



CHAPTER IV

RESULT AND DISCUSSIONS

According to methodology developed in the previous chapter, 408 people with diseases were interviewed using questionnaire. A selected team trained at workshop to aim to help data collection. After training the staff, assignments for data collection given to sub groups according to the study locations. The data was collected from 24th February 2009 to 23rd of March 2009 in Monaragala district Sri Lanka. This chapter will show the research results and discussions about results to answer research questions, objectives set in the first chapter of this study.

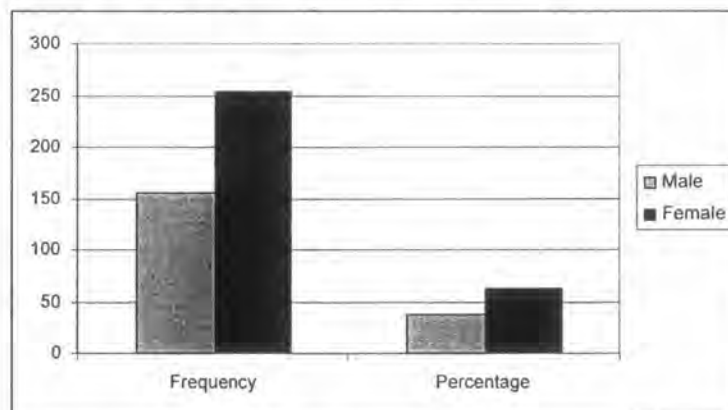
4.1 Data Description

4.1.1 Distribution of Respondents According to Gender

Table 4.1. Distribution of Respondents According to Gender

Gender	Frequency	Percentage (%)
Male	155	38
Female	253	62
Total	408	100

According to table 4.1 females are more frequently participated in research survey questionnaire about factors affecting utilization of health care services interviews. The number of 155 (38%) male respondents and 253 (62%) female respondents, given the answers of socio-economic factors, utilization pattern, perception and source of finance for health care testing survey questionnaire.

Diagram 4.1 Histogram of Respondents According to Gender

According to diagram 4.1 the male and female respondents are 155 (38%) and 253 (female) respectively. The female respondents are more than male respondents distributed in the research questionnaire for interview.

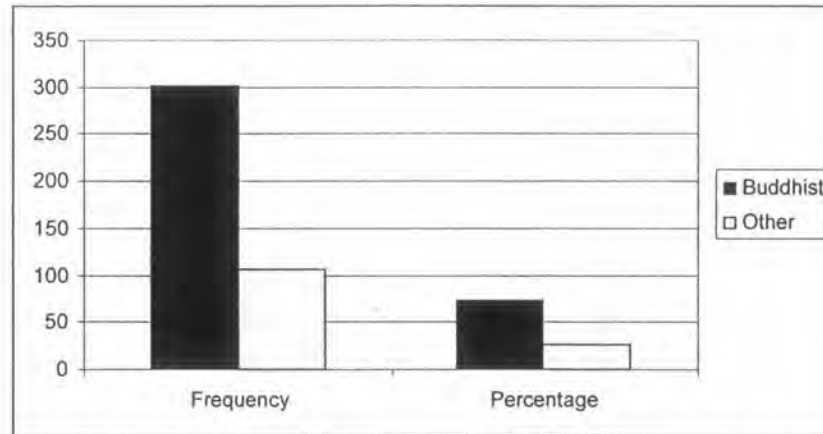
4.1.2 Distribution of Respondents According to Religion

