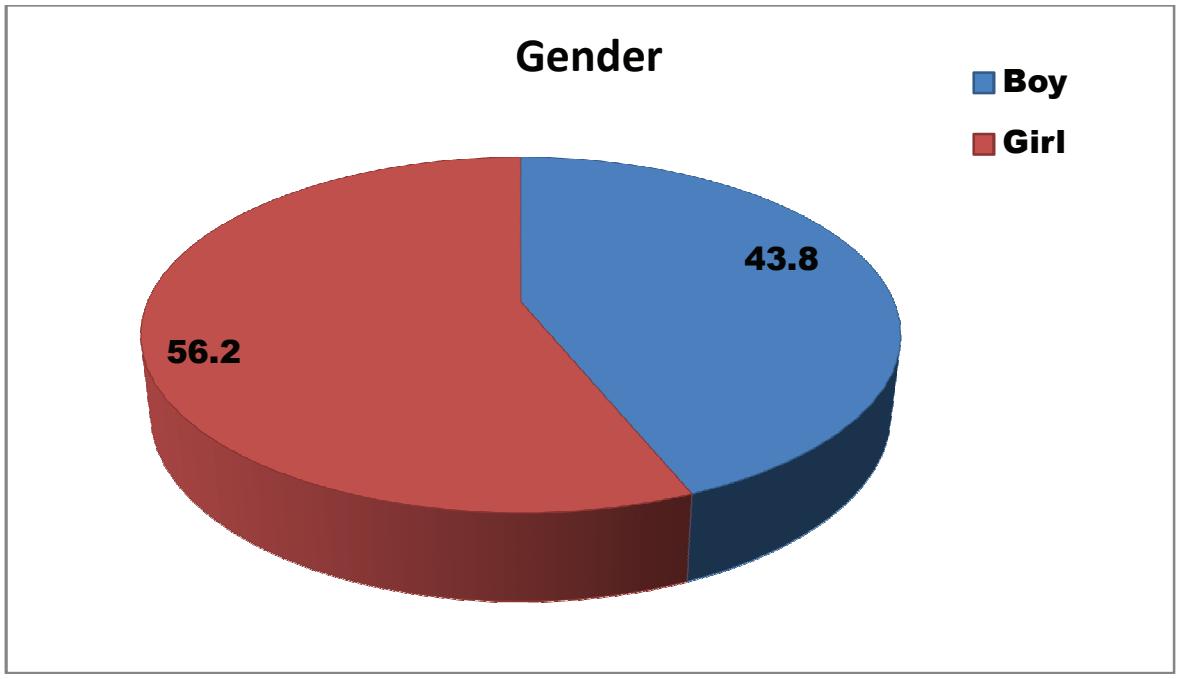


The gynaee complaints among the young girls below the age of 18 years is also noted along with normal women and girl child of lower age groups as mentioned in previous graphs. As noted earlier like other age groups even in this age group there is no big difference of incidence of excessive bleeding , low back ache, painful periods among the control group and study group.however 16% of village girls have white discharge where as it is only 5%in study group may be because of better awareness of menstrual hygiene and availability of sanitary napkins.

5.School Children

5.1 Gender

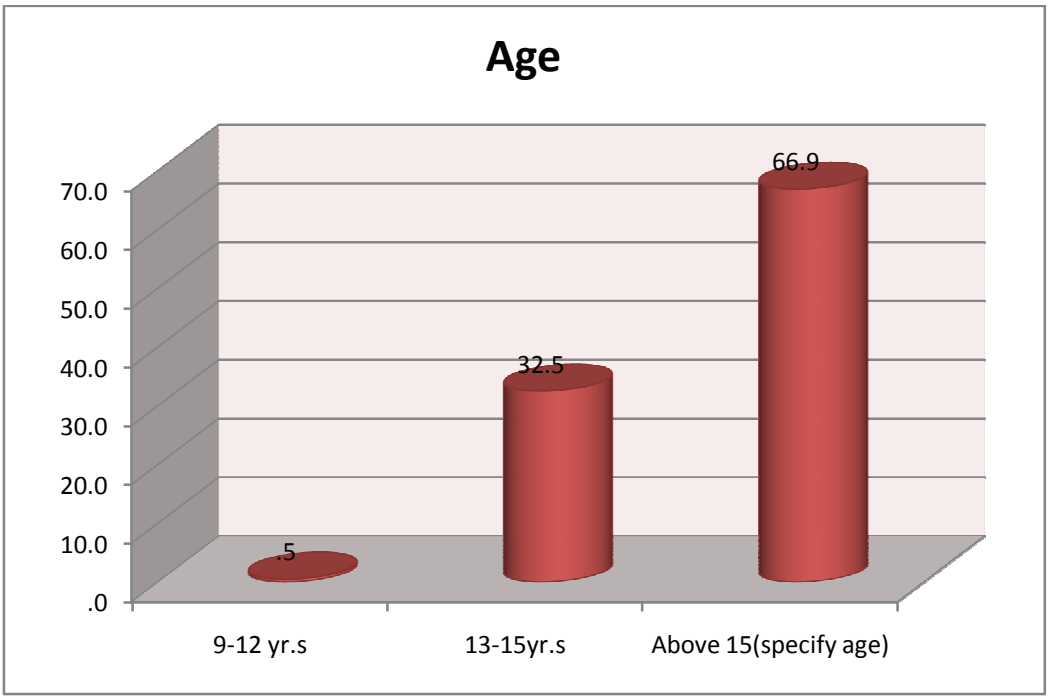
Gender?		
	No. Of	Percent %
Boy	241	43.8
Girl	309	56.2
Total	550	100.0



A Govt. high school children from 6th to 10th class were interviewed separately, who most of them are from the sample collected area, but some of them are also from outside the sample collected area also were involved. Totally 550 children were interviewed out of which 43.8% of them were boys and 56.2% of them were girls. The girls out numbered the boys in this school.

5.2Age

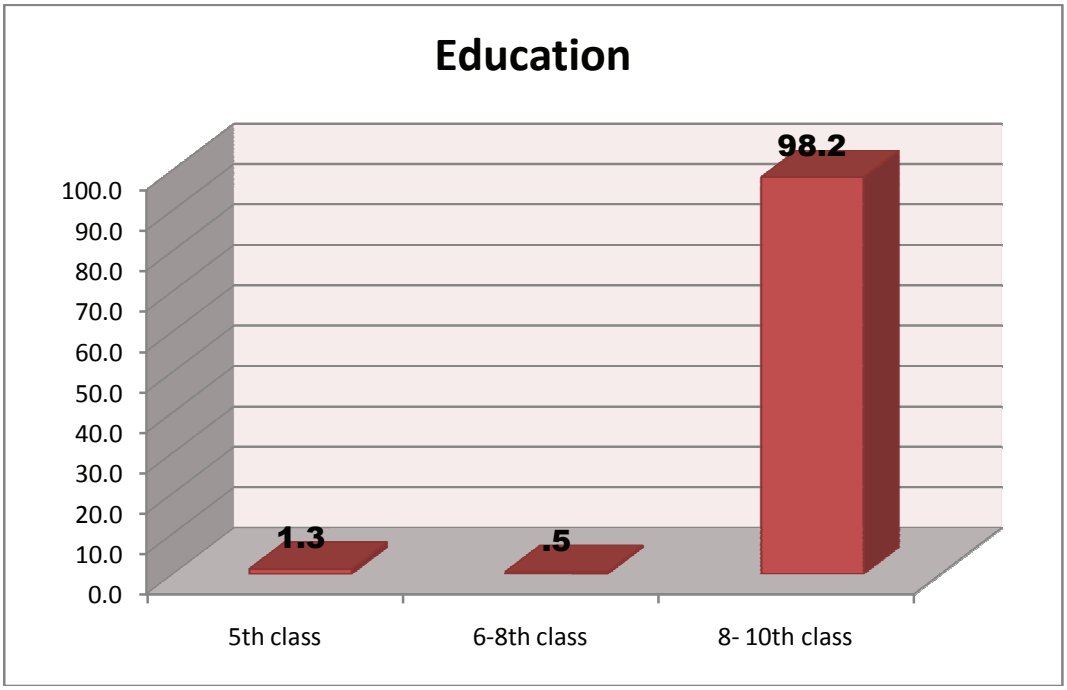
Age?		
	No. Of	Percent %
9-12 yr.s	3	.5
13-15yr.s	179	32.5
Above 15(specify age)	368	66.9
Total	550	100.0



The age frequency of the sample children were as follows. Between 13-15 years 32.5% and above 15 years age group were 66.9%. This indicates high school children were more, comparing to middle school class students..

5.3 Education

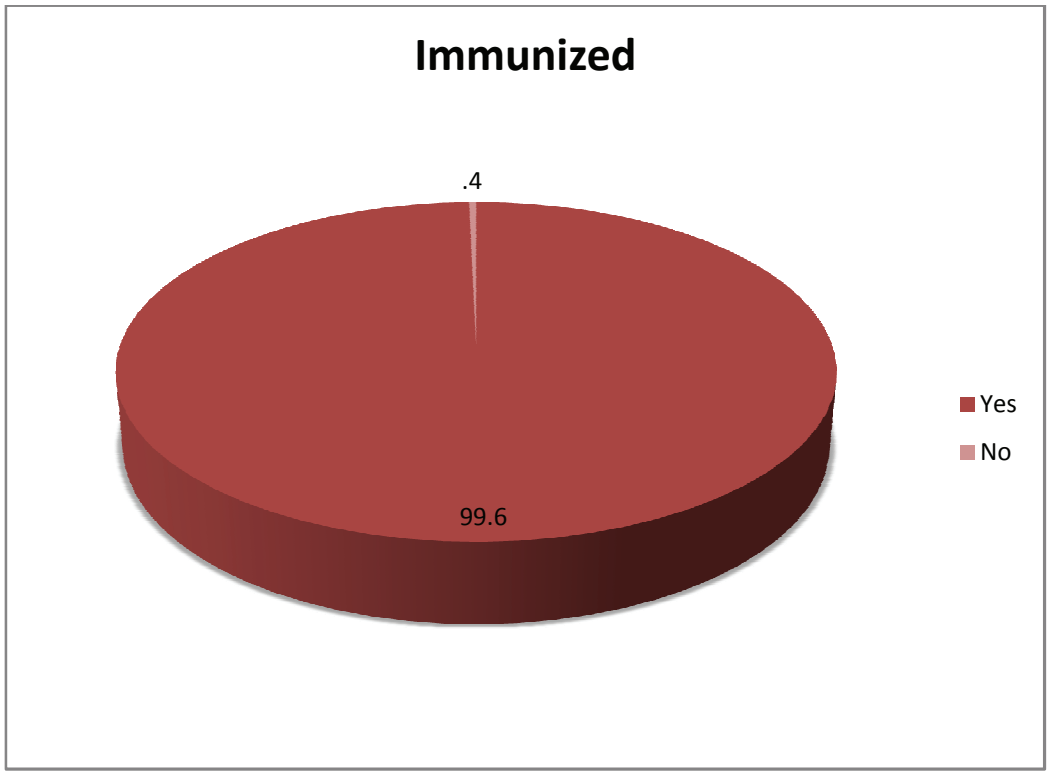
Education?		
	No. Of	Percent %
5th class	7	1.3
6-8th class	3	.5
8- 10th class	540	98.2
Total	550	100.0



98.2% of the sample students are in 8-10the class. we purpose fully selected high school children for getting a clear picture on the health status ,though some of them are already covered in the house hold survey.

