Chapter III
PROFILE OF THE RESPONDENTS AND FACTORS RELATED TO GALLBLADDER STONE FORMATION

In this chapter an attempt has been made to give social profile such as age, sex, residence, marital status, religion, social status education, occupation, type of family income of the gallbladder stone victims as well as gall bladder stone control respondents .It is related to occurrence of gallbladder stone problem such as type of house, sources of water, process of water and the habit of using same water body or both domestic purpose and drinking water. As knowledge leads to behavior that is why it is felt pertinent to examine the respondents' knowledge in regarding the sources of gallbladder stone formation, symptom, and diagnosis and so on and these variables are again cross checked with the social variables. Since food habit and sedentary lifestyle are highly co-related with the formation of gallbladder stone, respondents' food habits and the habit of sleeping as well as exercise will be given in detail i n the last part of the chapter.

Age:

Human life is a cycle of many stages.Each stage is determined by age.Age bring in to being change in life cycle which is an important event in the life of every human being. Age is the basis on which life cycles are earmarked. Age leads to changes in physical, psychological as well as behavioural aspects of a human being. Moreover, age is also an indicator of severity and susceptibility of diseases. It is a dimension of social structure. Change in age is followed by changes in social role and responsibilities assigned with different status of people. Division of life

cycles is culturally set by society in order to maintain stability and continuity of social structure. They are also well-designed to distribute the behaviour of individual as they pass from one stages to another. Every individual including infant, children, teenager, youth, and old are expected to act according to norms of different ages. Social judgments over an individual behaviour depend on their attitude conforming to norms. Health and sickness is also a part of it. An individual's sickness is judged in accordance with his role conformity expected by society.

Sex:

Sex is other important variable that plays an important role in occurrences of disease. Diseases are not equally distributed sex wise also. In India, female are victims of poor health comparison to male. Malnutrition, anemia and blindness are common diseases attributed to female. More over, maternity death among the female are also common phenomena. Poor health statuses of women are reported from different tribal population including North-East despite possessing a matrilineal socio-structural organization.

Though female above 40 years are more prone to gall bladder stone disease, in the present study the samples have been drawn in equal numbers of males and females. The sample also covers the sufferers of the disease from 6 years to 45 years and above age is equal proportion. The controlled group samples are more or less matches with the experimental group. Age and sex are equally distributed in the present study but it is reported that female folk of more than 40 years are more prone to Gall bladder stone disease.

TABLE: 3.1.GALL BLADDER STONE RESPONDENTS' AGE AND SEX

(Percentage in parenthesis)

	Age	SEX		Total
		Male	Female	
Experimental	6-17	20 (51.3)	19(48.7)	39 (100.0)
	18-30 ·	20(50.0)	20(50.0)	40 (100.0)
	31-45	20 (50.0)	20 (50.0)	40 (100.0)
	45 and above	20 (48.8)	21 (51.2)	41 (100.0)
	Total	80 (50.0)	80(50.0)	160 (100.0)
Control	6-17	20(50.0)	20(50.0)	40 (100.0)
	18-30	20 (50.0)	20 (50.0)	40 (100.0)
	31-45	20 (50.0)	20 (50.0)	40 (100.0)
	45 and above	20 (50.0)	20(50.0)	40 (100.0)
	Total	80(50.0)	80(50.0)	320

Residence:

Table 3.2 indicates that the sample has less than 51.2 percent (42 out of 82) of the rural male respondents who are with gallbladder stone as against 48.7 percent (38 out of 80) respondents of the urban counterpart. But in case of female respondent's 48.8(40 out of 82) percent of respondents are from rural areas and 51.3 (40 out of 78) percent of them are from urban areas. [1].

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[1] While in analyzing the social demography of health Crockerham observes that new generations of aged Americans are physically more affluent and healthy than their preceding generations(Crockerham;1994).As for gender differences; the study discloses higher rate of chronic conditions like hypertension, thyroid, anemia gall bladder stone and so on(ibid,1991).

TABLE: 3.2. GALL BLADDER STONE RESPONDENTS' RESIDENCE AND SEX.

(Percentage in parenthesis)

	Residence	SEX		Total
		Male	Female	
Experimental	Rural	42 (51.2)	40 (48.8)	82 (100.0)
	Urban	38(48.7)	40(51.3)	78 (100.0)
	Total	80 (50.0)	80 (50.0)	160 (100.0)
Control	Rural	43 (52.43)	39(47.56)	82 (100.0)
	Urban	37 (47.43)	41 (52.56)	78(100.0)
	Total	80(50.0)	80(50.0)	160 (100.0)

Marital Status:

Being an important social event marriage assumes significant changes in the status and role of an individual. Marital life is a source of happiness and shoudering family responsibilities. Accelerating socio-economic responsibilities of an individual are functional in reproducing the normative behaviour which may on the other hand help to lead a healthy life. Marital life may also be maladaptive in many ways: (i) marital tension or conflict may exacerbate the threat in the health of victim.(2) Domestic assignment giving birth of a child as well as nurturing a child may also affect on health of women. In India reproductive health of married women is a menace.

However, marital status wise sample distribution of gall bladder stone respondents indicates that married female are more than the male. Table 3.3

indicates that less than half of the control group male respondents are unmarried but they are more in numbers in the category of married respondents.

TABLE: 3.3. GALL BLADDER STONE RESPONDENTS' MARITAL STATUS AND SEX.

(Percentage in parenthesis)

	Marital Status	SEX		Total
		Male	Female	
Experimental	Married	46 (42.6)	62 (57.4)	108 (100.0)
	Unmarried	33(68.8)	15(31.3)	48 (100.0)
	Divorcee	1 (25.0)	3 (75.0)	4 (100.0)
	Total	80 (50.0)	80 (50.0)	160 (100.0)
Control	Married	47 (54.0)	40(46.0)	87 (100.0)
	Unmarried	33 (49.25)	34 (50.75)	67(100.0)
	Divorcee	--------------	6 (100.0)	6 (100.0)
	Total	80(50.0)	80(50.0)	160 (100.0)

Education:

Education is an indicator of healthy life style. Educated people who are aware about health and diseases are expected to act in accordance with norms and values related to health and disease. Educated people are also expected to follow proper health re seeking behaviourrelated to disease and sickness like adopting preventive measures, doing exercise, frequent visit of doctor for general problems and so on. Moreover, education is also functional in interacting with physician as

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lack of communication with physician is a common problem among the illiterate people that may keep them away to resort to allopathic doctor in sickness.

Table 3.4 indicates that less than half of the male and a little more than that of the female gall bladder stone respondents are illiterate. Only two male respondents are graduates or married beyond graduates .The rest have been studied up to secondary level. In this category both males and females are equally represented. This situation is slightly different in case of control group, where females are slightly more in categories of literate and up to above graduation.

TABLE: 3.4. GALL BLADDER STONE RESPONDENTS' EDUCATION AND SEX.

(Percentage in parenthesis)

	Education	SEX		Total
	.	Male	Female	
Experimental	Illiterate	41 (48.8)	43 (51.2)	84 (100.0)
	Primary to HSSLC	37(50.0)	37(50.0)	74 (100.0)
	Graduation and more	2 (100.0)	----------	2 (100.0)
	Technical and other	--------------	----------------	--------------
	Total	80 (50.0)	80 (50.0)	160 (100.0)
Control	Illiterate	24 (44.4)	30(55.6)	54 (100.0)
	Primary to HSSLC	45 (51.13)	43 (48.86)	88(100.0)
	Graduate and more Technical and other	11(61.1)	7 (38.9)	18 (100.0)
	Total	80(50.0)	80(50.0)	160 (100.0)

Religion:

The sample drawn by religion shows that the representations of Hindu female are more than males, but in case of Muslims, the number of male have out number the female. The other category is represented by a female Jain. In case of control group except nine Muslims, the rest of them are Hindus only.

TABLE :3.5. GALL BLADDER STONE RESPONDENTS' RELIGON AND SEX.

(Percentage in parenthesis)

	Religion	SEX		Total
		Male	Female	
Experimental	Hindu	46 (42.6)	62 (57.4)	108 (100.0)
	Muslim	33(68.8)	15(31.3)	48 (100.0)
	Join	1 (25.0)	3 (75.0)	4 (100.0)
	Total	80 (50.0)	80 (50.0)	160 (100.0)
Control	Hindu	47 (54.0)	41(46.0)	87 (100.0)
	Muslim	33 (50.0)	33 (50.0)	66(100.0)
	Join	---------------	6 (100.0)	6 (100.0)
	Total	80(50.0)	80(50.0)	160 (100.0)

Social Status:

Social status and diseases are highly co-relative as the different health related studies unravel the fact that unequal spread of disease is in different societies of disease in different society as Jenkins has observed that there is a strong association between dyeing of poverty and living with cancer (Jenkin,1983).