Table 4.2 Distribution of Respondents According to Religion

Religion	Frequency	Percentage
Buddhist	301	73.8
Other	107	26.2
Total	408	100

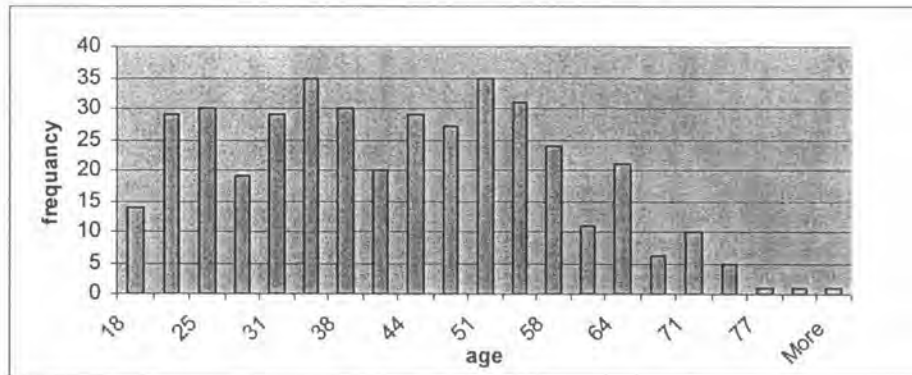
According to table 4.2 Buddhist and non Buddhist respondents were participated for this study. The number of 301 (73.8%) were Buddhist and 107 (26.2) respondents with other religion. All the respondents with different religions were given correct answers about their utilization pattern of health care services, socio-economic characteristics, their perception about health services and source of finance for health care testing survey questionnaire in the basing of Monaragala district of Sri Lanka.

Diagram 4.2 Histogram of Respondents According with Religion



The diagram 4.1 shows that more respondents (301) are Buddhists (73.8%). 107(26.2%) respondents with other religion were participated in the research questionnaire of the interviewed.

Diagram 4.3 Distribution of Respondents Age Showing in Histogram



Mean = 45.64
 Std.Dev. = 17.5
 N = 408

From the diagram 4.3 shows and explain the age of the respondents for survey questionnaire in Monaragala district. The respondent's age varies from 18 years to 84 years. The maximum number or frequency distributed of the respondent's age varies from 25 to 30, 35 to 40 and 51 to 55 years. Minimum number or frequency distributed of the respondent's age is 77 years to 84 years. The mean age of the respondents is 45 to 64 years and Std. Dev. is 17.5 years. Total numbers of respondents are 408. The number of respondents and their age symmetrically distributed as showed in diagram.

4.1.3 Distribution of Respondents Accordingly with their Household Monthly Income

Table 4.3 Distribution of Respondents Accordingly with their Household Monthly Income

Income group (SL Rupee)	Frequency	Percentage
Less than 5,000	75	18.4
5,000 to 10,000	72	17.6
10,000 to 15,000	85	20.8
15,000 to 20,000	75	18.4
More than 20,000	101	24.8
Total	408	100

According to the table 4.3 75 (18.4%) respondents had monthly household income less than 5,000 rupees, 72(17.6%) respondents had monthly household income between 5,000 and 10 000 rupees and 85 (20.8%) respondents had monthly household income between 10,000 and 15,000 rupees. 75(18.4%) respondents had monthly household income between 15,000 and 20,000 rupee and 101(24.8%) had monthly income more than 20,000 rupees.

Diagram 4.4 Distribution of respondents According to their Household Monthly Income showing Histogram

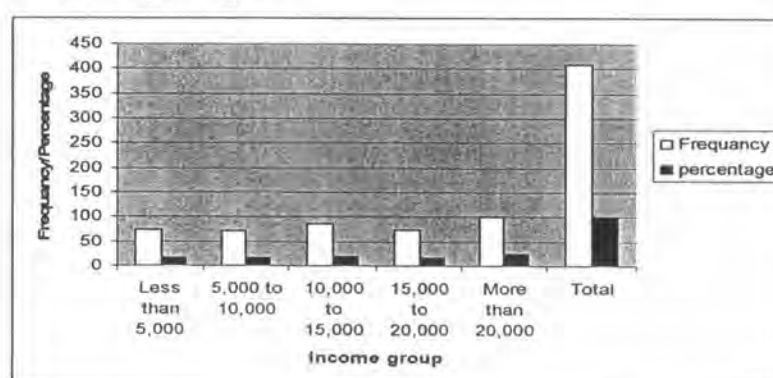


Diagram 4.4 shows that most of respondents has monthly household income less than 10 000 rupees (40.4) and between 10 000 rupees and 20 000 rupees (39.4). Other than this 83 (20.4) respondents had their monthly household income more than 20 000 rupees. From above diagram we can conclude that respondents with different levels of

monthly household income responded for this factors affecting utilization of health care services survey.