5.4 Immunized

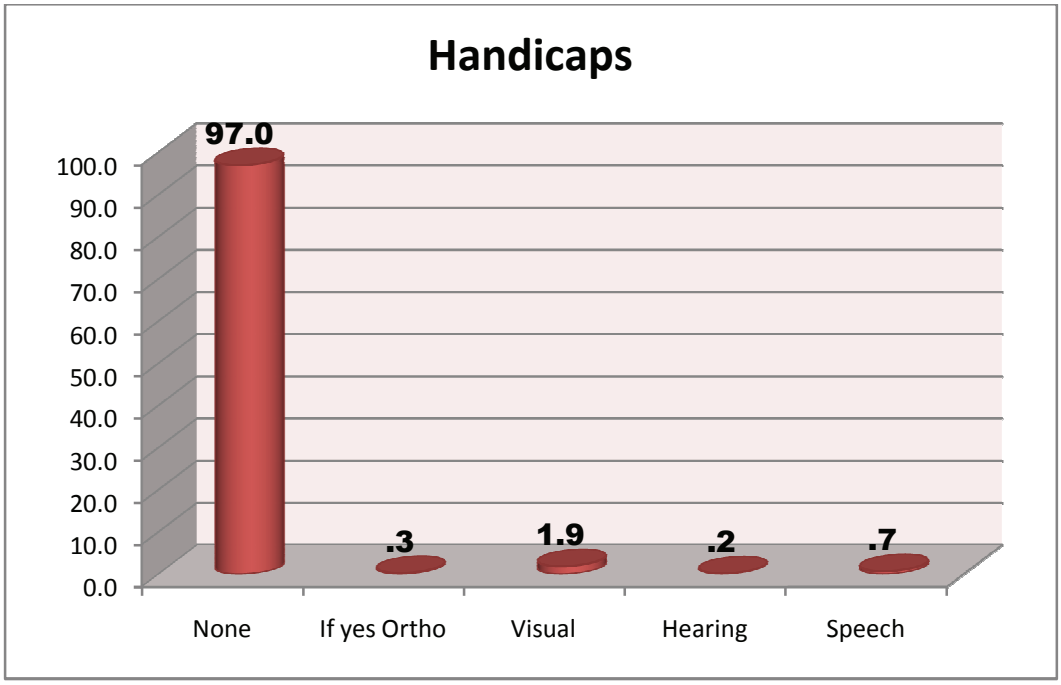
Immunized?		
	No. Of	Percent %
Yes	548	99.6
No	2	.4
Total	550	100.0



99.6% of the children in this category are immunized. This clearly shows that going to school will improve their awareness about the importance of getting immunized and they all can be said to be safe from vaccine preventable diseases.

5.5 Handicaps

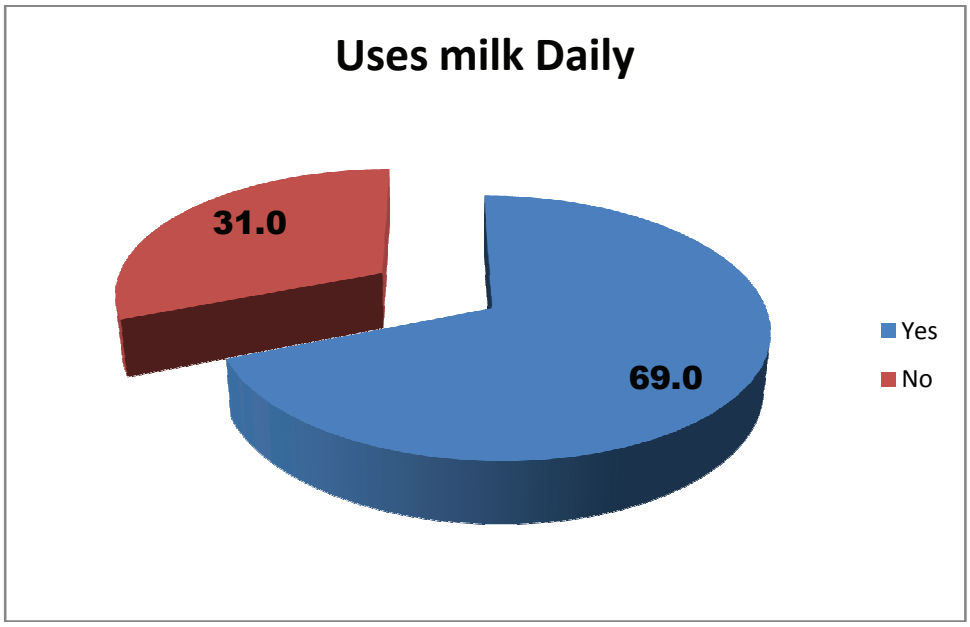
Handicaps?		
	No. Of	Percent %
None	531	97.0
If yes Ortho	1	.3
Visual	13	1.9
Hearing	3	.2
Speech	2	.7
Total	550	100.0



97% of these children are perfectly normal, but few children complained of hearing and visual defect. Whether this is severe or mild, is it temporary or permanent has to be further explained by doctors and corrective steps should be initiated.

5.6 Uses milk Daily

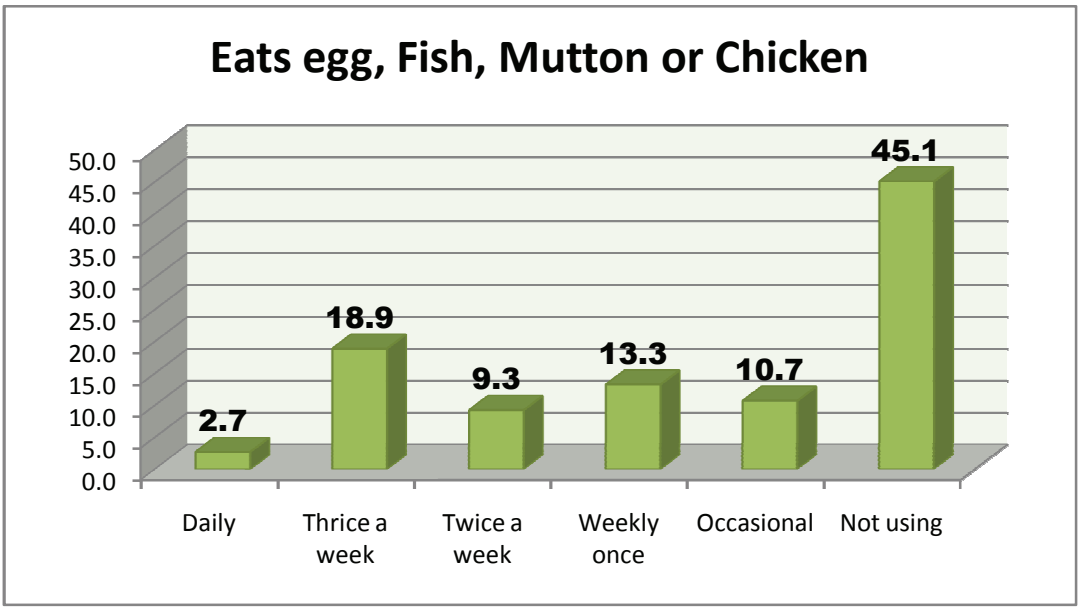
Uses milk Daily?		
	No. Of	Percent %
Yes	383	69.0
No	167	31.0
Total	550	100.0



Consumption of milk is a good indicator of health condition of the children. Only 69% of them replied that they consume milk regularly and in good quantity but 31% of them are rarely consuming milk. The reasons have to be further analyzed. Is it because of lack of money, they cannot afford, or non availability of milk or there is no custom or habit of milk consumption in the family.

5.7 Eats egg, Fish, Mutton or Chicken

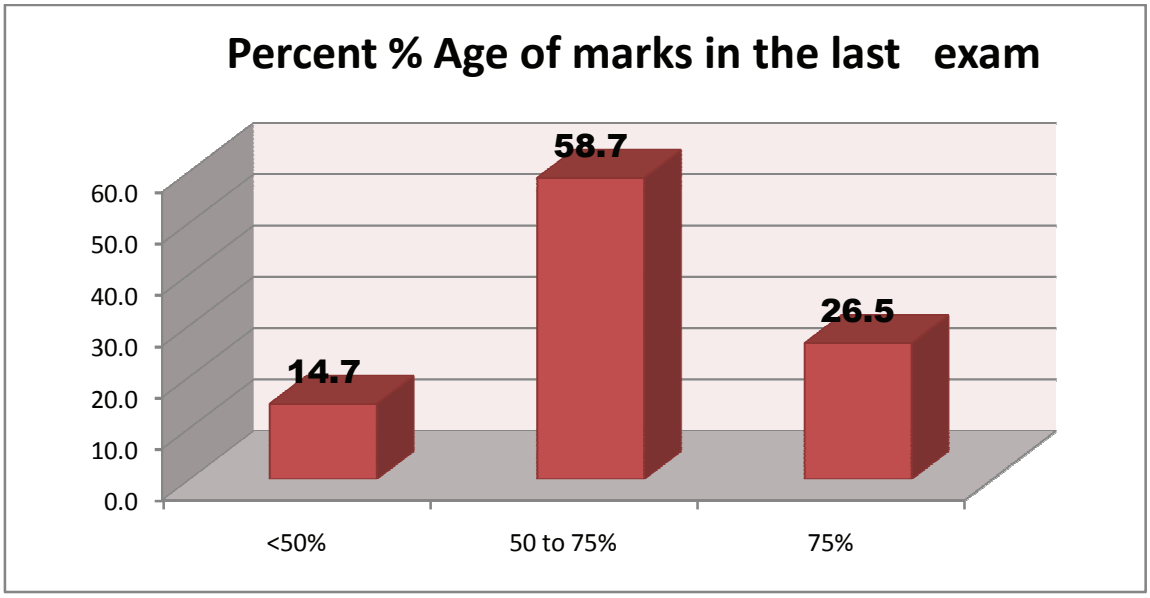
Eats egg, Fish, Mutton or Chicken?		
	No. Of	Percent %
Daily	15	2.7
Thrice a week	104	18.9
Twice a week	51	9.3
Weekly once	73	13.3
Occasional	59	10.7
Not using	248	45.1
Total	550	100.0



Eating protein foods like egg, fish, chicken or mutton is also a good indicator of health condition of the children. 45% of the sample children are not consuming any of the above protein foods. We have to further analyze, whether it is because they are vegetarians or because they cannot afford. If they are non vegetarians but still not consuming any of the above items, the family economic condition may not be permitting them to consume. But majority of them seems to be vegetarians as expected in Gujarat.

5.8 Percent % Age of marks in the last exam

Percent % Age of marks in the last exam?		
	No. Of	Percent %
<50%	81	14.7
50 to 75%	323	58.7
75%	146	26.5
Total	550	100.0



Percentage of marks scored in the last exam is a good indicator of the academic performance and mental ability and intelligence quotient. 26.5% of the children are scoring more than 75% marks, and 58% of them scoring between 50 – 75%. This is an indication of the good academic performance in Govt. school, where the children are from low socio economic strata of the society.