TABLE :3.6. GALL BLADDER STONE RESPONDENTS' SOCIAL STATUS AND SEX

(Percentage in parenthesis)

| | Social Status | SEX | | Total |
		Male	Female	
Experimental	Brahmin	13 (65.0)	7 (35.0)	20 (100.0)
	Kayastha\Vaisya	7(31.81)	15(68.18)	22 (100.0)
	Sudra\OBC	12(38.70)	19 (52.30)	31 (100.0)
	Schedule Caste	14(41.17)	20(38.83)	34 (100.0)
	Does not arise	34 (65.38)	18(34.61)	52(100.0)
	Total	80 (50.0)	80 (50.0)	160 (100.0)
Control	Brahmin	14 (63.63)	8(26.27)	22 (100.0)
	Kayastha\Vaisya	20 (68.96)	9(31.04)	29(100.0)
	Sudra\OBC	11(35.5)	20 (64.5)	31(100.0)
	Schedule Caste	6 (42.85)	8(57.15)	14(100.0)
	Does not arise	29(40.27)	43 (59.63)	72 (100.0)
	Total	76 (47.5)	84(52.5)	320 (100.0)

Table 3.6 indicates nearly 20 percent male and female respondents living with gall bladder stone are Brahmmin.It is a fourth of the male and little less than a fifth of the female in case of control respondents. Little less than a third of the victim respondents belonging to Kayastha\Vaisya category.A little over twenty percent is schedule caste category.The control group sample shows that twenty percent is from Brahmmin category,above 51 percent hail from Kayastha, Vaisya category and about twelve percent is sudra\Other backward class category and only 3.8 percent is Schedule caste.

Occupation:

By occupation, the samples of gall bladder stone victims show that a little more than half are students\unemployed persons. About a quarter of them are businessmen\self employed and twenty percent of them are in service. The control

group respondents are more or less in the same area, more from students and unemployed followed by businessmen\self employed and service people.

TABLE :3.7. GALL BLADDER STONE RESPONDENTS' OCCUPATION AND SEX

(Percentage in parenthesis)

| | Occupation | SEX | | Total |
		Male	Female	
Experimental	Student and unemployed	32 (36.4)	56 (63.6)	88 (100.0)
	Businessmen and self employed	26(66.7)	13(33.3)	39 (100.0)
	Serviceman	22 (66.7)	11 (33.3)	33 (100.0)
	Total	80 (50.0)	80 (50.0)	160 (100.0)
Control	Student and unemployed	44 (42.7)	59(57.3)	103 (100.0)
	Businessmen and self employed	20 (52.6)	18 (47.4)	38(100.0)
	Serviceman	16(84.21)	3(15.79)	19(100.0)
	Total	80 (50.0)	80(50.0)	320 (100.0)

Family member:

Table 3.8 shows that the experimental respondents came mainly from the families with 5-10 members followed by families with up to 4 members. Except, one there is no respondents from large families. However in the control group, there is high representation of small families compared to the next category.

TABLE : 3.8. GALL BLADDER STONE RESPONDENTS' FAMILY MEMBER AND SEX

(Percentage in parenthesis)

	Total No of Family M ember	SEX		Total
		Male	Female	
Experimental	Up to 4	28 (49.1)	29 (50.9)	57 (100.0)
	5-10	51(50.0)	51(50.0)	101 (100.0)
	10 and more	1 (100.0)	_____	1 (100.0)
	Total	80 (50.0)	80 (50.0)	160 (100.0)
Control	Up to 4	53 (42.74)	71(57.75)	124 (100.0)
	5-10	27 (77.1)	8 (22.9)	35(100.0)
	10 and more	------------	1(100.0)	1(100.0)
	Total	80 (50.0)	80(50.0)	320 (100.0)

Family Educational Background:

The educational background of the family members of both experimental and control group respondents' show that about a quarter of each of them are hailing from the family back ground of illiterate and graduates or above graduations. The rest half of them have studied up to level between primary and secondary level. In case of control group, nearly three fourths are in the category of primary to secondary school. and nearly one fourth of them hail from illiterate families. Only four cases are from the category of graduations or above.

TABLE: 3.9.GALL BLADDER STONE RESPONDENTS' FAMILY EDUCATION AND SEX.

(Percentage in parenthesis)

	Education	SEX		Total
		Male	Female	
Experimental	Illiterate	17 (43.6)	22 (56.4)	39 (100.0)
	Primary to HSSLC	43(52.4)	39(47.6)	82 (100.0)
	Graduation and more	20 (51.3)	19 (48.7)	39 (100.0)
	Total	80 (50.0)	80 (50.0)	160 (100.0)
Control	Illiterate	10 (26.3)	28(73.7)	38 (100.0)
	Primary to HSSLC	40 (48.19)	43 (51.80)	83(100.0)
	Graduate and more . Technical and other	30 (50.84)	29 (49.15)	59 (100.0)
	Total	80(50.0)	80(50.0)	320 (100.0)

Family Type and Income:

According to the categorization of family type, a majority of the respondents are from nuclear families in both experimental and control group.(Table 3.10) Table 3.11 indicates that among the experimental group.53.1 percent respondents have total family income less than rupees 5000.It is followed by the income ranging from rupees 5000 to 10000 per month. Thus a majority of them are from low income group. However, in the control group, the samples have been distributed between some what uniformly in all income slabs.

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TABLE: 3.10. GALL BLADDER STONE RESPONDENT'S FAMILY TYPE AND SEX.

(Percentage in parenthesis)

	Family type	SEX		Total
		Male	Female	
Experimental	Nuclear	49 (48.0)	53 (52.0)	102 (100.0)
	Joint	31(53.4)	27(46.6)	58 (100.0)
	Total	80 (50.0)	80 (50.0)	160 (100.0)
Control	Nuclear	50 (41.3)	71(58.7)	121 (100.0)
	Joint	30(76.24)	9 (23.76)	39(100.0)
	Total	80(50.0)	80(50.0)	320 (100.0)

TABLE: 3.11. GALL BLADDER STONE RESPONDENT'S FAMILY INCOME AND SEX.

(Percentage in parenthesis)

	Family income	SEX		Total
		Male	Female	
Experimental	>5000	40 (47.1)	45 (52.9)	85 (100.0)
	5,000-10,000	30(3.6)	26(46.4)	56 (100.0)
	10,000- 15,000	8 (47.1)	9 (52.9)	17 (100.0)
	<15,000	2 (100.0)	----------	2 (100.0)
	Total	80 (50.0)	80 (50.0)	160 (100.0)
Control	>5000	13 (40.6)	19(59.4)	32 (100.0)
	5000-10000	26 (54.16)	22 (45.74)	48(100.0)
	10000-15000	24(52.17)	22 (47.83)	46 (100.0)
	<15000	17(50.0)	17(50.0)	34(100.0)
	Total	80(50.0)	80(50.0)	320 (100.0)

Social Background:

The analysis reveals that with in the age group of 6-17 years, a large segment of respondents that is 44.4 percent male and over a half of female hail from lower social background, 55percent male and 44,6 percent female

respondents hail from middle social background. There is neither a single male nor a single female of this age group belonging to upper social background. With in the age group of 18-30 years majority of the male respondents (77.3 percent) and one fourth of the female respondents hail from lower social background, while 23 percent male and 70 percent female respondents hail from middle social background and only 9.1 percent of the male respondent belong to upper social background.. Majority of the female control respondent hails from middle social background irrespective of any age. A third of the respondents hail from middle social background and only 4 respondents who hail from lower social background belong to the age group of 31 years to 45 years.

TABLE:3.12. GALL BLADDER STONE RESPONDENTS' SOCIAL BACKGROUND

(Percentage in parenthesis)

Sl.	Social Background	Experimental	Control
1	Lower Social Background	86(53.75)	6(3.75)
2	Middle Social Background	70(43.75)	82(51.25)
3	Upper Social background.	4(2.5)	72(45.0)
	Total	160(100.0)	160(100.0)

Factors related to gallbladder stone:

As stated in the case of hepatitis respondents, the same categories of house type are used for the analysis using Kutcha, semipucca\Assam type\ and pucca\ Rcc categories in case of gall bladder stone.