4.1.4 Average Monthly Household Income According to the Health Care Facility

Table-4.4 Average Household Monthly Income According to the Health Care Facility

Place	Average in Rupee
D.G.H.Monaragala	16,614.71
B.H.Dambagalla	16,208.82
D.H.Siyambanduwa	14,827.45
Patients without access to public health care facility	6960.79

According to the table-4.4 patients come to the D.G.H.Monaragala had highest monthly household income. Low income has people without access to public hospitals. From this we can conclude that patients without access to public hospital have lower income than others.

4.1.5 Average Hospital Visits during Last Three Months According Health Care Facility

Table-4.5 Average Hospital Visits during Last Three Months According Health Care Facility

Place	Average visits
D.G.H.Monaragala	4.1
B.H.Siyambanduwa	4.2
D.H.Dambagalla	3.8

According to the table-4.5 there is no much different between hospital visits for each public health care facilities. But slightly reduction can be observed at D.H.Dambagalla.

4.1.6 Average Hospital Visits during Last Three Months According to Diseases

Table-4.6 Average Hospital Visits during Last Three Months According to Diseases

Disease	Average visits
B.A.	4.4
I.H.D.	4.4
V.F.	3.1

According to the table-4.6 patients with B.A. and I.H.D. visits public hospitals more than patients with V.F.

4.1.7 Average Household Size According to the Health Care Facility

Table-4.7 Average Household Size According to the Health Care Facility

Place	Average number of people
D.G.H.Monaragala	5.5
B.H.Dambagalla	5.7
D.H.Siyambalanduwa	6
Patients without access to public health care facility	5.9

According to the table-4.7 average household size have not much different according to the area.

4.1.8 Average Number of Dependents in the Family According to the Health Care Facility

Table-4.8 Average Number of Dependents in the Family According to the Health Care Facility

Place	Average number of people
D.G.H.Monaragala	1.7
B.H.Dambagalla	1.7
D.H.Siyambalanduwa	1.8
Patients without access to public health care facility	2.1

According to the table-4.8 numbers of dependents in the family are same for all places. But slight increase can be observed at patients without access to public hospitals.

4.2 Factors Affecting Utilization of Health Care Services.

This study aimed to understand that factors which may affect to choose different levels of public health care facilities in Monaragala district, those patients with Bronchial asthma, Ischemic heart disease and viral fever. Understanding the factors affecting for utilization of health care services, policy makers can make future decisions to target to improve those factors and provide good services. For this study not all the factors considered which can be affect to utilization of health care services, but identified main factors considered. Factors that had been chosen for this study mainly considered patient's side. These factors were patients age, sex, household monthly income, religion, expenditure that spent by patients for their health care, patients perception about health care facility, distance from home to health facility and number of dependents in patients family. All the data were collected from 408 respondents, respectively different levels of the health care facility that they can seek.

4.2.1 Factors Affecting to Bronchial Asthma Patients Using D.G.H. Monaragala

Table 4.9 OLS Estimated for Utilization of D.G.H. Monaragala by Patients with B.A.

Variable	Coefficient	t- statistics	Prob.
C	-1.08733	-1.26028	0.2197
AGE	-0.064168	-3.715224	0.0011*
EXPEN	-0.00019	-0.82389	0.4181
INCOME	9.43E-05	2.878981	0.0083*
DISTEN	-0.02078	-0.97824	0.3377
PERC	0.719102	2.782757	0.0103*
HHOLD	-0.06863	-0.48628	0.6312
DEPEN	-0.15322	-0.91442	0.3696
D1	-0.0602	-0.20013	0.8431
D2	-0.14783	-0.50009	0.6216
F statistics	23.87248		
R-squared	0.899519		
N	34		

*sign in above table is significant

$$\text{Utilization} = -1.087 + 0.064\text{AGE} - 0.00019\text{EXPEN} + 9.43\text{E-}05\text{INCOME} - 0.021\text{DISTEN} \\ + 0.719\text{PERC} - 0.069\text{HHOLD} - 0.153\text{DEPEN} - 0.06\text{D1} - 0.148\text{D2}$$

4.2.1.1 Setting Hypothesis:

Null Hypothesis ; $H_0: \beta_i = 0$

Alternative Hypothesis: $H_a: \beta_i \neq 0$

F- Ratio for a test of overall significance as a matter of course. The value of the F- statistic or calculated F- value or F_{cal} 23.87248 The critical F- value of table value of F- at degree of freedom (k, N-k-1), where k=9, N=34 and $\alpha=0.05$ level of significance $F_{tab}(9, 24) = 2.30$ and P value at 0.05 level of significance (1.96), calculated value of $F >$ critical F value.