5.9 **Smokes (Cigarettes, Beedi, any others)**

Smokes (Cigarettes, Beedi, any others)		
	No. Of	Percent %
Occasional	3	.7
More than five	0	.0
Never	547	99.3
Total	550	100.0

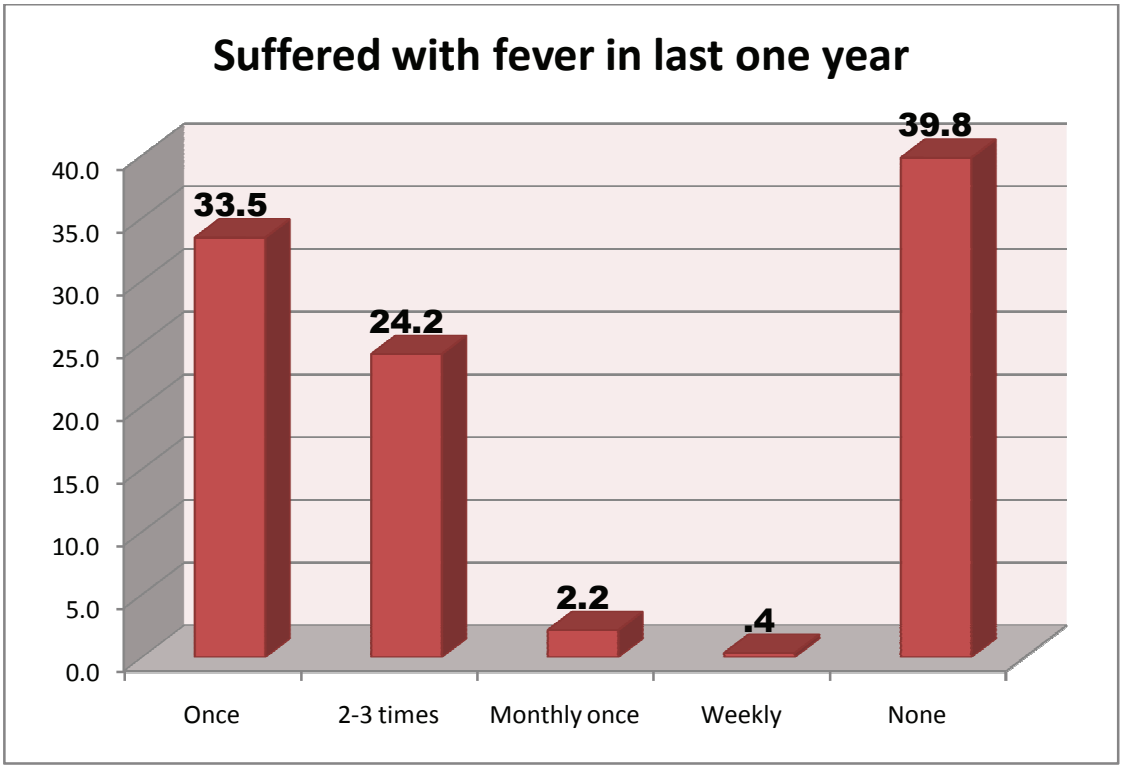
5.10 **EatsGutka/Zarda pan**

Eats Gutka/Zarda pan		
	No. Of	Percent %
Occasional	1	.2
More than five	2	.4
Never	547	99.5
Total	550	100.0

Both the above questions are put to the students in the presence of their teachers. hence they must be afraid of telling the truth. however it is observed by the field staff that there are good number of empty gutka sachets in and around the school premises. we also enquired from the nearby pan shop whether any school student buys the oral tobacco product. he answered in affirmative saying that a good number of them eat gutka or pan masala and few of them also smoke regularly.

5.11 Suffered with fever in last one year

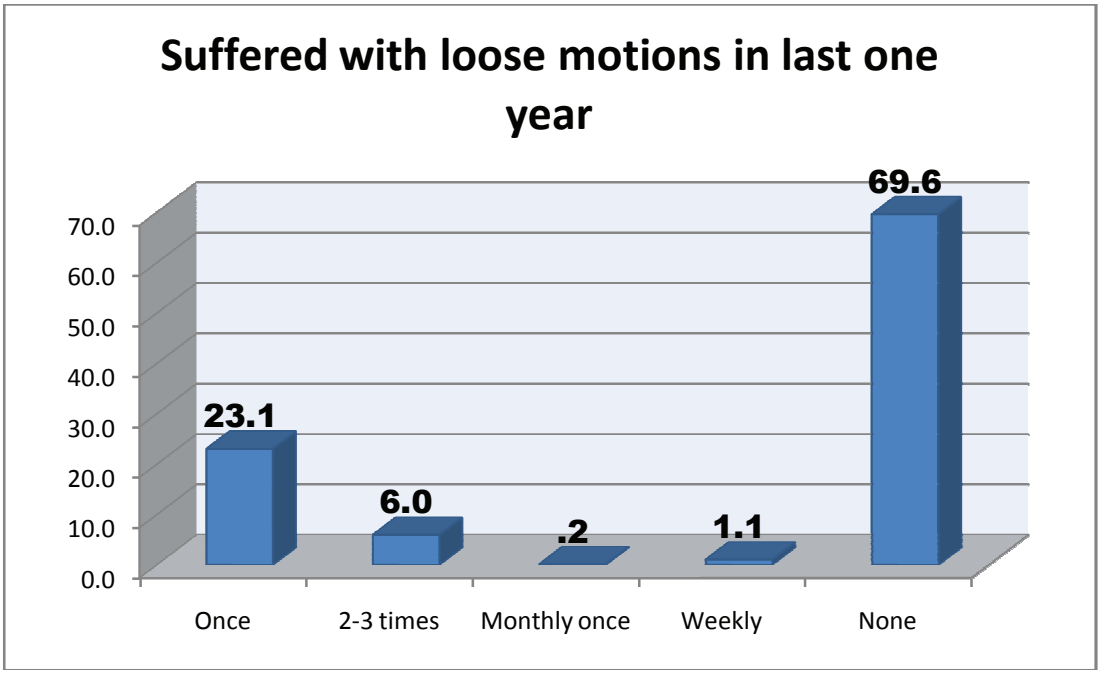
Suffered with fever in last one year?		
	No. Of	Percent %
Once	184	33.5
2-3 times	133	24.2
Monthly once	12	2.2
Weekly	2	.4
None	219	39.8
Total	550	100.0



57% of the children had either one or more than one attack of fever in the last one year. 40% of them said, they never had any attack of fever.

5.12 Suffered with loose motions in last one year

Suffered with loose motions in last one year?		
	No. Of	Percent %
Once	127	23.1
2-3 times	33	6.0
Monthly once	1	.2
Weekly	6	1.1
None	383	69.6
Total	550	100.0

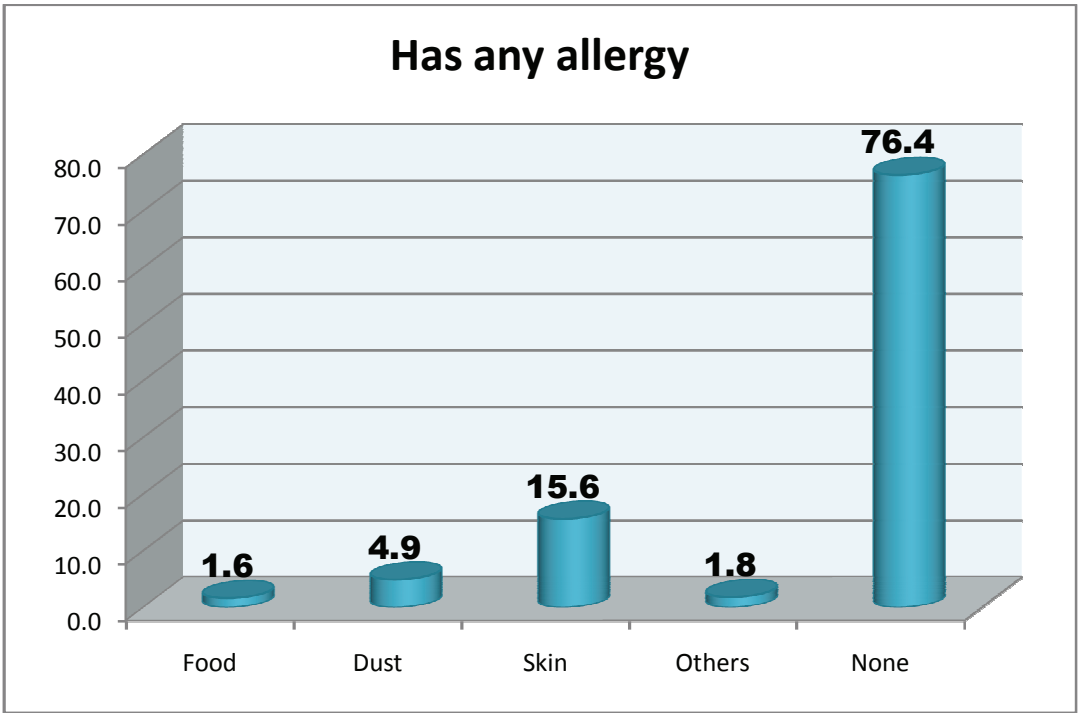


70% of the school going children never suffered with even a single attack of loose motions. Remaining children had one to few attacks. 23% of them had a single attack of loose motion. Remaining had more than one attack of loose motions. The percentage of attack of loose motions indicates the hand hygiene and food hygiene practices of the children. This is going to affect the school attendance and subsequently their academic performance also.

5.13 **Has any allergy**

Has any allergy?		
	No. Of	Percent %
Food	9	1.6
Dust	27	4.9
Skin	86	15.6
Others	10	1.8
None	420	76.4

**Multiple responses, so total won't tally to 100%.

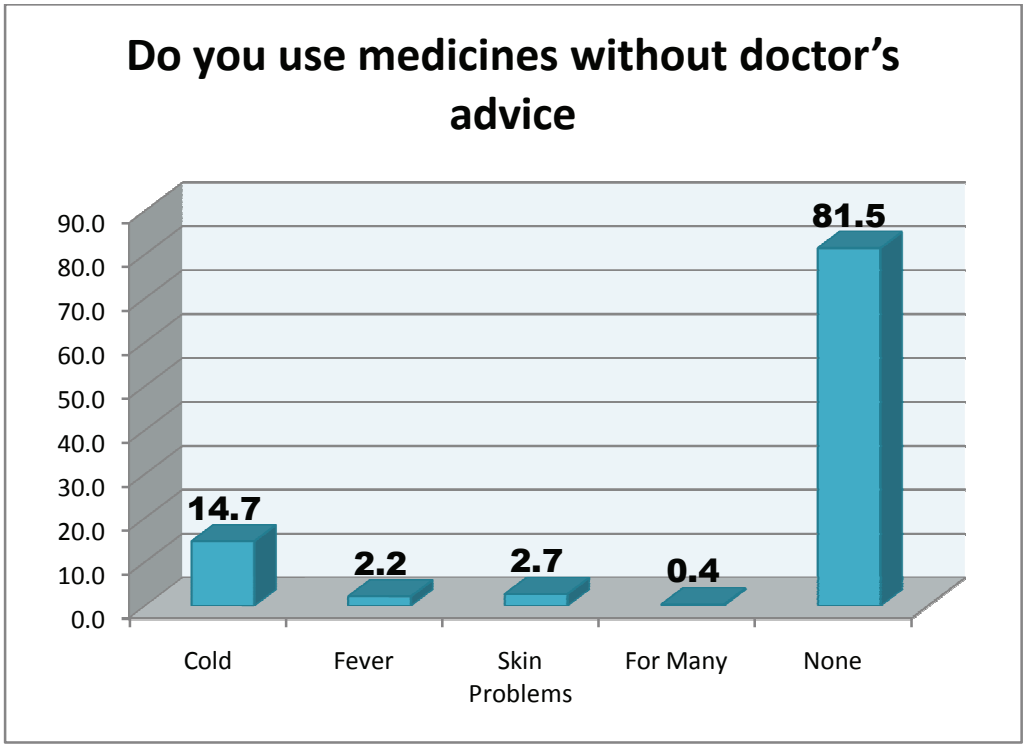


76.4% of the school children did not or are not suffering or suffered with any type of allergy. Skin and dust allergy is reported in 20.3% of the children. This will also affect the performance of their education. The reasons for such high incidence of skin allergy has to be analysed further.