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TABLE :3.13. GALL BLADDER STONE RESPONDENTS' TYPE OF HOUSE AND SEX.

(Percentage in parenthesis)

| | TYPE OF HOUSE | SEX | | Total |
		Male	Female	
Experimental	Kutcha	22(50.0)	22(50.0)	44(100.0)
	SemiPucca\Assamtype	33(44.0)	42(56.0)	75(100.0)
	RCC	25(61.0)	16(39.0)	41(100.0)
	Total	80(50.0)	80(50.0)	160(100.0)
Control	Kutcha	19 (70.4)	8(29.6)	27 (100.0)
	SemiPucca\Assamtype	33 (41.8)	46 (58.2)	79(100.0)
	RCC	28 (51.85)	26 (48.14)	54 (100.0)
	Total	80(50.0)	80(50.0)	320 (100.0)

Table 3.13 shows the experimental and control group data are more or less matches with reference to semi-pucca \Assam type\house type\but there are some differences with reference to kutcha and RCC categories. But this does not signify number, and perhaps no relation between gallbladder stone and house type.

According to World Health Organization (WHO), less than 40 percent of India's population lack proper sanitation facilities and those who do not have number option but to pass them here and there even in railway track, agriculture field river bank or public park poses grave the disease by contamination. Although the sample has been drawn randomly both for victims and control group without taking in to consideration the type of latrine they use. But it is found that a sizeable proportion if the victims use pit latrine. There fore it is assumed that pit latrine and disease may have been related. The table reveals 3. 14 that although majority of the victims use sanitary system of toilet but quite a notable number of them are using pit latrine in the experimental group. In case of control group it is hardly a few. So,

from the data it can be assumed that the tendency of gallbladder stone formation is more among the people of lower socio-economic profile. These people who use pit latrine generally comes from remotest part of the valley.^{2}

TABLE :3.14. GALL BLADDER STONE RESPONDENTS' TYPE OF TOILET AND SEX.

(Percentage in parenthesis)

| | TYPE OF TOILET | SEX | | Total |
		Male	Female	
Experimental	Sanitary ·	47 (47.5)	52 52.5)	99 (100.0)
	Pit	33(55.0)	27(45.0)	60 (100.0)
	Open Space	------------	1 (100.0)	1 (`100.0)
	Total	80 (50.0)	80 (50.0)	160 (100.0)
Control	Sanitary	78 (50.32)	77(49.67)	155 (100.0)
	Pit	2 (40.0)	3 (60.0)	5(100.0)
	Open Space	---------------	----------------	--------------
	Total	80(50.0)	80(50.0)	320 (100.0)

Table-3.15 reveals that although the difference between total experimental and control respondents are marginal, a significant number of gallbladder stone victims are taking water from river\ canal\pond but they are not even 4 percent in case of control group respondents. A majority of the victim respondents are using water of ringwell \hand pump for drinking purpose. The reason behind the status is that half of the respondents hail from rural areas (see table -3.2).and they are not economically well off to construct ring well\hand pump at their home. More over

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^{2} But in a village of rural Maharastra 61.12 percent people defecate in open system. 27.35 percent of them have latrine and 11.51 percent of them have latrine connected with anal(ibid.2007)\

many villages are yet to be provided by PHE water supply, so the villagers have no options left but to take water of river\cannel\pond which carries higher quantum of contamination. Although sources of water are not directly associated with gall bladder stone formation but contaminated water is a source of all kind of stomach related disease. In order to avoid the drinking of contaminated water or to purify the same what actions is taken has been examined in the following table.

TABLE: 3.15. GALL BLADDER STONE RESPONDENT'S SOURCES OF WATER AND SEX.

(Percentage in parenthesis)

	TYPE OF TOILET	SEX		Total
		Male	Female	
Experimental	PHE ·	29 (51.8)	27 (48.2)	56 (100.0)
	Ring well\h And pump	1(14.3)	6(85.7)	7 (100.0)
	Pond\River\Cannal	50 (51.5)	47 (48.5)	97 (`100.0)
	Total	80 (50.0)	80 (50.0)	160 (100.0)
Control	PHE	16 (35.6)	29(64.4)	45 (100.0)
	Ring well\h And pump	63 (57.27)	47 (42.72)	110(100.0)
	Pond\River\Cannal	1 (20.0)	4 (80.0)	5 (100.0)
	Total	80(50.0)	80(50.0)	320 (100.0)

Boiled water is the best method to make it free from contamination. According to medical science the easiest and safest method of purifying water from any source is that it is to be boiled up to 100 ^{0} C heat for 20 minutes ,all germs and bacteria will be destroyed. Water of river\pond\canal are processed in such a way to make it pure. But the process requires knowledge regarding the fact as well plenty of fuel. Therefore, poor people can not afford boiling water. Filtration is the second best method which is found to be in use by a large

proportion of the respondents of both the categories as shown in table 3.16.But so far as raw water is concerned, the share of experimental group respondents is 15 percent more than their control counterparts. This reflects lack of scientific attitude in the behavior and poverty ridden condition of the victims of gall bladder stone respondents.'

TABLE: 3.16. GALL BLADDER STONE RESPONDENT'S PROCESSES OF WATER AND SEX.

(Percentage in parenthesis)

| | Process of water | SEX | | Total |
		Male	Female	
Experimental	Boil ·	16 (43.2)	21 (56.8)	37 (100.0)
	Filter	31(49.2)	32(50.8)	63 (100.0)
	Raw	33 (55.0)	27 (45.0)	60 ('100.0)
	Total	80 (50.0)	80 (50.0)	160 (100.0)
Control	Boil	40 (67.8)	19(32.2)	59 (100.0)
	Filter	18 (27.7)	47 (72.3)	65(100.0)
	Raw	22 (61.11)	14 (38.89)	36 (100.0)
	Total	80(50.0)	80(50.0)	320 (100.0)

When there are ponds and individual well, the same water is often used for drinking as well as often domestic purposes such as bathing, washing and cleaning utensils. In such cases most often used pond water gets back in to pond, which means the water gets easily contaminated. With reference to this aspect there are 77 cases (48.1 percent) in the experimental group, but 40 cases (25.0 percent) are in the control group who are using same water body for domestic purpose and contaminated water also. There fore it implies an association of gall bladder stone formation and contaminated water.

Doctors presume that bad food that is food grains and vegetables grown by synthetic fertilizer are the sources of gall bladder stone formation. As there is no

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known specific cause it is believed that such food produce gas and acidity which may in the long run cause the promotion of gall bladder stone formation. Thus the table -3.18 reveals that in total control respondents are more knowledgeable than the victims. In regarding bad food those who presume it correctly that it is a source of gall bladder stone formation amongst them control respondents share is more than double than that of victims. Those who know that contaminated water is a source of gall bladder stone victims respondents share is just half of the control groups and there is wide gap between the two groups in assuming correctly that drinking alcohol may cause jaundice.

Table: 3.17 SOURCES OF GALL STONE BY HEPATITIS RESPONDENTS.

SL.NUMBER	AWARNESS	Experimental	Control
1.	Bad food	26.3	65.6
2.	Contaminated Water.	25.6	49.4
3.	Physical Contact	4.4	3.8
4.	Using Cloth\Utensils	2.5	0.6
5.	Drinking alcohol	1.9	36.3
6.	Sexual contact	3.1	3.1

The knowledge regarding gall bladder as an organ of body related to stone formation is all most nil amongst the victim respondents while quite a good number of the control respondents are aware of it. One tenth of the victim respondents and a large segment of the control respondents know that gallbladder is the organ of body. Eight percent of the victims and less than 4 percent of the control respondents confidently reply "No" that is gall bladder has nothing to do with stones while 90 percent of the victims and a fourth of the control respondents have replied that they have no idea about it.

Table: 3.18 GALL BLADDER AS AN ORGAN OF BODY BY HEPATITIS RESPONDENTS.

SL.No		Experimental	Control
1.	Yes	1.9	72.5
2.	No	8.1	2.5
3.	Do not Know	90.0	25.0

Table 3.18 shows that only a few of the respondents of both the cases are wrongly informed that x-ray is a method of gall bladder stone detection. But all the disease respondents know that gall bladder stone is detected by sonography and interestingly, victims are ahead than their control counterparts in knowing this aspect. This is because their stone is detected by sonography and hence reply was "In my case it is detected by sonography"(Amar to Haise).All the victims have refuse blood test or electro cardio graphy as a method of gall bladder stone detection while a good number of the control respondents have misconception that gall bladder stone can be detected by blood test or ECG.