This means all coefficients in above regression model were not equal to zero simultaneously. Because of it we can reject the null hypothesis and we can accept the

alternative hypothesis. It means we can conclude that above regression model have a significant overall fit and the model is accepted.

4.2.1.2 Factors Affecting Utilization of Health Care Services of Bronchial Asthma Patients in Monaragala District.

According to table 4.9 age, income and perception had significant relation with utilization of health care facilities.

Age Variable: Coefficient of age variable was significant at 95% of confidence interval because P value is less than 0.05. The coefficient of age is negative; it implies that if patient's age increase by one percent utilization of health care services will reduce by 0.064168 percent.

Income Variable: Coefficient of income variable was significant at 95% of confidence interval because P value is less than 0.05. The coefficient of income is positive it implies that if patients income increase by one percent, utilization of health care services will increases by 9.43E-05 percent.

Perception Variable: Coefficient of perception variable was significant at 95% of confidence interval because P value is less than 0.05. The coefficient of perception is positive it implies that if patient's perception increase by one percent, utilization of health care services will increase by 0.719102 percent.

4.2.2 Factors Affecting to I.H.D. Patients Using D.G.H. Monaragala

Table 4.10 OLS Estimated for Utilization of D.G.H. Monaragala by Patients with I.H.D.

Variable	Coefficient	t- statistics	Prob.
C	4.054056	2.309004	0.0299
AGE	-0.0325	-1.96844	0.0607*
EXPEN	-0.000392	-1.14554	0.2633
INCOME	6.05E-05	2.466702	0.0212*
DISTEN	-0.07279	-2.9852	0.0064*
PERC	0.243912	0.990525	0.3318
HHOLD	-0.0175	-0.11884	0.9064
DEPEN	-0.08049	-0.34547	0.7328
D1	-0.55621	-1.52478	0.1404
D2	0.786855	2.155168	0.0414*
F statistics	4.974051		
R-squared	0.809061		
N	34		

*sign in above table is significant

$$\text{Utilization} = 4.054 - 0.033\text{AGE} - 0.0004\text{EXPEN} + 6.05\text{E-}05\text{INCOME} - 0.073\text{DISTEN} \\ + 0.244\text{PERC} - 0.017\text{HHOLD} - 0.08\text{DEPEN} - 0.556\text{D1} + 0.787\text{D2}$$

4.2.2.1 Setting Hypothesis:

Null Hypothesis : $H_0: \beta_i = 0$

Alternative Hypothesis: $H_a: \beta_i \neq 0$

F- Ratio for a test of overall significance as a matter of course. The value of the F- statistic or calculated F- value or F_{cal} 4.974051 The critical F- value of table value of F- at degree of freedom (k, N-k-1), where k=9, N=34 and $\alpha=0.05$ level of significance $F_{tab}(9, 24) = 2.30$ and P value at 0.05 level of significance (1.96), calculated value of $F >$ critical F value.

This means all coefficients in above regression model were not equal to zero simultaneously. Because of it we can reject the null hypothesis and we can accept the

alternative hypothesis. It means we can conclude that above regression model have a significant overall fit and the model is accepted.

4.2.2.2 Factors Affecting Utilization of Health Care Services of Ischemic Heart Disease Patients in Monaragala District.

According to table 4.10 age, income, distance and religion had significant relation with utilization of health care facilities.

Age Variable: Coefficient of age variable was quite significant at 95% of confidence interval because P value quite less than 0.05. The coefficient of age is negative; it implies that if patient's age increase by one percent utilization of health care services will reduce by 0.0325 percent.

Income Variable: Coefficient of income variable was significant at 95% of confidence interval because P value is less than 0.05. The coefficient of income is positive it implies that if patients income increase by one percent, utilization of health care services will increases by 6.05E-05 percent.