5.14 **Do you use medicines without doctor's advice**

Do you use medicines without doctor's advice?		
	No. Of	Percent %
Cold	81	14.7
Fever	12	2.2
Skin Problems	15	2.7
For Many	2	0.4
None	448	81.5

**Multiple responses, so total won't tally to 100%.

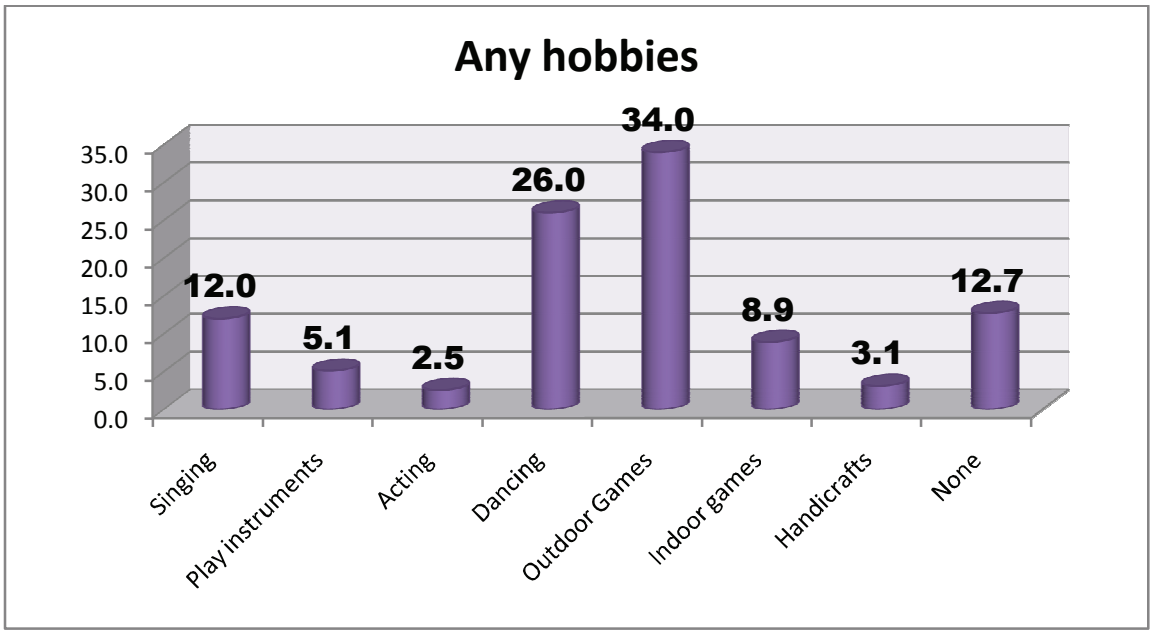


81% of them do not use any self medication. Remaining children take medicines for fever, cough, cold etc. from over the counter for these routine ailments.

5.15 **Any hobbies**

Any hobbies?		
	No. Of	Percent %
Singing	66	12.0
Play instruments	28	5.1
Acting	14	2.5
Dancing	143	26.0
Outdoor Games	187	34.0
Indoor games	49	8.9
Handicrafts	17	3.1
None	70	12.7

**Multiple responses, so total won't tally to 100%.

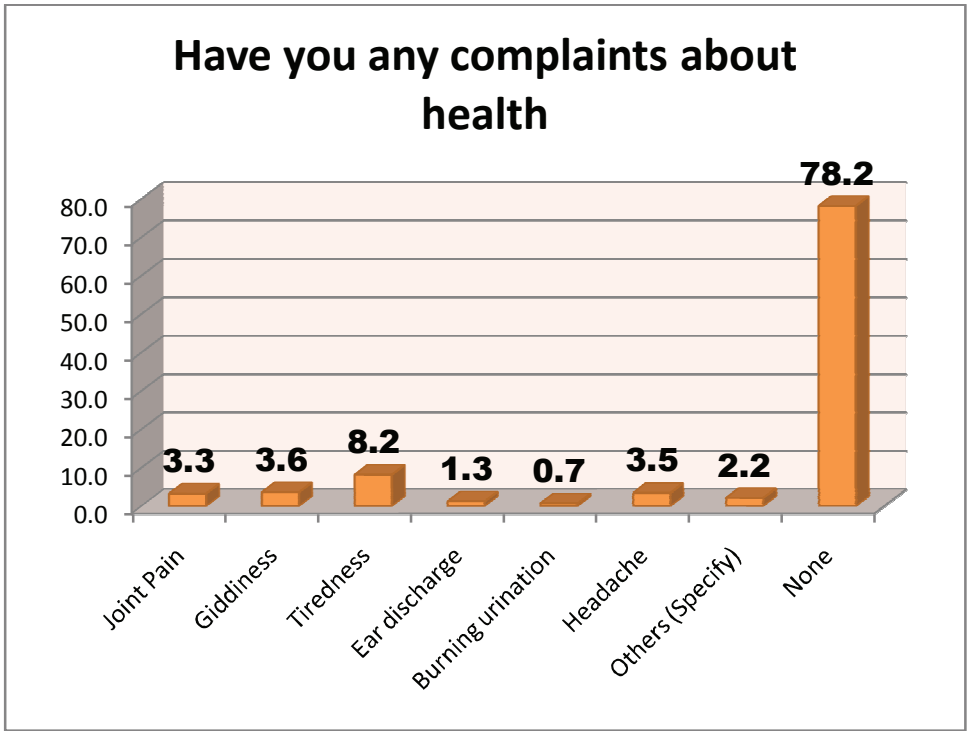


Only 12.7% of the children do not have any extra curricular activities. 34% of them play outdoor games. 26% have dancing as hobby. 8% of the children play musical instruments, 12% of them are having singing as hobby. Involvement of extra curricular activities is a good indication of the mental and physical alertness.

5.16 **Have you any complaints about health**

Have you any complaints about health?		
	No. Of	Percent %
Joint Pain	18	3.3
Giddiness	20	3.6
Tiredness	45	8.2
Ear discharge	7	1.3
Burning urination	4	0.7
Headache	19	3.5
Others (Specify)	12	2.2
None	430	78.2

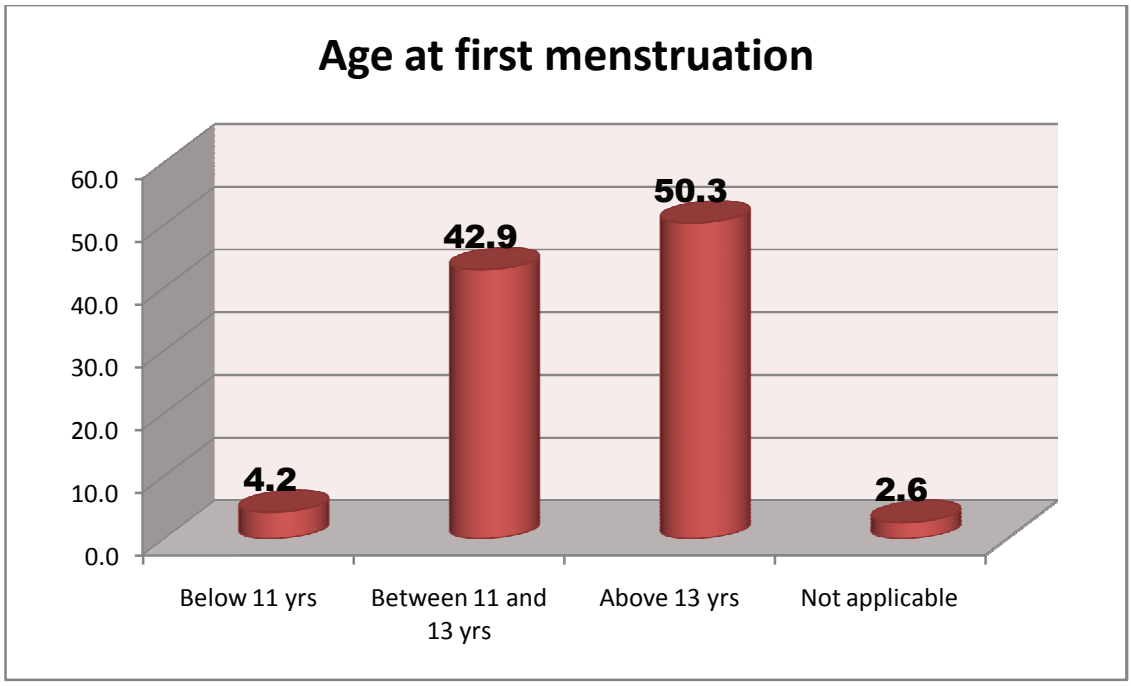
**Multiple responses, so total won't tally to 100%.



78% of the children do not have any health complaints. Remaining children in very few numbers have minor ailments like joint pains, giddiness, ear discharge, ulcers, headache etc. 8% of the children having tiredness may be due to anemia and majority of them may be girls.

5.17 **Age at first menstruation**

Age at first menstruation		
	No. Of	Percent %
Below 11 yrs	13	4.2
Between 11 and 13 yrs	132	42.9
Above 13 yrs	155	50.3
Not applicable (Boys)	8	2.6
Total	308	100.0

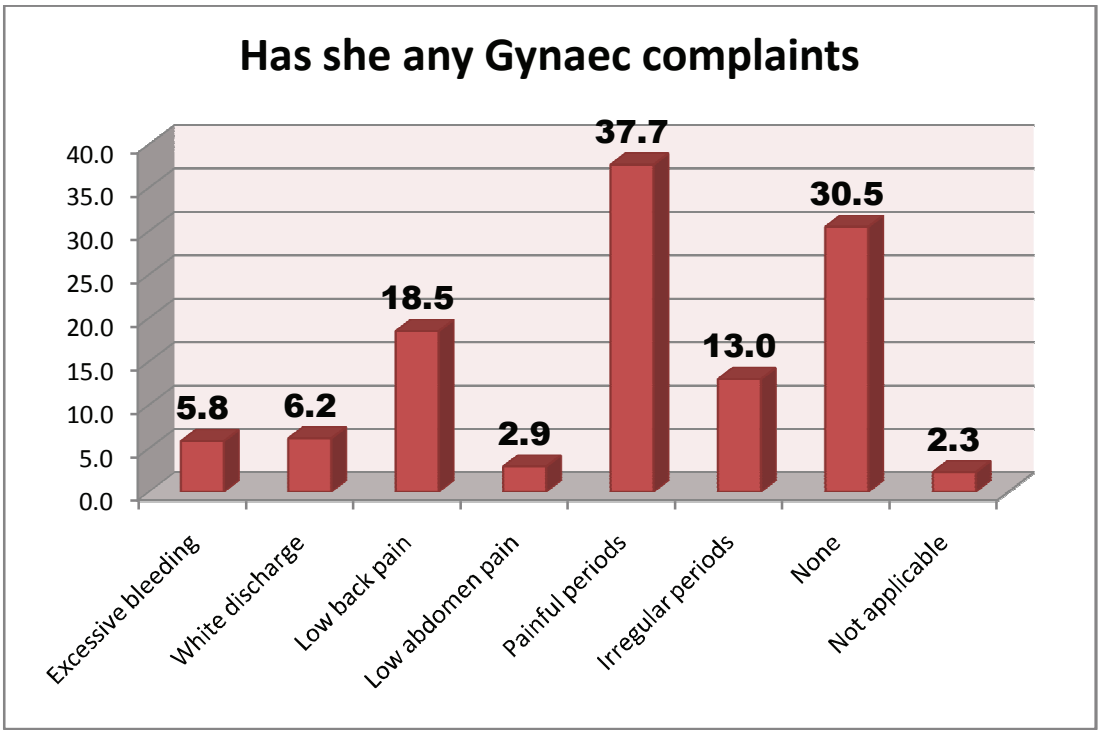


All the girls in this group who are above 11 years of age had their menarche attained at normal age group only. It is recorded that all the girls are having normal periods, and there is not a single girl who did not attain menarche in this age group. So it can be concluded that there is no hormonal imbalance observed in this study group.