TABLE: 3.19 KNOWLEDGEABLE ABOUT DETECTION OF GALL BLADDER STONE

Sl.No	Awareness	Experimental	Control
1.	X-ray	.6	8.1
2.	Sonography	99.4	80.6
3.	Blood test	---------	3.8
4.	ECG	-----------	7.5
1.	Stomach pain	80.6	65.6
2.	Gas/acidity	30.6	20.6
3.	Fever	8.1	0.6
4.	Diarrhea	.6	
5.	Other	2.5	13.1

Above table also shows that although large segment of the respondents of both the case know that stomach pain is a symptom of gall bladder stone yet number of correct reply comes more from the victims. A third of the respondents who are sufferers know that gas-acidity is a symptom of gall bladder stone formation but it is known by a fifth of the control respondents. But a substantial number of respondents of both the cases wrongly presumed fever, diarrhea and other diseases are symptom of gall bladder stone formation. As the sufferers have already experience the symptoms so they are more informative.

Regarding the sources of gall bladder stone formation respondents were asked different sources through which problems of stone in gall bladder may likely to cause. These are bad food, bad water, physical contact with respondents using same cloth of the infected person, drinking alcohol and sexual contact. Of which the phenomena which is known to maximum number of respondents is bad water (25.5 percent) followed by bad food (21.1 percent) and drinking alcohol (1.3).A few people also possesses misconception regarding physical contact with respondents (15.0 percent) using same cloth of the infected person (1.9 percent) and sexual contact (1.3).Of all these aspects which are assumed by doctor as correct are bad food, sources of water and drinking alcohol. Thus those respondents who have replied bad food and bad water as a source of gall bladder stone formation their social profile are given below. Table 3.20 shows that the respondents who know that food grain made of chemical synthetic substances are creating the havoc of gall bladder stone formation they are mainly the children and youth respondents in the age group of 6-17 years and 18 to 30 years of age. Sex wise, male and female respondents are equally distributed in assuming correctly

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that chemical fertilization of grains and vegetables, even fish may likely to cause gall bladder stone formation. Besides, preservatives and color contain in different types of food items are also taken in to account for causing gall bladder stone. Illiterate respondents share higher proportion than the educated respondents. Residence wise distribution reveals the fact that there is no significant difference between the rural and urban people in terms of knowledge the data shows that former are better informed. Lower background respondents are more knowledgeable and surprisingly the data highlights that not knowledgeable respondents have out numbered the knowledgeable respondents in possessing the correct assumption that gall bladder is caused by taking bad food.

TABLE:3.20. BAD FOOD IS A SOURCE OF JAUNDICE AND SOCIAL PROFILE OF THE GALL BLADDER STONE RESPONDENTS.

(Percentage in parenthesis)

Sl.No	Yes	Bad food	Total
		Experimental	Control
1			
	6-17	6(42.9)	21 (26.6)
	18-30	5 (35.7)	13(16.5)
	31-45	2 (14.3)	22(26.6)
	45<	1 (7.1)	24 (30.4)
	Total	14 (100.0)	79 (100.0)
2	Sex		
	Male	8 (57.1)	38(48.1)
	Female	6 (42.9)	
	Total	14 (100.0)	79 (100.0)
3	Residence		
	Rural	10 (71.4)	
	Urban	4 (28.8)	52(65.8)
	Total	14 (100.0)	79 (100.0)

	Education		
	Illiterate	8 (57.1)	
	Primary to HSSLC	6 (42.9)	45 (57.0)
	Graduation and more	———	10 (12.7)
	Technical	—————	
	.	14 (100.)	79 (100.0)
5.	Social Background		
	Lower Background	7(50.0)	————
	Middle Back	4(28.6)	39 (49.4)
	Upper background	3(21.4)	40 (29.6)
		14 (100.0)	79 (100.0)
6	Knowledge		
	Not Knowledgeable	7(50.0)	————
	Less Knowledgeable	2 (14.3)	37 (46.8)

According to table 3.21, as regards as the relationship between sources of water and formation of gall bladder stone, children and youth respondents reply positively the source of water is a factor for formation of gall bladders stone. It is seen that female respondents are leading in this aspect than the adults who know that water is a source of hepatitis, the respondents in the age group of 18 to 30 years (32.4 percent) are more in proportion compares to others. In over all respondents above 18 years have better knowledge. Sex wise male respondents are better informed than their female counterparts. More than half of them are urbanites yet notable number of them hail from rural areas. Equal proportion of those illiterate or have studied from primary to higher secondary level are aware

that water is a source of hepatitis. More than half of them belong to middle social background respondents are not knowledgeable about hepatitis. In the control group, the respondents are having better knowledge compared to the hepatitis group.

TABLE: 3.21. BAD WATER IS A SOURCE OF JAUNDICE AND SOCIAL PROFILE OF THE GALL BLADDER STONE RESPONDENTS.

(Percentage in parenthesis)

Sl.No	Yes	Bad water	
		Experimental	Control
1	Age		
	6-17	15(35.7)	17 (30.9)
	18-30	14(33.8)	8(14.5)
	31-45	6(14.3)	12(21.8)
	45<	7(16.7)	18 (32.7)
	Total	42(100.0)	55 (100.0)
2	Sex		
	Male	18 (42.9)	32(58.2)
	Female	24 (57.1)	23 (41.8)
	Total	42 (100.0)	55 (100.0)
3	Residence		
	Rural	26 (61.9)	18(37.2)
	Urban	16 (38.1)	37(67.3)
	Total	42 (100.0)	55 (100.0)
4	Education		
	Illiterate	16 (38.1)	17 (30.9)
	Primary to HSSLC	25 (59.5)	36 (65.5)
	Ion and more	1(2.4)	2 (3.6)
	Technical	-------	-------
		42 (100.))	55 (100.0)
	Social Background		

	Lower Background	12(28.6)	--------
	Middle Back	28(66.7)	32 (58.18)
	Upper background	2(4.76)	23 (41.72)
		42 (100.0)	55 (100.0)
6	Knowledge		
	Not Knowledgeable	2(4.8)	--------
	Less Knowledgeable	-----------	29 (52.7)
	Knowledgeable	40 (95.2)	26(47.3)
		42 (100.0)	55 (100.0)

Amongst the "not knowledgeable" respondents. victim respondents are many times more than that of their control counterpart. The control group respondents are knowledgeable under all parameters. In case of experimental group lower is the age higher is the knowledge but amongst the control group all most all of them are knowledgeable irrespective of any age differences. Across the gender although male are knowledgeable, amongst the experimental group the gap is more while it is marginal in case of control group that experimental respondents who are living in the rural area slightly more than that of urbanites in case of knowledgeable respondents. In control cases there are no differences between rural and urban background. It is found there is no such difference of knowledge on the basis of education in any group. Experimental married respondents are more amongst not knowledgeable respondents but it is reverse in case of experimental group. Large segments of Hindu and Muslims respondents are not knowledgeable while it is a few of the Hindu and none of Muslim in control case. In both the cases students and unemployed respondents are more knowledgeable. In both the case it is found lower income group respondents are more knowledgeable.

TABLE: 3.22 RESPONDENTS KNOWLEDGE BY SOCIAL PROFILE.