Distance Variable: Coefficient of distance variable was significant at 95% of confidence interval because P value is less than 0.05. The negative sign of the coefficient implies that if distance increase by one percent utilization of health care services will reduce by 0.07279 percent.

Religion Variable: Coefficient of religion variable was significant at 95% of confidence interval because P value is less than 0.05. The positive sign against coefficient means if the patient religion increase by one percent, utilization of health care facility will increase by 0.786855 percent.

4.2.3 Factors Affecting to V.F. Patients Using D.G.H. Monaragala

Table 4.11 OLS Estimated for Utilization of D.G.H. Monaragala by Patients with V.F.

Variable	Coefficient	t- statistics	Prob.
C	-1.83925	-1.4142	0.1701
AGE	-0.00801	-0.28533	0.7778
EXPEN	-0.002678	-3.10657	0.0048*
INCOME	2.86E-07	0.012623	0.99
DISTEN	-0.002747	-0.11347	0.9106
PERC	1.064747	4.027102	0.0005*
HHOLD	-0.06009	-0.34564	0.7326
DEPEN	-0.02084	-0.07063	0.9443
D1	-0.13656	-0.36641	0.7173
D2	0.386763	1.014606	0.3204
F statistics	12.53856		
R-squared	0.840418		
N	34		

*sign in above table is significant

$$\text{Utilization} = -1.839 - 0.008\text{AGE} - 0.003\text{EXPEN} + 2.865\text{E-}07(\text{NCOME} + 0.003\text{DISTEN} \\ + 1.065\text{PERC} - 0.06\text{HHOLD} - 0.021\text{DEPEN} - 0.137\text{D1} + 0.387\text{D2})$$

4.2.3.1 Setting Hypothesis:

Null Hypothesis : $H_0: \beta_i = 0$

Alternative Hypothesis: $H_a: \beta_i \neq 0$

F- Ratio for a test of overall significance as a matter of course. The value of the F- statistic or calculated F- value or F_{cal} 12.43856 The critical F- value of table value of F- at degree of freedom (k, N-k-1), where k=9, N=34 and $\alpha=0.05$ level of significance $F_{tab}(9, 24) = 2.30$ and P value at 0.05 level of significance (1.96), calculated value of $F >$ critical F value.

This means all coefficients in above regression model were not equal to zero simultaneously. Because of it we can reject the null hypothesis and we can accept the alternative hypothesis. It means we can conclude that above regression model have a significant overall fit and the model is accepted.

4.2.3.2 Factors Affecting Utilization of Health Care Services of Patients with Viral Fever in Monaragala District.

According to table 4.11 expenditure and perception had significant relation with utilization of health care facilities.

Expenditure Variable: Coefficient of cost variable was significant at 95% of confidence interval because P value is less than 0.05. The negative sign of the coefficient implies that if patient's health care expenditure increase by one percent, utilization of health care services will reduce by 0.002678 percent.

Perception Variable: Coefficient of perception variable was significant at 95% of confidence interval because P value is less than 0.05. The coefficient of perception is positive it implies that if patient's perception increase by one percent, utilization of health care services will increase by 1.064747 percent.

4.2.4 Factors Affecting to Patients with Common Three Diseases in D.G.H. Monaragala

Table 4.12 OLS Estimated for Utilization of D.G.H. Monaragala by Patients with Common Three Diseases

Variable	Coefficient	t- statistics	Prob.
C	0.312454	0.417426	0.6773
AGE	-0.00429	-0.38636	0.7001
EXPEN	-0.00067	-4.71610	0.0021*
INCOME	4.12E-05	2.759442	0.007*
DISTEN	-0.02994	-2.10439	0.0381*
PERC	0.712416	4.34559	0.003*
HHOLD	-0.09253	-0.98479	0.3273
DEPEN	-0.02273	-0.14748	0.8831
DI	-0.03864	-0.17117	0.8645
D2	0.247376	1.045623	0.2985
F statistics	24.80332		
R-squared	0.70815		
N	102		