5.18 **Has she any Gynaec complaints**

Has she any Gynaec complaints		
	No. Of	Percent %
Excessive bleeding	18	5.8
White discharge	19	6.2
Low back pain	57	18.5
Low abdomen pain	9	2.9
Painful periods	116	37.7
Irregular periods	40	13.0
None	94	30.5
Not applicable	7	2.3

**Multiple responses, so total won't tally to 100%.



No major gynaec complaints were reported in this age group of girl children. However few of them have excessive bleeding(5.8%), some white discharge (6.2)and some low back pain(18.6). pain full and Irregular periods were reported by 50% of the girls which needs attention.

VI CONCLUSIONS

Households' survey was conducted in areas of Vapi and Five villages namely Dharmpur, Karaya, Degom, Karvad, and KarvadFatak near Vapi industrial area. The sample was randomly selected.

In the selected areas, 5917 families were randomly interviewed using road maps and house numbers available with the local authorities. Out of these 5917 families, 3866 are from Vapi areas and remaining 2113 are from Five villages namely Dharmpur, Karaya, Degom, Karvad, and KarvadFataknear by Vapi area Sample surveyed from Vapi area is called **'focus group'** and five villages sample is treated as **'control group'**.

Conclusions that could be drawn from survey and analysis findings are given in this section with respective to each objective of the survey.

***Objective 1*:** To assess the health status of vapiand surrounding areas inhabitants

Conclusions drawn:

- Out of 5917 families studied 3866 are from Vapi town and 2113 are from nearby villages.
- Majority of the earning members from the Vapi town are dependent on industrial work and villagers are either in agriculture or self employed.
- About 58% males have admitted to be consuming tobacco in oral form. (pan, gutka, zardaetc).**this percentage has**

increased comparing to 5 years back study and also more than state average.(NFHS 2014 REPORT)

- About 43% are smokers in men. and have admitted to consume smoking in different quantity. **The NFHS report states that it is 50% in Gujarat.**
- Around 6% of the women admitted to be chewing tobacco.
- Consumption of nutritious and balanced diet is not practiced by majority. Consumption of dal, leafy vegetables, fruits, milk, eggs and non-vegetarian food is less frequent.
- Men reported to be suffering with chronic ailments like hypertension diabetes and Asthma heart attack etc. the incidences recorded did not show any high percentage of people suffering with any of these diseases,and are as per the national average only**(NFHS 2014 showed same percentage..**
- Women reported to be suffering with chronic ailments like hypertension , diabetes , asthma and heart attack etc less frequently than men and this is also in very small numbers.
- Around 28% men, women, unmarried and children above 5 years were affected with fever and loose motions 'once or twice in last one year, which is very common. There are very insignificant percentage of people who reported frequent attacks of fever and loose motions. **The percentage is slightly more than last study.**

- Only 23% o the children above 1 to 5years had some kind of illness in last 3 months. About 33% of the infants fell ill in the last three months.
- only 6.4% men and 10% women complained to be suffering with 'joint pains' occasionally. **This is exactly same as last study.**
- Irritation, Redness, Watering of eyes is reported by about 20% men and 14.5% women. **This allergy factors are slowly increasing in last 5 years**.
- 96% of the men did not have any major surgery ever reinforcing the fact that there were no major incidences of bad health.
- About 33% women had family planning operation and around 24% had operation for delivery(ceasarian).**same as last study report.**
- No major incidences of death were observed in all the families studied in the last 2 years. About 1.6% of families said that a family member died due to heart attack.
- No deaths due to cancer reported in last one year.

***Objective 2*:** To compare the health status of inhabitants from town and villages

Conclusions drawn:

- Educational standards of both urban and rural inhabitants are more or less same with majority having only high school education.

- There is no significant difference between control group families and focus group families in hygiene practices
- Though frequency of incidence of fever and loose motions is slightly varying, statistically valid difference is not observed between town and villages in all age segments.
- Incidence of typhoid and malaria fever among men, unmarried and children above 5 years is marginally low (3-6%) in town compared to near by villages. Among women, no difference is observed.
- Among men and women, prevalence of major diseases like diabetes, heart attack, TB, asthma etc.are minimal has no statistically valid variation between urban and rural areas.
- **There is no difference in last 5 years.**
- Percentage of men suffering with 'joint pains' is almost equal in both the groups. Marginal (1.6%) and insignificant difference is observed in case of females.
- Irritation, redness and watering of eyes are complained by marginally (2-4%) more percentage of men and women from vapi than those from villages..

Objective 3:To compare reproductive cycle and hormonal life of control group women with that of women from industrial area families.

Conclusions drawn:

- Majority of the women in both groups reported age at first menstruation as 12 years and above, which is normal. There is no difference between the groups.

- **No delayed menarche reported as alleged**.
- **No increase in last 5 years. no difference from NFHS report.**
- There is **no statistically noticeable difference** between study and control group women regarding '**reproductive abilities'** like number of children, number of pregnancies and incidence of infertility. Caesarian deliveries are marginally more in women of town compared to village women.
- **Abortions, still births, infant deaths are minimal**. There is no valid difference in abortions, still births and infant mortality rates between study and control groups. **No difference in last 5 years**.

Objective 4:To compare mental and physical abilities of control group children with that of focused group children.

Conclusions drawn:

- All most all the children are born without any mental and physical disabilities.
- There are no abnormalities observed in the physical and mental growth among children of age group of 1 to 5 years among both the groups.
- Academic performance in the last examination is satisfactory in majority of children of above 5 years of age and is equal in both the groups. **there is increase in academic performance comparing to 5 trs back study..**

- The door to door house hold survey is carried out to record any perceivable change in the health status of the residents of Vapi area who live in highly industrialized area in India. The main focus is on the incidence of common infections life fever, loose motions etc in a year. There is absolutely no increased incidence recorded in the focused families.
- Similarly to elicit any extra incidence (if any) of chronic diseases like TB, diabetes, hypertension, asthma, paralysis, heart attack etc, data is collected.
- **Even this has no variation from national level incidences or statistics.**
- In view of several agencies reporting pollution of industrialization and its alleged effect on the hormonal life of the industrial area family members, an extensive data is collected on the age at menarche, age at menopause, number of abortions, number of still births, early hysterectomies. Even these data is as per the other socio economic groups in the country who have no exposure to the industrialization. T**his data is as per NFHS STUDY.**
- The academic performance of the children of the focused group families was also recorded and did not show any abnormal findings.

- Deaths due to cancer and other diseases during last 2 years are recorded and very few deaths of cancer are recorded in both industrial and non industrial area.
- **In view of the fact that having studied nearly 5917 families involving more than 20995 members in the low socio economic colonies of Vapi area of Valsad city and nearby villages of a conclusion can be drawn that there is no direct or indirect perceivable effect of industrialization on the health of residents or its family members**

HOSPITAL INFORMATION

1. Name of the Hospital: Hasiu Rotary Hospital
2. Address: Plot No. 363/1 & 364, Housing Sector, GIDC, Vapi
3. Number of Beds : 186
4. Year of establishment: 1985
5. Type of Hospital: **1.Govt. 2.Trust 3.ESI 4.Private General 5. Private Specialty**

S.NO	No. of cases Admitted	2014	2015	2016	2017	2018	2019
1	Normal Deliveries						379
2	Caesarian Deliveries						326
3	Abortions						4
4	Infant Death						12
5	Asthma						8
6	T.b						15
7	Diabetes						41
8	Cancer						05
9	Hysterectomy						143
10	Gastroenteritis						73

ROTARY HOSPITAL VAPI HARIA

Signature of the hospital Head/Superintend/In-charge

HOSPITAL INFORMATION

1. Name of the Hospital: SHREYAS MEDICARE
2. Address: KACHIGAM ROAD, VAPI
3. Number of Beds : 108
4. Year of establishment: 2018
5. Type of Hospital: **1.Govt. 2.Trust 3.ESI 4.Private General**
   5. Private Specialty

S.NO	No. of cases Admitted	2014	2015	2016	2017	2018	2019
1	Normal Deliveries	-	-	-	-	34	36
2	Caesarian Deliveries	-	-	-	-	70	71
3	Abortions	-	-	-	-	0	1
4	Infant Death	-	-	-	-	0	0
5	Asthma	-	-	-	-	24	32
6	T.b	-	-	-	-	24	31
7	Diabetes	-	-	-	-	341	561
8	Cancer	-	-	-	-	17	19
9	Hysterectomy	-	-	-	-	13	23
10	Gastroenteritis	-	-	-	-	672	506

SHREYAS MEDICARE
Janseva Hospital Compound,
Kachigam Road, Vapi - 396 191

Signature of the hospital Head/Superintend/In-charge

Format to calculate Factor C for the CEPI;

Three to Five hospitals data of last 05 years are required

1. For Air Environment related diseases

Diseases	No of cases in the year Jan–Dec 2015	No of cases in the year Jan–Dec 2016	No of cases in the year Jan–Dec 2017	No of cases in the year Jan–Dec 2018	No of cases in the year Jan–Dec 2019
Asthma	100	92	90	40	20
Bronchitis	24	14	16	10	10
Cancer	2	Nil	Nil	3	2
Acute respiratory infections	10	6	5	8	8
Total					40

2. For Surface & Ground water pollution related diseases Environment

Diseases	No of cases in the year Jan–Dec 2015	No of cases in the year Jan–Dec 2016	No of cases in the year Jan–Dec 2017	No of cases in the year Jan–Dec 2018	No of cases in the year Jan–Dec 2019
Cancer	2	3	2	4	6
Gastroenteritis	10	28	30	36	42
Renal (Kidney malfunctioned)	20	26	24	30	33
Diarrhoea	20	25	40	100	38
Total					

Name and Address of the Hospital:

Authorised sign: Dr. JAYESH L. LATA

Chief Administrative Officer

Stamp / seal : Sheryas Medicare

M. N. Mehta (Valvada) Hospital

Shree Janseva Mandal Thaki Adhikrut.