Sl. No.	Item	Experimental			Control		
	Age	Not Knowledgea ble	Less Knowledgeabl e	Knowledgea ble	Not knowledgeable	Less Knowledg eable	Knowledg eable
1	6-17	6(15.4)	51(12.5)	9(60.0)	1(2.6)	8 (21.1)	29(76.3)
2	18-30	27(65.9)	12 (29.3)	2(13.0)	5 (12.2)	8(19.9)	28 (68.3)
3	31-45	28(70.0)	9 (22.5)	3 (20.0)	0(0.0)	9 (22.0)	32 (78.0)
4	45<	31(79.5)	7(17.9)	1	9 (22.5)	0	31 (77.5)
5	Total	112(100.0)	33(100.)	15(100.0)	15 (100.0)	25(100.0)	120 (100.0)
6	Sex						
7	Male	52(64.2)	23(29.4)	6(7.4)	6(6.9)	13(14.9)	68 (78.8)
8	Female	60 (75.9)	10 (12.7)	9(11.4)	9(12.3)	12(16.4)	52(71.2)
9	Total	112(100.0)	33(100.0)	15(100.0)	15(100.0)	25 (100.0)	120(100.0)
10	Residence						
11	Rural	52(65.8)	18(22.8)	9(11.4)	8(9.9)	12(14.8)	61(75.3)
12	Urban	60(74.1)	15(18.5)	6(7.4)	7(8.9)	13(16.5)	59(74.7)
13	Total	112(100.0)	33(100.0)	15(100.0)	15 (100.0)	25(100.0)	120 (100.0)
14	Education						
15	Illiterate	7(43.8)	2(12.5)	7(43.8)	2(10.5)	2(10.5)	15(78.9)
16	Primary-HSSLC	82(76.6)	20(18.7)	5(4.7)	8(7.2)	18(16.2)	85(76.6)
17	Graduate and more	17(58.6)	11(37.9)	1(3.4)	4 (21.1)	2(10.5)	13(68.4)
18	Technical and other	6(75.0)	1(3.4)	2(25.0)	1(9.1)	3(27.3)	7(63.6)
19	Total	112(100.0)	33(100.0)	15(9.4)	15 (100.0)	25(100.0)	120 (100.0)
20	Marital Status						
21	Married	76 (72.4)	19(18.1)	10(9.5)	10(16.7)	4(6.7)	46(76.7)
22	Unmarried	34(65.4)	13(25.0)	5(9.6)	4(4.1)	21(21.4)	73(74.5)
23	Divorcee	2(66.7)	1(33.3)	0	1(100.0)	-------	--------
24	Widow	_____	------	------	------	-------	1(100.0)
25	Total	112(100.0)	33(100.0)	15(9.4)	15 (100.0)	25(100.0)	120 (100.0)
26	Religion						
27	Hindu	86(69.4)	24(19.4)	14(11.3)	15(10.9)	20(14.5)	103(74.6)
28	Muslim	25(71.4)	9(25.7)	1(100.0)	-----	5(22.7)	17(77.3)
29	Jain	1(100.0)	------	------	--------	------	------
30	Total	112(100.0)	33(100.0)	15(9.4)	15(100.0)	25(100.0)	120(100.0)
31	Occupation						
32	Students\ Unemployed	57(66.3)	19(22.1)	10(11.6)	9(7.8)	16(13.9)	90(78.3)
33	Businessmn\ Selfemployed	21(61.8)	9(26.5)	4(11.8)	5(14.7	6(17.6)	23(67.6)
34	Service	34(85.0)	5(12.5)	1(2.5)	1(9.1)	3(27.3)	7(63.6)

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35	Total	112(100.0)	33(100.0)	15(9.4)	15(100.0)	25(100.0)	120(100.0)
36	Income						
37	<5000	59(68.6)	16(18.6)	11(12.8)	11(7.3)	23(15.2)	117(77.5)
38	5000-10000	41(74.5)	11(20.0)	3(5.5)	3(75.0)	1(25.0)	-----
39	10000-15000	12(70.6)	4(23.5)	1(5.9)	1(20.0)	1(20.0)	3(40.0)
40	15000<	-----	2(100.0)	------	-------	-----	-----
41	Total	112(100.0)	33(100.0)	15(9.4)	15(100.0)	25(100.0)	120(100.0)

GALL BLADDER STONE RESPONDENTS' KNOWLEDGE REGARDING HEPATITIS :

As it is already mentioned in the previous chapter, the relationship between gall bladder stone formation and occurrence of hepatitis is that one may be followed by others. It is desirable from the gall bladder stone respondents that they should possess knowledge of hepatitis to prevent them selves from hepatitis infection. However, it is found from the study that whether chemical composed food grains are responsible causing hepatitis, it is found that control respondents are more knowledgeable than that of the experimental respondents. The most vital source of jaundice is contaminated water; it is observed that majority of the control respondents are aware about it while not even 40 percent of the experimental respondents know the fact. Data highlights, aspects related to alcohol consumption is not known to significant number of respondents in any segment yet share of control respondents are not as meager as the experimental group respondents.

Poor knowledge of gall bladder stone respondents is also reflected from shallow knowledge regarding liver as an organ of body. It is found from the study, except a few respondents this aspect is known to all most all the gall bladder stone control respondents while it is known to hardly a few respondents.

As regards as symptom of jaundice is concerned, no significant difference is observed between the experimental and control respondents in regarding the knowledge of yellowness of eye. But a wide gap exists in between them in

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possessing the correct information related to yellowness of urine and both yellowness of urine and eye.

Hepatitis is diagnosed by blood test. The most common aspect is known to over a half of the gall bladder stone control respondents but the phenomenon is not known to even a fifth of the gall bladder stone experimental population.

Gall bladder stone controls respondents have out numbered those people who are living with gall bladder stone in regarding the fact abut hepatitis B. Over 40 percent of the control respondents have heard about hepatitis B while it is known to not even a third of the experimental people. The question is asked whether hepatitis is related to jaundice. In reply to the question positive response have come more from the control respondents than that of their experimental counterpart. Hepatitis B is transmitted through blood is found to be a most common aspect known to control respondents but little more than a tenth of the experimental respondents are known to it. Infected needle and syringe used by individual carrying hepatitis viruses is a potent source of transmission of hepatitis B. It is found that gall bladder stone control respondents are 4 time more knowledgeable in this aspect. It is found that control respondents are more knowledgeable regarding the vaccine of hepatitis.

Food habits of Gallbladder stone sufferers:

Food habit and gallbladder stone formation are closely associated. The bile juice secreted by the liver is sorted and gets released in to the stomach through the bile duct. It can not help in digesting fat when its quantity is excess. Thus the food items that contain higher amount of fat react with bile produce stones which get accumulated in the gall bladder. Vegetarian food contains comparatively less fat than non-vegetarian food. Therefore, the tendency of developing gall bladder

stone is relatively high among the non-vegetarians. People of Barak valley are generally non-vegetarians. The table shows 3.23 that although the respondents are non-vegetarian but in control groups quite a few of them are habituate to take vegetarian food.

TABLE :3.23. FOOD HABIT OF GALLBLADDER STONE RESPONDENTS.

SL.NO	FOOD HABIT	Experimental	Control
1.	Vegetarian	1.5	10.0
2.	Non-vegetarian	98.5	90.0

It is known that mustard oil contains more fat than any other types of oil. In order to remain safe from the problems of gall bladder stone it is desirable to take oil with low contents. But the data reflects that hardly any respondents irrespective of their socio-economic background are habituated to take mustard oil. In Barak valley Bengalee people consume mustard oil regularly. Traditionally, they used to cultivate mustard oil and with the help of indigenous technology the oil was extracted. Although the practice no longer exists in the valley the habit of consuming mustard oil continues.

TABLE: 3.24 TYPE OF OIL FOR COCKING OF GALL BLADDER STONE RESPONDENTS.

SL.NO	Type Of Oil For Cooking	Experimental	Control
1.	Mustard oil	94.3	95.0
2.	Sunflower oil	5.7	5.0
3.	Soya bin	------------------	------------------
4.	Groundnut	------------------	------------------
5.	Any Other	------------------	------------------

Table 3.25 indicates that the consumption of raw fish among the victims of gall bladder stones is all most 30 percent more than that of control group

respondents. They eat fish at least twice in a week. The respondents of control group show moderate consumption of fish in a week. There is not a single respondent in experimental group category who is consuming fish fort nightly or rarely but there are a significant number of them in the control group.

The data indicate that among the respondents who are accustomed to take dry fish in the experimental group are double to control group. The number of dry fish consumption in the experimental group is inversely proportional in both cases. Most of the control group respondents are accustomed to consume dry fish less frequently compared to the others.

Although majority of the respondents in both the group prefer to consume chicken rarely but higher intensity of chicken consumption is seen among the victim respondents than their control counter parts. Despite having negative cultural value this may be seen as process of cultural adaptation cause of theta may be biological that chicken has less fats higher proteins and not as hard as meat to digest. It is cost effective also.

Meat is hard to digest and carries more saturated fats. But the data reveal higher intensity of meat eating among the experimental respondents. More than half of the control respondents are habituated to take meat minimum two days to five days which is just 40 percent more than the control group. In case of control group respondents majority of them are habituated to take meat rarely while hardly a few of the respondents among the victims rarely eat meat. Thus the data reflects close association between meat eating and gall bladder stone formation.

Consumption of eggs in excess quantity affects liver that causes problem to digestion system .This leads to gall bladder stone formation. The table indicates that the consumption of egg by the experimental group is more regularly than other

group. More than 40 percent of the control group respondents eat egg rarely where not even 15 percent of the experimental group respondents take eggs rare. A little less than a quarter of them takes egg thrice or twice in a week but in case of control group there is not even one in this category. But there are a few respondents amongst the control respondents who eat eggs daily.

Consumption of milk is very much less amongst the people of Barak valley. This is because of non-availability of pure milk and also high cost of it. It has been found that milk is given to children and to some widows who remain as vegetarian. The data reflects consumption of milk by a few respondents. Only 5 percent of the victim respondents of gall bladder stone formation use to consume milk twice or thrice in a week and a little less than that of them consume milk daily or six times. Few of them consume milk three times or four times in a week. Amongst the control group respondents less than a tenth of them consume milk daily and there are not even 3 percent of the respondents who consume milk even rarely also.

Dal is the most popular in Barak valley that goes along with rice. Amongst the gall stone respondents and control group respondents except a few almost all the respondents eat dal in their meal. It is a compulsory and conventional item in their meal

It is seen from the study that unlike northern part of India taking of ghee and butter are not common amongst the people Barak valley. The higher intensity of ghee or butter consumption is found among the control respondents. Although none of the victim respondents use to take ghee or butter daily but there are a few of the control respondents who take it daily. Amongst the victims there are a few who use to take it twice or thrice in a week. A few of them take ghee or butter rarely also. But amongst the control respondents there are less than a fourth of the

respondents who take ghee or butter daily and not even half of the respondents use to eat ghee or butter rarely. On the whole the use of ghee or butter is more common among the control group. In this context it may be mentioned here that in taking ghee butter was a convention among Bengalese. But now a days it has lost its significance on the score of two reason: i) owing to non availability of homemade ghee and ii) It is believed that ghee poses problem of in digestions. Butter is generally given to children.

Eating dalda is not common in the region. It is the least preferred saturated fat. Very few of the respondents in both categories have preferred to use dalda. Even in experimental group' respondents 6.3 percent and 6.9 percent of the respondents control group respondents use to use consume dalda either thrice or twice or fort nightly.While amongst the control group respondents it is less than these.

TABLE: 3.25 FREQUENCY OF IN TAKING FOOD ITEMS AND GALLBLADDER STONE RESPONDENTS.

SL.NO	Frequency of in taking raw fish.	Experimental	Control
1	Daily\Six time	93.8	41.25
2	Five\Four time	5.0	10.0
3	Thrice\Twice	1.3	19.37
4	Fortnightly	93.8	13.12
5	Rarely	-----------	16.25
	Dry fish		
6	Daily\Six time	10.6	5.6
7	Five\Four time	19.4	1.9
8	Thrice\Twice	31.3	10.0
9	Fortnightly	12.5	41.3
10	Rarely	26.3	40.0
	Chicken		

11	Daily\Six time	0.6	3.1
12	Five\Four time	0.6	10.0
13	Thrice\Twice	23.8	10.6
14	Fortnightly	10.6	23.8
15	Rarely	64.4	63.1
	Meat		
16	Daily\Six time	0.6	--------------
17	Five\Four time	25.7	5.6
18	Thrice\Twice	31.9	3.8
19	Fortnightly	41.9	30.6
20	Rarely	0.6	60.0
	Egg		
21	Daily\Six time	14.9	5.0
22	Five\Four time	23.8	
23	Thrice\Twice	20.0	8.1
24	Fortnightly	41.4	47.5
25	Rarely	14.9	39.4
	Milk		
26	Daily\Six time	4.4	8.8
27	Five\Four time	0.6	------
28	Thrice\Twice	5.0	-----------
29	Fort nightly	-----------	-----------
30	Rarely	1.2	2.4
	Dal		
31	Daily\Six time	92.5	90.0
32	Five\Four time	1.9	5.6
33	Thrice\Twice	4.4	4.4
34	Fortnightly	1.3	
35	Rarely	----------	----------
	Ghee\Butter		
36	Daily\Six time	-----------	24.4
37	Five\Four time	-------	10.6
38	Thrice\Twice	4.1	
39	Fortnightly	-----------	6.9
40	Rarely	3.9	48.1

	Dalda		
41	Daily\Six time	----------	----------
42	Five\Four time •	-------	-------
43	Thrice\Twice	6.3	4.1
44	Fortnightly	6.9	----------
45	Rarely	------	3.9

Table 3.26 shows that fish consumption is more among the gall bladder stone respondents. Of these the consumption of raw fish is slightly less than the dry fish by them. About chicken and meat consumption, tendency of chicken is more. But the tendency is less in case of control group. There is difference in case of eggs between the two groups of respondents. The consumption of milk, dal, ghee or dalda is higher among the experimental group. Thus, victim group consumes more fish, milk, dal, ghee and dalda compared to control group. Of these items, fish and milk are closely related to water compared to others. As pointed out earlier there seems to be an association of hepatitis with PHE, river\canal\and pond water, even in case of flood water related foods appears to have an association with gall bladder stone.

TABLE 3.26: RESPONDENTS' AVERAGE CONSUMPTION OF THE FOOD ITEMS.

Item	Experimental	Control	Difference
Raw fish	6.75	4.49	--2.26
Dry Fish	2.93	1.59	-1.74
Chicken	2.23	1.29	-0.94
Meat	1.93	1.26	-0.67
Egg	2.02	1.77	-0.25
Milk	1.56	2.14	0.58
Dal	1.11	2.72	0.61
Ghee\Butter	2.96	1.82	-1.14
Dalda	1.06	0.73	-0.33

Chewing of pan is conventionally prevalent in Bengalee society. The pan consists of a pinch of live calcium, which the doctors say injuries to health; it affects liver and teeth also. It is believed to be the prime source of gall bladder stone formation. But the data shows that a good percentage, nearly half of the control groups also take pan. Therefore, these might be some other food items or habits contributing the formation of gallbladder stone besides, the live It is seen from table 3.27 that over half of the disease and less than that of control respondents use to consume pan during the time of data collection.

TABLE: 3.27. CONSUMPTION OF PAN AND GALLBLADDER STONE RESPONDENTS.

SL.NO	Pan	Experimental	Control
1.	Yes	56.4	45.6
2.	No	44.6	53.8

Table 3.28 indicates that those who take pan amongst them hardly any one would take pan without tobacco. The tobaccos used with pan are generally of two kinds: "sada" or "jarda". A small segment of them prefer to take jarda pan among the control group. It is seen from the above table that "sadder guar" is the most popular and most of the people prefer "Sadder guar."

TABLE: 3.28 .TYPE OF PAN CONSUMPTION AND GALLBLADDER STONE RESPONDENTS.

SL.NO	Type Of Pan	Experimental	Control
1.	Sadargura	58.88	50.0
2.	Jarda	26.66	8.1
3.	Plain	14.24	41.9

A few of the respondents who are suffering from gall bladder stone formation are habituated to consume alcohol either regularly or rarely and their share is more than their control counterparts. The respondents who consume alcohol either regularly or rarely are teen ager.

Those who consume liquor 5 of them are students and unemployed. Little more than that of them are in business and self-employed. Three of them are in service as well. Amongst the control group respondents 4 of them are businessman and self-employed and one of them is in service.

TABLE :3.29. CONSUMPTION OF ALCOHOL AND GALL STONE RESPONDENTS.

SL.NO	Alcohol	Experimental	Control
1.	Regular	5.0	1.3
2.	Rare	3.8	3.1

Except a few, majority of the respondents (91.9 percent and 89.4 percent) have stated that they do not smoke.

TABLE :3.30. SMOKING AND GALL STONE RESPONDENTS.

SL.NO	Smoking	Experimental	Control
1.	Yes	8.1	8.1
2.	No	91.9	89.4

Table 3.31 indicates that of all the gallbladder stone victims as well as control respondents' majority of them sleep up to 5 hour to 8 hour. While more than a third of the victims of gallbladder stone have the habit of sleeping for 8 hour and only a few of the control group respondents sleep more than eight hours. Similarly, it is found among those who sleep less than four hours as 5 percent of the experimental group respondents sleep four hours. 33.8 percent respondents in control group sleep four hours.

TABLE: 3.31 HOURS OF SLEEPING IN A DAY AND GALL STONE RESPONDENTS.

SL.NO	Hours of sleeping	Experimental	Control
1.	Up to 4 hours	5.0	33.8
2.	5 hr to 8 hours	59.4	63.1
3.	More than 8 hours	35.6	0.6

It is seen from table 3.33 that unlike hepatitis respondents many of the respondents who are suffering from the disorder of gall bladder stone do not sleep during day .But those who sleep during day they are slightly more than that of control case.