Format to calculate Factor C for the CEPI:

Three to Five hospitals data of last 05 years are required

1. For Air Environment related diseases

Diseases	No of cases in the year Jan–Dec 2015	No of cases in the year Jan–Dec 2016	No of cases in the year Jan–Dec 2017	No of cases in the year Jan–Dec 2018	No of cases in the year Jan–Dec 2019
Asthma			48	51	42
Bronchitis			21	09	10
Cancer			00	01	01
Acute respiratory infections			04	06	04
Total					

2. For Surface & Ground water pollution related diseases Environment

Diseases	No of cases in the year Jan–Dec 2015	No of cases in the year Jan–Dec 2016	No of cases in the year Jan–Dec 2017	No of cases in the year Jan–Dec 2018	No of cases in the year Jan–Dec 2019
Cancer	05	04	03	04	03
Gastroenteritis	51	48	30	22	16
Renal (Kidney malfunctioned)	31	26	26	21	21
Diarrhoea	65	60	61	40	48
Total					

SHALBY LTD.
Nr. D-Mart, Chanod,
Vapi Silvassa Road,
Vapi-396 195, Gujarat.
Ph. No. 0260-24[illegible]

Name and [illegible] of the Hospital:

Authorised sign:

Stamp / seal :

Format to calculate Factor C for the CEPI:

Three to Five hospitals data of last 05 years are required

1. For Air Environment related diseases

Diseases	No of cases in the year Jan–Dec 2015	No of cases in the year Jan–Dec 2016	No of cases in the year Jan–Dec 2017	No of cases in the year Jan–Dec 2018	No of cases in the year Jan–Dec 2019
Asthma		23	24	30	27
Bronchitis		32	31	28	30
Cancer		6	7	5	5
Acute respiratory infections		670	694	670	666
Total					

2. For Surface & Ground water pollution related diseases Environment

Diseases	No of cases in the year Jan–Dec 2015	No of cases in the year Jan–Dec 2016	No of cases in the year Jan Dec 2017	No of cases in the year Jan–Dec 2018	No of cases in the year Jan–Dec 2019
Cancer		—	—	—	—
Gastroenteritis		337	340	341	340
Renal (Kidney malfunctioned)		29	32	30	25
Diarrhoea		224	216	211	209
Total					

Note:- Source of disease for above mentioned data was not known.

Name and Address of the Hospital:

Authorised sign.

Stamp / seal

Format to calculate Factor C for the CEPI;

Three to Five hospitals data of last 05 years are required

1. For Air Environment related diseases

Diseases	No of cases in the year Jan–Dec 2015	No of cases in the year Jan–Dec 2016	No of cases in the year Jan–Dec 2017	No of cases in the year Jan–Dec 2018	No of cases in the year Jan–Dec 2019
Asthma	107	102	108	106	110
Bronchitis					
Cancer	2	1	2	1	2
Acute respiratory infections	156	155	158	152	160
Total	265	258	268	259	272

2. For Surface & Ground water pollution related diseases Environment

Diseases	No of cases in the year Jan–Dec 2015	No of cases in the year Jan–Dec 2016	No of cases in the year Jan–Dec 2017	No of cases in the year Jan–Dec 2018	No of cases in the year Jan–Dec 2019
Cancer	—	—	—	—	—
Gastroenteritis	190	182	175	170	180
Renal (Kidney malfunctioned)	270	265	290	285	300
Diarrhoea	—	—	—	—	—
Total	460	447	465	455	480

We have seen case of above mentioned diseases but that does not mean that they are due to air or water pollution

Name and Address of the Hospital:

Authorised Sign:

Stamp / Seal:

Health Recors for CEPI Calculations (Jan-2020).

Act	Diseases	2015					2016					2017					2018					2019				
		H1	H2	H3	H4	Total	H1	H2	H3	H4	Total	H1	H2	H3	H4	Total	H1	H2	H3	H4	Total	H1	H2	H3	H4	Total
Air Act	Asthma	107			100	207	102	83		92	277	108	84	48	90	330	106	80	51	40	277	110	77	42	20	249
	Bronchitis	0			24	24	0	33		14	47	0	31	21	16	68	0	28	9	10	47	0	30	10	10	50
	Cancer	2			2	4	1	6		0	7	2	7	0	0	9	1	5	1	3	10	2	5	1	2	10
	Acute respiratory inf	156			10	166	155	670		6	831	158	674	4	5	841	152	670	6	8	836	160	666	4	8	838
	Total	265	0	0	136	401	258	792	0	112	1162	268	796	73	111	1248	259	783	67	61	1170	272	778	57	40	1147
																			-6.25					-1.97		
	Cancer	0		5	2	7	0	0	4	3	7	0	0	3	2	5	0	0	4	4	8	0	0	3	6	9
Water Act	Gastroenteritis	190		51	10	251	182	337	48	28	595	175	340	30	30	575	170	341	22	36	569	180	340	16	42	578
	Renal Malfunction	270		31	20	321	265	29	26	26	346	290	32	26	24	372	285	30	21	30	366	300	28	21	33	382
	Diarrhoea	0		65	20	85	0	224	60	25	309	0	216	61	40	317	0	211	40	40	291	0	209	48	38	295
	Total	460	0	152	52	664	447	590	138	82	1257	465	588	120	96	1269	455	582	87	110	1234	480	577	88	119	1264
																			-2.76					2.43		

Note: Increase in cases are less than 5 % in both Air and Water Acts so C will be 0 for Air EPI, Water EPI, Land EPI.

H1	Jeevandeep Surgical Hospital, Vapi
H2	Haria L.G. Rotary Hospital, Vapi
H3	Shalby ltd, Chanod, Vapi
H4	Shree Janseva Hospital, Vapi

EPI	C - Value
Air	0
Water	0
Land	0

ENVIRONMENT MONITORING REPORT

In Order to estimate the CEPI Index, The Environmental Monitoring at Predefined Location of Vapi Industrial clusters is carried out in January 2020.Air, Ground water and Surface water sample are collected from Predefined Location and the indicative parameters are identified for analysis. Total 3 Round of Monitoring done at which 6 Nos. of sample for ground water monitoring location, 6 Nos. of sample for surface water monitoring location &6 Nos. of Ambient Air Monitoring locations

Environment Monitoring Results

	Parameter	Limit	Minimum	Maximum
Air Environment	Ammonia(µg/m3)	400	20.6	86.3
	PM10(µg/m3)	100	70.6	102
	PM2.5(µg/m3)	60	30.2	54
Water Environment (surface)	Copper(mg/L)	0.1	0.001	0.09
	BOD(mg/L)	8	2	7
	Total Ammonia(mg/L)	1.5	0.32	1.2
Land Environment	Flouride(mg/L)	1	0.24	0.9
	Zinc(mg/L)	0.1	0.02	0.12
	Total Ammonia(mg/L)	0.5	0.3	0.45

PARIRAKSHANA
(A Society for Promotion and Protection of Health Systems Management Training & Research)

Ann-C' (13)

Gujarat Pollution Control Board
Paryavaran Bhavan Sector-10-A, GANDHINAGAR-382043.
Phone : 22756, 22095, 22096 Gram : CLEANWATER
Fax : (02712) 22784

No. : HAZ/VSD-C-627/

To,
VAPI INDUSTRIAL ASSOCIATION.,
VIA HOUSE, PLOT NO. 135,
VAPI-396 195.

Sub.: Notification of land acquired for solid waste management project.

Ref.: Your letter at 26/10/98.

Sir,

In your above referred letter, you have requested as to initiate procedural requirements for notification of land acquired by you for the solid waste management project.

We hereby inform you that the above land was notified by Government of Gujarat, forest and Environment Department vide Mark on 8 Nov.1995.Xerox copy of the notification is enclosed for your reference and records.

Thanking you,

Yours faithfully,

(Dr. G. B. Soni)
Sr. Environmental Scientist.

Encl: Copy of Notification.

11-03-95 17:12 GPCB-GANDHINAGAR 412 P02

Government of Gujarat,
Forests and Environment Department,
Sachivalaya, Gandhinagar.

Dated the 10 NOV 1995

NOTIFICATION :

No.GVR- (5) -95-ENV-1092-17-Part-IV-P: In exercise of the powers conferred under Rule (5) of Hazardous Wastes (Management & Handling) Rules, 1989 made under sections 6, 8 and 25 of the Environment (Protection) Act, 1986 the Government of Gujarat hereby notifies the following sites for the development of facilities for disposal of Hazardous wastes in Valsad District :

GIDC Ltd.,
Plot-IV - Vapi Karvagan,
Pardi, Valsad.

Survey No.	Area
406	2-47-87
407	0-64-75
	+0-02-02
416	1-35-57
	+0-02-02
417/1/1	0-60-80
417/1/2	0-59-69
	0-01-01
417/3/1	0-17-20
417/2	1-35-57
418/1	0-36-42
418/2	0-24-28
418/3	0-14-16
463/1	0-59-62
	+0-06-07
463/2	0-14-16
463/3	0-59-69
	+0-04-05
465/1	0-44-52
	+0-03-05
465/2	0-43-50
466/2	0-12-14
	+0-06-07
466/3	0-00- 04
466/4	0-01-05
466/5	0-52-61
467	0-70-82
468	1-00-16
713/4	0-32-37
713/5	0-47-55
713/6	0-21-25
713/7	0-07-08
714/1	0-59-69
714/2	0-59-69
715/1+2+3+4	0-82-97
716/1+2	-
717	0-97-13
718/1	0-50-59
718/2	0-31-36
719/1	0-61-71
719/2	1-11-[illegible]
720	0-05-06
721	1-50-20
721	0-40-54
721	1-50-20

...2...

	Survey No.	Area Hect-are-sq.m.
	723/1	0-83-97
	723/2	0-16-19
	723/3	0-78-91
	723/3	0-17-10
	723/4	0-67-79
	723/4	0-18-21
		14-90-57
		+ 13-23-59
		28-14-16
	394	0-04-00
	395/1	0-22-23
	395/2	0-28-30
	395/3	0-29-14
	395/4	0-47-59
	395/5	0-06-93
	395/6	0-06-16
	396/1	0-64-33
	396/2	0-65-03
	396/3	0-65-00
	396/4	0-46-53
	403	5-56-30
		+ 14-95-45
		20-51-75
2. Phase-IV-Vapi Kocharva, Pardi.	25	0-97-13
	26	0-67-79
	27	1-03-20
	28/1	0-80-02
	28/2	1-00-16
	29/1	0-00-21
	29/2	0-94-09
	30	0-97-13
	31	0-65-76
	32	3-26-81
	33	0-28-23
	33	0-80-94
	34	0-96-11
	35	1-16-35
	43	2-26-79
	46	1-41-64
		40-03-04
	Total:-	17-40-70
	Grand Total Karvad:	20-51-75
	Grand Total:	37-92-45

...3...

93[illegible] 47

16

[illegible] operation of the facility shall [illegible]
[illegible] application under the Gujarat Pollution Control
Board, Gandhinagar with the conditions as stipulated in
[illegible] to be met for the development of the facility for
[illegible] solid disposal of the cities mentioned above.

By order and in the name of the Governor of Gujarat,

ISSUED
DATE [illegible]

(S.M. Dange)
Section Officer,
Forests and Environment Department.

Copy to:

1. [illegible] to the Chief Minister, Government of Gujarat, Gandhinagar.
2. [illegible] to the Minister (Environment), Gandhinagar.
3. [illegible] to the Dy. Minister (Environment), Gandhinagar.
4. Revenue Department, Sachivalaya, Gandhinagar.
5. Education & Mines Deptt., Sachivalaya, Gandhinagar.
6. Urban Development & Urban Housing Development Department, Sachivalaya, Gandhinagar.
7. The Collector, Valsad.
8. The Managing Director, G.I.D.C., Gandhinagar.
9. Industries Commissioner, Gandhinagar.
10. Gujarat Pollution Control Board, Gandhinagar.
11. The Engineer, M.E.C., Valsad.
12. Industries Association, Vapi, Valsad.
13. Officers of the Forests & Environment Dept.
14. Branches of the Forests & Environment Dept.
15. Select File.

Extra No. 145 REGISTERED NO. G/GNR/2

The Gujarat Government Gazette

EXTRAORDINARY

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Separate paging is given to this Part in order that it may be filed as a separate compilation.