TABLE: 3.32. DAY-SLEEP AND GALL STONE RESPONDENTS.

SL.NO	Day –sleep	Experimental	Control
1.	Yes	39.4	37.5
2.	No	60.6	62.5

It may be seen from the table 3.33 that, many of respondents of any group neither play games nor do exercise. But those respondents who do exercise are higher in proportion in control group than the sufferers of gallbladder stone formation. Thus the data reflects those who do exercise they are more fit physically. The number of respondents of "No activity" is more than that of the control group respondents.

Table given below, those respondents who play games large number of them are students and unemployed in both the cases and none of the disease and 3 of the control respondents are engage in service. Those disease respondents who proclaim to do exercise, exactly half of them are businessman and self –employed followed by service as well as student and unemployed. Amongst the control cases

those who are doing exercise most of them are engage in business and self-employed followed by serviceman and students and unemployed.

Table :3.33. PHYSICAL EXERCISE AND GALL STONE RESPONDENTS.

SL.NO	Physical exercise	Experimental	Control
1.	Games	16.5	16.9
2.	Exercise	12.3	31.3
3.	No-activity	72.2	51.0

The respondents who have domestic work about 50 percent of them are with in the age group of 18 years to 30 years, five percent of them are at juvenile stages of their life also. Less than a quarter of them are with in the age group of 31 years to 45 years and a fourth of them are also above 45 years of age. So far as sex wise distributions of the respondents are concern, it is seen that those respondents who have domestic work majority of them are female.

Having described the social profile and knowledge of gallbladder stone respondents, now attempt is made to study how different and similar are the victims of hepatitis and gall bladder stone in terms of their knowledge about the diseases and food as well as other habit. This comparison will enable to understand the relationship between the socio-economic factors and the knowledge of the two diseases in Barak valley. Since knowledge leads to action, awareness of health and disease are also a part of health. When people know what causes the disease they attempt protect themselves from the disease. If once the preventive measures are known precautionary measures can be taken off. Hence finding out the knowledge of victims about the disease is important.

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TABLE: 3.34 RESPONDENT'S KNOWLEDGE ABOUT SOURCES OF JAUNDICE

S.No	Awareness	Hepatitis	Gallbladder stone
1.	Bad food as a source of jaundice	38.1	26.3
2.	Bad water as a source of jaundice	38.1	25.6
3.	Physical contact as a source of jaundice	24.4	4.4
4.	Using same cloth, utensils of infected person	25.0	2.5
5.	Drinking alcohol as a source of jaundice.	23.1	1.9
6.	Sexual contact as a source of jaundice.	23.1	3.1

It is interesting to note that knowledge level of gall bladder stone respondents are far less compared to the knowledge level of hepatitis victim that bad food is the source of disease. Similar is the case with reference to bad water as the source of disease. The victims of hepatitis know better that bad water is the source of disease. In the same manner we find the difference in the knowledge of the diseases in the respective victims. Thus, table 3.35 shows that hepatitis victims are having better knowledge about the source of hepatitis, compared to the victims of gall bladder stone about the sources of the disease of gall bladder stone formation. It implies that hepatitis victims can take preventive measures better than the victims of gallbladder stone about the disease with in which they have suffered and suffering.

Table 3.35 shows that a wide gap of knowledge exists between the victims about the relations of the body organ with the disease that these have suffered\ suffering. It is seen that the knowledge about heart as well as other organs relating

to hepatitis are better known to the victims of hepatitis. As regards to victims of gallbladder stone, a good number of them have wrong knowledge that heart is related to the disease, but only few know that liver is related to gall bladder stone respondents.

TABLE: 3.35. GALL BLADDER STONE RESPONDENT'S KNOWLEDGE ABOUT HEPATITIS RELATED TO ORGAN OF BODY:

SL.NO	Awareness	Hepatitis	Gallbladder stone
1.	Liver	30.4	2.5
2.	Kidney	16.3.	10.60
3.	Eye	18.8	10.0
4.	Heart	16.9	32.5

When house types are examined in relation to disease, it is found that the hepatitis patients are living mostly in semi-pucca and Assam type houses where as gallbladder stone respondents are also living in semi-pucca houses but a significant number of them are living in RCC rooms too. The hepatitis is few in RCC houses. Thus, it may be inferred that victims of gall bladder and economically better off are living in hygienically locality.

TABLE:3.36. RESPONDENTS' TYPE OF HOUSE BY SEX.

(Percentage in parenthesis)

	Hepatitis			Gallbladder stone		
	Male	Female	Total	Male	Female	Total
Kachha	17(47.2)	9(52.8)	36(100.0)	22(50.0)	22(50.0)	44(100.0)
Semipucca\ Assamtype	53(50.9)	53(49.1	106(100.0)	33(44.0)	42(56.0)	75(100.0)
RCC	10(55.6)	8(44.4)	18(100.0)	22(53.65)	19(46.34)	41(100.0)
Total	80(50.0)	80(50.0)	160(100.0)	84(52.5)	76(47.5)	160(100.0)

Although most of the people of both the disease are using sanitary type of toilet, those who are using pit latrine they are more among the hepatitis respondents. Table 3.37 reveals the fact that gallbladder stone respondents are higher in number among those who are using sanitary toilet while in use of pit latrine the hepatitis respondents are dominant. Thus the fact that gallbladder stone respondents are economically well off than the hepatitis respondents is substantialised by data. It may also substentialise that pit latrine is also a source of infection of hepatitis.

TABLE: 3.37.RESPONDENTS' TYPE OF TOILET BY SEX.

(Percentage in parenthesis)

	Hepatitis			Gallbladder stone		
	Male	Female	Total	Male	Female	Total
Sanitary	43(46.2)	50(53.8)	93(100.0\22.5)	47(47.5)	52(52.5)	99(100.0)
Pit	36(54.54)	30(45.45)	83(100.0\66.3)	33(55.0)	27(45.0)	60(100.0)
Open	1(100.0)	--------	---------	-	1(100.0)	1(100.0)
Total	80(50.0)	80(50.0)	160(100.0)	80(50.0)	73(50.0)	160(100.0)

Sources of water: There is wide gap between the hepatitis and gallbladder stone respondents in using the sources of water which are potent sources of contamination. Table 3.38 shows, respondents of both the groups are equal in number in using the PHE water, yet in using the river\pond\ ring welll the hepatitis respondents are more than three times more compared to gallbladder stone respondents. Thus, the data reinforce the fact that hepatitis respondents are poor and hail from rural areas. They depend on river or pond or ring well easily gets contaminated.

TABLE :3.38 RESPONDENTS' SOURCE OF WATER BY SEX

(Percentage in parenthesis)

	Hepatitis			Gallbladder stone			
	Male	Female	Total	Male	Female	Total	
PHE	29(51.8)	27(48.2)	56(100.0)	29(51.8)	27(48.2)	56(100.0)	
Rimgwell\ Handpump	3(21.4)	11(78.6)	14(100.0)	1(14.3)	6(18.5)	7(100.0)	
River canal\Pond	48(53.3)	42(46.7)	90(100.0)	50(51.5)	47(48.5)	97(100.0)	
Total	80(50.0)	80(50.0)	160(100.0)	87(54.4)	73(45.6)	160(100.0)	

In regarding the process of water, the methods adopt for processing are same in both the cases. But it has to be mentioned here that people who are living with hepatitis have rightly out numbered the gallbladder stone respondents in taking boiled water among those who are drinking raw water. Because after getting jaundice they have come to know about the source of jaundice as contaminated wares should be boiled to free water from contamination. This may be due to fact that more gallbladder stone respondents are not serious about boiling water or they have no means to boil water.

TABLE: 3.39.RESPONDENTS' PROCESS OF WATER BY SEX

(Percentage in parenthesis)

	Hepatitis			Gallbladder stone		Hepatitis
	Male	Female	Total	Male	Female	Total .
Boil	22(43.2)	28(56.8)	50(31.25)	16(20.0)	21(26.3)	37(23.1)
Filter	29(76.56)	35(23.44)	64(40.0)	31(49.2)	32(50.8)	63(39.4)
Raw	29(63.04)	17(36.06)	46(35.0)	33(41.3)	27(33.8)	60(37.5)
Total	80(50.0)	80(50.0)	160(100.0)	80(50.0)	80(50.0)	160(100.0)

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It is already mentioned that there is a strong correlation between the food habits and the diseases. In Barak Valley people in general are non vegetarian. The data substantiates that non vegetarian people are slightly more among the gallbladder stone respondents. Even the vegetarians are slightly more amongst the hepatitis respondents. The reason is not known it may be due to living condition and surrounding of the vegetarian respondents. This slight difference also speaks about strong associations between non-vegetarianism and gall bladder stone.