PART I-B

CENTRAL SECTION

Government Notifications published under Land Acquisition Act only

REVENUE DEPARTMENT

Notification

Sachivalaya, Gandhinagar, 10th September, 1984.

LAND ACQUISITION ACT, 1894 (I OF 1894).

District : Valsad.

No. AM-84-027-M-LBU-1281-2054-GH.—Whereas by Government Notification in the Revenue Department No. AM-81-723-M-LBU-1281-2054-GH, dated 3-9-1981 read with it was notified that the lands specified in the Schedule hereto (hereinafter referred to as the said lands) were likely to be needed for the public purpose specified in column 4 of the said schedule.

And whereas the Government of Gujarat is satisfied after considering the report of the Officer on Special Duty (Land Acquisition) Ahmedabad under sub-section (2) of Section 5-A of the Land Acquisition Act, 1894 (I of 1894) that the said lands are needed to be acquired partly at the public expense for the public purpose specified in column 4 of the said schedule.

It is hereby declared under the provisions of section 6 of the said Act that the said lands are needed for the public purpose as specified in column 4 of the said schedule.

The Officer on Special Duty (Land Acquisition) in the Office of the Industries Commissioner, Navrangpura, Ratnakar Building, Ashram Road, Navrangpura, Ahmedabad 380 009, is hereby appointed under clause (c) of section 3 of the said Act, to perform the functions of a Collector for all proceedings hereafter to be taken in respect of the said lands. The Officer on Special Duty (Land Acquisition) Navrangpura, [illegible] Building, Ashram Road, Navrangpura, Ahmedabad 380 009, is hereby directed under Section 7 of the said Act to take order for the acquisition of the said lands.

And whereas the Government of Gujarat having been satisfied that the acquisition of said lands is urgently necessary, the Government of Gujarat is further pleased to direct under Sub-Section (1) of Section 17 of the said Act, that the Officer on Special Duty (Land Acquisition) Ahmedabad 380 009, shall on the expiration of fifteen days from the publication of the notice relating to the said lands under Sub-section (1) of Section 9 of the said Act, take possession of the said lands.

A plan of the said lands can be inspected at the Office of the Officer on Special Duty (Land Acquisition) Navrangpura, Ratnakar Building, Ashram Road, Navrangpura, Ahmedabad 380 009.

SCHEDULE

District, Taluka, Village.	Survey No.	Area	Purpose
1	2	3	4
		H.-A.-Sq.M.	
Valsad	[illegible]	1—01—17	For the expansion of Vapi Industrial Estate by G.I.D.C.
Pardi	[illegible]	[illegible]—49—72	
Karwad	207 P	0—44—65	
	207 P	0—[illegible]—10	
	294/4	0—26—45	
	[illegible]	0—52—17	
	[illegible]	[illegible]	

1	2	3	4
		H.A.Sq.M.	
8	383/4	0-38-67	
9	386/1+4	0-24-29	
10	386/4	0-17-18	
11	385/4	0-41-48	
12	386/5	0-14-16	
13	386/3	0-14-16	
14	386/7	0-37-43	
15	385/8-9	0-23-37	
16	387/P	1-24-44	
17	393/P	2-09-45	
18	398/1	0-18-26	
19	398/2	2-16-49	
		0-00-07 (Kh)	
20	388/9	0-18-21	
21	394	0-31-05	
22	395/1	0-01-10	
23	395/1	0-22-23	
24	397/2	0-28-20	
25	213/4	0-47-38	
26	396/3	0-20-14	
27	396/2	0-20-03	
28	396/1	0-54-53	
29	396/1	0-64-23	
30	390/4	0-40-63	
31	390/3	0-25-08	
32	390/2	0-85-07	
33	397	3-89-25	
34	398	0-57-04	
35	399	3-41-09	
36	400/1	0-28-33	
37	403/2/1+3/1	0-42-40	
38	403/2/2+3/2	0-41-48	
39	401	1-46-70	
40	402	0-37-01	
41	403	0-02-07	
42	404	0-61-06	
43	405/1	0-39-08	
44	405/2	0-07-79	
45	406	2-47-87	
46	407	0-64-70	
47	409	0-37-44	
		+ 0-02-02(Kh)	
48	410/P	2-92-27	
		+ 0-06-07(Kh)	
49	410/P	0-37-41	
50	411/P	0-47-47	
51	411/P	0-13-14	
52	411/P	0-40-47	
53	412/P	0-97-13	
54	412/P	1-39-80	
55	413	1-02-19	
56	414	2-67-09	
57	415/1	0-67-67	
58	415/2+3	0-44-62	
59	415/4	0-34-40	
60	415/5	0-34-35	
61	415/6	0-39-45	
62	416	1-36-67	
		0-02-02(Kh)	
63	417/1/1	0-04-40	
64	417/1/2	0-59-60	
		0-01-01(Kh)	
65	417/2	1-35-61	
		0-01-01(Kh)	
66	417/3/1	0-47-20	
67	417/3/2	0-16-19	
68	418/1	2-36-42	
69	418/2	0-24-25	
70	418/3	0-24-25	
71	418/4	0-23-27	
		+ 0-01-01 (Kh)	

1	2	3	4
		H.A.Sq.M.	
		0-16-67 (Kh)	
80	463/2	0-15-16	
81	463/3	0-19-19	
		+ 0-04-05 (Kh)	
82	463/4	0-13-16	
83	464	0-74-87	
		+ 0-02-02 (Kh)	
84	465/1	0-44-52	
		+ 0-03-04 (Kh)	
85	465/2	0-43-50	
		+ 0-05-07 (Kh)	
86	466/1	0-10-12	
87	466/2	0-12-14	
		+ 0-00-01 (Kh)	
88	466/3	0-50-64	
89	466/4	0-81-05	
90	466/5	0-70-81	
91	467	0-70-82	
92	468/1	1-60-74	
		+ 0-02-02 (Kh)	
93	468/2	1-73-00	
		0-12-14 (Kh)	
94	469/P	1-61-88	
95	469/P	1-23-43	
		0-02-02 (Kh)	
96	470	1-00-16	
97	471/P	0-82-27	
		0-10-07 (Kh)	
98	471/P	0-10-11	
99	472/1/1	1-49-74	
100			
101			
102			
103			
104			
105			
106			
107			
[illegible]	472/2	3-08	
		0-03-02 (Kh)	
109	472/3	0-03-06	
110	472/4	0-02-02	
111	472/5	0-05-06	
112	472/6	0-03-04	
113	473/1	0-09-11	
114	473/2+3	0-09-08	
115	473/4	0-03-04	
116	473/5	0-06-08	
117	473/6	0-00-01	
118	473/7	0-01-01	
119	473/8	0-05-06	
120	473/9	0-25-29	
		0-04-06(Kh)	
121	473/10	0-19-21	
122	473/11	0-14-16	
		0-03-04 (Kh)	
123	473/12	0-29-34	
		0-01-01 (Kh)	
124	473/13	0-01-16	
125	473/14	0-08-10	
126	473/15	0-05-06	
127	473/16	0-05-06	
128	473/17/1	0-07-08	
129	473/17/2	0-00-07	
130	479/P	1-06-20	
131	479/P	1-09-00	
132	480/P	0-72-90	
133	481/3/1	0-09-46	
134	481/3/2	0-88-02	
135	482/P	0-87-01	
136	482/P	0-88-02	

1		2	3	4
			H.A.Sq.M.	
	144	380/3	0-53-02	
	145	650/1	0-26-[illegible]	
	146	687	1-12-80	
	147	688	3-63-64	
			0-05-00 (Kh)	
Dungra	1	382	3-82-46	
	2	383	2-20-[illegible]	
	3	384	2-16-09	
	4	385	3-73-92	
			0-02-03 (Kh)	
	5	386	3-[illegible]	
			0-32-03 (Kh)	
	6	387	1-29-41	
	7	388	1-87-05	
	8	389	2-81-28	
			0-[illegible]-00 (Kh)	
	9	390	1-[illegible]	
	10	391	0-2[illegible]-75	
	11	392/1	0-[illegible]-21	
	12	421	0-10-22	
	13	423	0-[illegible]-23	
Kocharva	1	25	0-07-12	
	2	26	0-47-70	
	3	27	1-43-23	
	4	28/1	0-38-02	
	5	28/2	1-91-10	
	6	29/1	0-14-21	
	7	29/2	0-91-00	
	8	30	0-[illegible]-42	
	9	31	0-[illegible]-79	
	10	32	3-26-61	
	11	33/1	0-30-04	
	12	33/1	0-39-23	
	13	33/1	0-19-22	
	14	34	[illegible]	
	15	35	1-10-25	
	16	43	3-26-72	
			+0-07-03 (Kh)	
	17	48	1-[illegible]-[illegible]	
			0-03-04 (Kh)	
	14	3[illegible]/17	1-[illegible]	
			1-[illegible] (Kh)	
	15	3[illegible]	[illegible]	
	16	[illegible]	[illegible]	
			0-[illegible] (Kh)	
Dungra	1	2[illegible]	[illegible]-78	
	2	[illegible]	1-44-43	
			0-[illegible] (Kh)	
	3	[illegible]	[illegible]	
	4	[illegible]	2-[illegible]-27	
	5	209/1	0-72-47	
Kocharva	1	[illegible]	[illegible]	
	2	[illegible]	[illegible]	
	3	[illegible]	[illegible]	
	4	[illegible]	[illegible]	
	5	288	1-67-17	
	6	[illegible]	[illegible]	
			[illegible] (Kh)	
	7	[illegible]	[illegible]	
	8	[illegible]	[illegible]	
	9	[illegible]	[illegible]	
	10	[illegible]	[illegible]	
	11	[illegible]	[illegible]	
	12	[illegible]	[illegible]	

By order and in the name of the Governor of Gujarat,

R. J. JHALA,
Under Secretary to Government.

The acquisition of causing following lands village Karvad, Dungra and Kocharva, Ta. Pardi, District-Valsad mentioned in the statement appended to the Government notification No. AN-81-723-M,—LRQ/181-2044-CH, dated 3rd September, 1981 published in the Gazette dated 1st October, 1981 for the purpose stated above is hereby abandoned and Government of Gujarat is pleased to direct that the said notification shall be cancelled in respect of the said land.

SCHEDULE

List of S. Nos. proposed to be released from requisition.

District, Taluka, Village.		Survey Number	Area	Purpose
1		2	3	4
			H.A.Sq.M.	
Valsad	1	384/1	0-54-39	
Pardi	2	384/3/1	0-87-08	
Karvad	3	384/2/2	0-07-03	
	4	3[illegible]/3	0-18-[illegible]	
	5	[illegible]/3	0-50-50	
	6	[illegible]	0-35-26	
	7	[illegible]/1	0-[illegible]-47	

મહેસૂલ વિભાગ

જાહેરનામું

સચિવાલય, ગાંધીનગર, ૧૯મી સપ્ટેમ્બર, ૧૯૮૧.

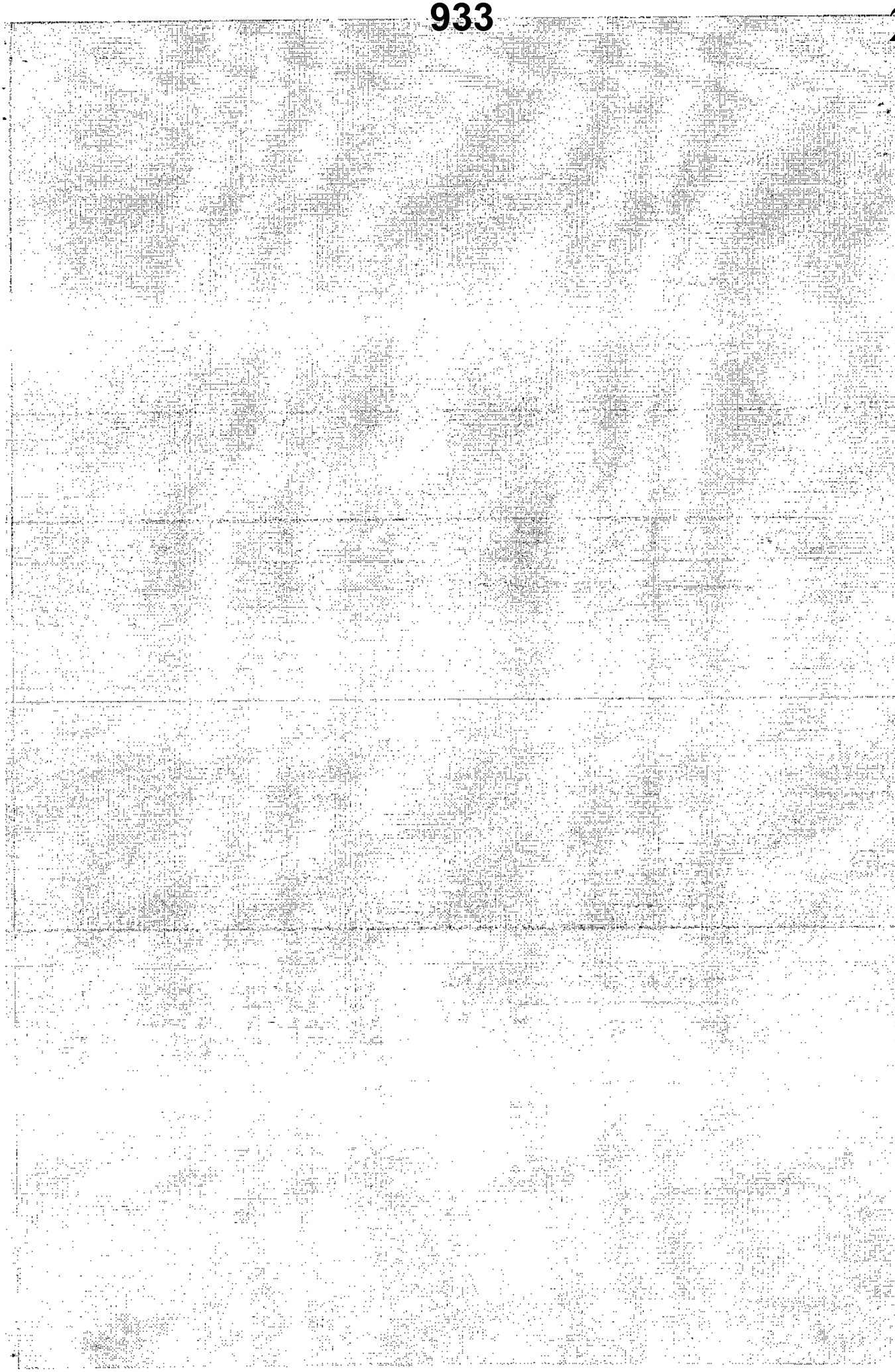
જમીન સંપાદન અધિનિયમ, ૧૮૯૪ (સન ૧૮૯૪નો ૧લો).

જિલ્લો : વલસાડ.

[illegible]

[illegible]

[illegible]



S C H E D U L E

District Taluka Village		Survey No.	Area H. A. Sq.Mt.	Purpose
	1	2	3	4
Valsad	1	294	1-01-17	For the expansion
Pardi	2	295	1-49-73	of Vapi Industrial
Karwad	3	297 P	0-44-52	Estate by G.I.D.C.
	4	297 P	0-92-06	
	5	384/4	0-38-45	
	6	385/1	0-37-43	
	7	385/2	0-80-94	
			0-08-09(Kh)	
	8	385/4	0-48-56	
	9	386/1+4	0-24-29	
	10	386/2	0-07-98	
	11	386/3	0-41-48	
	12	386/5	0-14-16	
	13	386/6	0-14-16	
	14	386/7	0-37-43	
	15	386/8-9	0-28-32	
	16	387/P	1-24-44	
	17	387/P	2-09-43	
	18	388/1	0-13-15	
	19	388/2	2-15-49	
			0-06-07 (Kh)	
	20	388/3	0-18-21	
	21	394	0-84-93	
	22	395/6	0-06-15	
	23	395/1	0-22-23	
	24	395/2	0-28-30	
	25	395/4	0-47-59	
	26	395/3	0-29-14	
	27	395/5	0-26-93	
	28	396/5	0-56-53	
	29	396/1	0-34-33	
	30	396/4	0-46-53	
	31	396/3	0-63-08	
	32	396/2	0-53-03	
	33	397	3-59-28	
	34	398	0-55-64	
	35	399	3-41-96	

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1	2	3	4
36	400/1	0-28-33	
37	400/2/1+3/1	0-42-49	
38	400/2/2+3/2	0-41-48	
39	401	1-45-70	
40	402	0-87-01	
41	403	0-92-07	
42	404	0-81-95	
43	405/1	0-58-68	
44	405/2	0-57-79	
45	406	2-47-87	
46	407	0-64-75	
47	408	0-97-44	
		+ 0-02-02 (Kh)	
48	409/P	2-82-27	
		+ 0-06-07 (Kh)	
49	410/P	0-35-41	
50	411/P	0-40-47	
51	411/2	0-12-14	
52	411/P	0-40-47	
53	412/P	0-57-15	
54	412/P	1-38-50	
55	413	1-02-18	
56	414	2-57-09	
57	415/1	0-57-47	
58	415/2+3	0-44-52	
59	415/4	0-34-40	
60	415/5	0-31-36	
61	415/6	0-39-46	
62	416	1-35-57	
		0-02-02 (Kh)	
63	417/1/1	0-66-80	
64	417/1/2	0-59-69	
		0-01-01 (Kh)	
65	417/2	1-35-57	
		0-01-01 (Kh)	
66	417/3/1	0-17-20	
67	417/3/2	0-16-19	
68	418/1	0-36-42	
69	418/2	0-24-25	

/3/

1	2	3	4
70	418/3	0-24-26	
71	418/4	0-23-27	
		+ 0-01-01 (Kh)	
72	420/1-5	0-59-59	
73	420/2	0-18-21	
74	420/3	0-17-20	
75	420/4	0-19-22	
76	420/6	0-16-19	
77	420/7	0-14-16	
78	420/8	0-93-08	
79	463/1	0-59-69	
		+ 0-06-07 (Kh)	
80	463/2	0-14-16	
81	463/3	0-59-59	
		+ 0-04-05 (Kh)	
82	463/4	0-13-15	
83	464	0-74-87	
		+ 0-02-02 (Kh)	
84	465/1	0-44-52	
		+ 0-03-04 (Kh)	
85	465/2	0-43-50	
		+ 0-05-07 (Kh)	
86	466/1	0-10-12	
87	466/2	0-12-14	
		+ 0-03-04 (Kh)	
88	466/3	0-90-04	
89	466/4	0-81-95	
90	466/5	0-52-51	
91	467	0-70-82	
92	468/1	1-50-75	
		0-02-02 (Kh)	
93	468/2	1-73-00	
		0-12-14 (Kh)	
94	469/P	1-61-88	
95	469/P	1-23-43	
		0-02-02 (Kh)	

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1	2	3	4
96	470	1-00-16	
97	471/5	2-32-27	
		0-06-07 (Kh)	
98	471/2	0-16-19	
99	472/1/1	0-15-41	
100	472/1/2	0-17-20	
101	472/1/3	0-17-20	
102	472/1/4	0-16-19	
103	472/1/5	0-18-21	
104	472/1/6	0-16-19	
105	472/1/7	0-15-18	
106	472/1/8	0-02-02	
107	472/1/9	0-12-14	
108	472/2	0-08-10	
		0-01-01 (Kh)	
109	472/3	0-05-06	
110	472/4	0-02-02	
111	472/5	0-05-06	
112	472/6	0-03-04	
113	473/1	0-09-11	
114	473/2+3	0-06-08	
115	473/4	0-03-04	
116	473/5	0-04-05	
117	473/6	0-01-01	
118	473/7	0-01-01	
119	473/8	0-02-02	
120	473/9	0-26-30	
		0-04-05 (Kh)	
121	473/10	0-18-21	
122	473/11	0-14-16	
		0-03-04 (Kh)	
123	473/12	0-28-35	
		0-01-01 (Kh)	
124	473/13	0-04-05	
125	473/14	0-08-09	
126	473/15	0-04-05	
127	473/16	0-04-05	
128	473/17/1	0-07-08	
129	473/17/2	0-06-00	

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1	2	3	4
130	577/P	1-08-20	
131	579/P	1-00-00	
132	580/P	3-52-90	
133	581/3/P	0-09-45	
134	581/3/2	0-88-02	
135	582/P	0-87-01	
136	582/P	0-88-02	
137	582/P	0-87-01	
138	583	1-03-20	
139	584/1P	0-18-37	
140	583/2P	1-11-29	
141	585/1	0-06-00	
142	586/1	0-33-37	
143	586/2	0-43-50	
144	586/3	0-53-62	
145	586/4	0-35-41	
146	587	1-12-80	
147	588	2-53-94	
		0-05-06 (Kh)	
Dungra 1	382	3- 85-46	
2	383	2-20-55	
3	384	5-18-69	
4	385	3-73-32	
		0-02-03 (Kh)	
5	386	3-20-72	
		0-03-03 (Kh)	
6	387	1- 38-61	
7	388	1- 67-95	
8	389	2-81-26	
		0-05-06 (Kh)	
9	390	1-75-03	
10	391	0-29-75	
11	392/P	0-75-24	
12	521	0-19-22	
13	522	0-30-55	

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1	2	3	4
Kacharwa			
1	25	0-97-13	
2	26	0-67-79	
3	27	1-03-20	
4	28/1	0-88-03	
5	28/2	1-00-16	
6	29/1	0-18-21	
7	29/2	0-94-09	
8	30	0-97-13	
9	31	0-65-76	
10	32	3-28-81	
11	33/2	0-80-94	
12	33/P	0-20-23	
13	33/P	0-19-22	
14	34	0-96-11	
15	35	1-16-55	
16	45	3-26-79	
		+ 0-07-08 (Kh)	
17	46	1-41-64	
		→ 0-03-04 (Kh)	

Asstt. Chief Executive (Land)
G.I.D.C.-1 AHMEDABAD - 9.

ANNEXURE-4

Time Bound Chart for final Capping Work of Cell Ex.4.1&4.2

SR NO.	TENTATIVE TIME / WORK ACTIVITIES	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24
1	ADMINISTARTIVE APPROVAL FOR WORK																										
2	CONSULTANT FINALIZATION FOR DEGING AS PER CPCB GUIDLINE																										
3	PREPERATION OF DESIGNING WORK																										
4	PREPERATION OF BOQ AS PER DESIGN																										
5	PREPERATION OF TENDER DOCUMENTS																										
6	FLOAT TENDER THROGHU ONLINE PLATFORM(M.S.T.C)																										
7	FINALIZATION OF AGENCY																										
8	EXECUTION OF WORK FOR																										

LEGEND	
WORK COMPLETED	
WORK PENDING	

VAPI GREEN ENVIRO LIMITED VGEL VAPI GIDC

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