TABLE :3.40. FOOD HABIT OF HEPATITIS RESPONDENTS.

SL.NO	FOOD HABIT	Hepatitis	Gallbladder stone
1.	Vegetarian	4.4	1.5
2.	Non-vegetarian	95.6	98.5

As stated above more gallbladder stone respondents are non-vegetarians the consumption of fish is high compared to hepatitis respondents. The table 3.41 reveals this fact clearly. It is gallbladder stone respondents who are more in number that taking fish daily. Perhaps it is not the fish but the way it is prepared may possibly cause the problem. The Bengalees makes the fish curry spicy with lots of oil. The affluent people in fact use higher quantity of oil than actually required, as they believe that oil enclaves the taste of this curry. Average consumption of dry fish is more among the hepatitis respondents. It may due to the fact that the numbers of poverty sticken respondents are more among them. The proportion of them is less than rupees 5000 per month is higher than any income group

Average consumption of chicken is more among the gall bladder stone respondents. Chicken contains more fiber and fat that may be considered cause of

formation of stone. Since earning is related. Since earning is related to gender, as bread winner men are nurtured very carefully.

Male are given priority in the distribution of all kinds of foods which is also considered as good and valuable. They are also given higher quantity of food. As chicken is nutritionally value loaded higher quantity of it is given to men. But excess quantity of egg causes liver related diseases. As both hepatitis and gallbladder stone diseases are related to liver, it is pertinent to note gender issues on the consumption patterns of egg and chicken by hepatitis and gall bladder stone respondents. This behavior provides not only the association between egg eating and disease, it also reflects on the economic condition, knowledge, regarding the disease and preventive action by the respondents. Table 3.41 shows that gallbladder stone respondents on an average are consuming eggs more regularly. It reflects that hepatitis respondents are lesser consumers of eggs. This may also be due to the fact that hepatitis respondents mostly hail from poorer families.

TABLE: 3.41. FREQUENCY OF EATING FOOD ITEMS.

SL.NO	Frequency of in taking raw fish.	Hepatitis	Gallbladder stone
1	Daily\Six time	86.9	93.8
2	Five\Four time	8.1	5.0
3	Thrice\Twice	1.3	1.3
4	Fortnightly	3.8	---------
5	Rarely	------------	-----------
	Dry fish		
6	Daily\Six time	15.6	10.6
7	Five\Four time	30.0	19.4
8	Thrice\Twice	15.6	31.3
9	Fortnightly	38.8	12.5
10	Rarely		

	Chicken		
11	Daily\Six time	3.1	0.6
12	Five\Four time	.6	0.6
13	Thrice\Twice	30.6	23.8
14	Fortnightly	65.1	10.6
15	Rarely	-----------	64.4
	Chicken		
16	Daily\Six time	3.1	0.6
17	Five\Four time	.6	0.6
18	Thrice\Twice	30.6	23.8
19	Fortnightly	65.1	10.6
	Meat		
20	Daily\Six time	3.1	0.6
21	Five\Four time	.6	0.6
22	Thrice\Twice	30.6	23.8
23	Fortnightly	65.1	10.6
24	Rarely	-----------	64.4
	Egg		
25	Daily\Six time	1.9	14.9
26	Five\Four time	28.1	23.5
27	Thrice\Twice	--------	20.0
28	Fortnightly	35.6	41.4
29	Rarely	46.3	14.9

The table 3.42 indicates, average consumption of raw fish is slightly more among gall bladder stone respondents than hepatitis victims. But hepatitis respondents are found to consume more dry fish than that of gall bladder stone cases. Although the consumption pattern of chicken is all most same in both the groups yet in meat consumption hepatitis respondents constitute higher number. Consumption pattern of egg is all most same in both cases. But it is observed that average consumption of fatty substances like milk, ghee or butter and dalda are slightly more among the gall bladder stone respondents.

TABLE: 3.42 AVERAGE CONSUMPTION OF THE FOLLOWING ITEMS.

Item	Hepatitis	Gallbladder stone	Difference
Raw fish	6.43	6.75	-0.32
Dry Fish	4.16	2.93	1.23
Chicken	2.55	2.23	0.22
Meat	3.28	1.93	1.39
Egg	2.27	2.02	0.25
Milk	1.29	1.56	-0.27
Dal	6.39	1.11	5.28
Ghee\Butter	2.37	2.96	-0.49
Dalda	1.34	1.06	-0.28

Pan:.

There is the slightest difference in case of pan chewing behavior between the respondents of hepatitis and gallbladder stone formation. There are more respondents in case of gallbladder stone formation. As lime is present in the pan, and often tobacco also is added, pan chewing mostly contributing the cause of these diseases. In this regard the contribution is more towards the gallbladder stone. There is the slightest difference between in case of pan chewing behaviour among the respondents of hepatitis and gallbladder stone formation. There are more respondents in case of gallbladder stone formation.

TABLE: 3.43. CONSUMPTION OF PAN AND HEPATITIS RESPONDENTS.

SL.NO	Pan	Hepatitis	Gallbladder stone
1.	Yes	43.1	45.6
2.	No	56.9	44.6

Alcohol:

Alcohol consumption may also cause problems of both hepatitis and gallbladder stone. The question asked to both hepatitis and gallbladder stone respondents was weather alcohol is a source of hepatitis or gallbladder stone to asses their knowledge about it. However, the table 3.45 shows hepatitis respondents are slightly more alcoholic than that of gallbladder stone respondents. Though they are living with hepatitis yet they are at high risk of formation of gallbladder stone and vice versa as they drink alcohol. In spite of the fact of awareness of the assumption between alcohol and liver problem, they drink alcohol.

TABLE :3.44. FREQUENCY OF ALCOHOL CONSUMPTION AND HEPATITIS RESPONDENTS.

SL.NO	Alcohol	Hepatitis	Gallbladder stone
1.	Regular	(56.0)	(50.0)
2.	Rare	(44.0)	50.0)

Smoking:

In Barak Valley, in general people belong to lower socio-economic status are habituated to smoking bidi and cigarette. Smoking cigarette are common among the people of middle and upper socio- economic status. Bidi smoking is popular among the poor.

TABLE: 3.45. SMOKING AND HEPATITIS RESPONDENTS.

SL.NO	Smoking	Hepatitis	Gallbladder stone
1.	Cigarette	38.25	8.1
2.	Bidi	58.82	91.9
3.	Other	3.75	-----------

Sleeping:

So far as quality of sleeping is concerned,8 hours of sleeping is considered as normal. Table 3.46 shows a wider difference between hepatitis and gallbladder stone respondents in normal sleeping. Again in the day sleeping also they are preponderant in number. Thus it appears that hepatitis respondents disturb normal sleeping pattern. Day sleeping is also normal behavior among the healthy people as the controlled data shows (table 3.47). Therefore, not sleeping day time may considered as disorder due to hepatitis

TABLE :3.46. HOUR OF SLEEPING IN A DAY AND HEPATITIS RESPONDENTS.

SL.NO	Hour of sleeping	Hepatitis	Gallbladder stone
1.	Up to 4hr	42.15	5.0
2.	5 hr to 8 hr	8.8	59.0
3.	More than 8hr	48.8	33.6

TABLE 3.47: DAY-SLEEP AND HEPATITIS RESPONDENTS.

SL.NO	Day –sleep	Hepatitis	Gallbladder stone
1.	Yes	18.8	39.4
2.	No	81.3	60.6

Physical exercise\games are a part of healthy behavior. Playing games is confined to the younger men respondents only. The study reveals that in both games and exercise gallbladder stone respondents are more compelled to the victims of hepatitis. It is difficult to co-relate the exercise and games with their diseases with data available on this subject.

Thus, the analysis reveals that gall bladder stone respondents are slightly more from rural areas. Tendency of gall bladder stone is found to be more to some extent amongst the married and unemployed respondents. Since aged and women

respondents constitute considerably more number it might be reason that can be traced for relationship between gall bladder stone and unemployment. Data highlights occurrence of gall bladder stone among the people of lower socio-economic background but housing pattern of the respondents hints gall bladder stone respondents are economically better in comparison to hepatitis respondents. It is found, both awareness level and food habit of the respondents are all most same but gall bladder stone respondents are found to consume more fish and egg.