*sign in above table is significant

$$\text{Utilization} = 0.313 - 0.004\text{AGE} - 0.001\text{EXPEN} + 4.12\text{E-}05\text{INCOME} - 0.029\text{DISTEN} \\ + 0.712\text{PERC} - 0.092\text{HHOLD} - 0.023\text{DEPEN} - 0.039\text{D1} + 0.247\text{D2}$$

4.2.4.1 Setting Hypothesis:

Null Hypothesis : $H_0: \beta_i = 0$

Alternative Hypothesis: $H_a: \beta_i \neq 0$

F- Ratio for a test of overall significance as a matter of course. The value of the F- statistic or calculated F- value or F_{cal} 24.80332 The critical F- value of table value of F- at degree of freedom (k, N-k-1), where k=9, N=102 and $\alpha=0.05$ level of significance $F_{tab}(9, 92) = 2.04$ and P value at 0.05 level of significance (1.96), calculated value of $F >$ critical F value.

This means all coefficients in above regression model were not equal to zero simultaneously. Because of it we can reject the null hypothesis and we can accept the alternative hypothesis. It means we can conclude that above regression model have a significant overall fit and the model is accepted.

4.2.4.2 Factors Affecting Utilization of Health Care Services of Patients with Common Three Diseases in Monaragala District.

According to table 4.12 expenditure, income, distance and perception had significant relation with utilization of health care facilities.

Expenditure Variable: Coefficient of cost variable was significant at 95% of confidence interval because P value is less than 0.05. The negative sign of the coefficient implies that if patient's health care expenditure increase by one percent, utilization of health care services will reduce by 0.00067 percent.

Income Variable: Coefficient of income variable was significant at 95% of confidence interval because P value is less than 0.05. The coefficient of income is

positive it implies that if patients income increase by one percent, utilization of health care services will increases by 4.12E-05 percent.

Distance Variable: Coefficient of distance variable was significant at 95% of confidence interval because P value is less than 0.05. The negative sign of the coefficient implies that if distance increase by one percent utilization of health care services will reduce by 0.02994 percent.

Perception Variable: Coefficient of perception variable was significant at 95% of confidence interval because P value is less than 0.05.

The coefficient of perception is positive; it implies that if patient's perception increase by one percent, utilization of health care services will increase by 0.712416 percent.

4.2.5 Factors Affecting to B.A patients using B.H.Siyambalanduwa

Table 4.13 OLS Estimated for Utilization of B.H. Siyambalanduwa by Patients with B.A.

Variable	Coefficient	t- statistics	Prob.
C	1.622064	2.21736	0.0363
AGE	0.011257	0.707827	0.4859
EXPEN	-0.000374	-1.47776	0.1525
INCOME	0.000101	3.420703	0.0022*
DISTEN	-0.04147	-2.23282	0.0351*
PERC	0.529396	3.491028	0.0019*
HHOLD	-0.21667	-1.63652	0.1148
DEPEN	0.180316	1.034921	0.311
D1	0.18782	0.571189	0.5732
D2	-0.35918	-1.22148	0.2338
F statistics	12.46031		
R-squared	0.823715		
N	34		

*sign in above table is significant

$$\text{Utilization} = 1.622 + 0.0112\text{AGE} + 0.0004\text{EXPEN} + 0.0001\text{INCOME} - 0.041\text{DISTEN} \\ + 0.529\text{PERC} - 0.217\text{HHOLD} + 0.18\text{DEPEN} + 0.188\text{D1} - 0.359\text{D2}$$

4.2.5.1 Setting Hypothesis:

Null Hypothesis : $H_0: \beta_i = 0$

Alternative Hypothesis: $H_a: \beta_i \neq 0$

F- Ratio for a test of overall significance as a matter of course. The value of the F- statistic or calculated F- value or F_{cal} 12.46031 The critical F- value of table value of F- at degree of freedom (k, N-k-1), where k=9, N=34 and $\alpha=0.05$ level of significance $F_{tab}(9, 24) = 2.30$ and P value at 0.05 level of significance (1.96), calculated value of $F >$ critical F value.

This means all coefficients in above regression model were not equal to zero simultaneously. Because of it we can reject the null hypothesis and we can accept the alternative hypothesis. It means we can conclude that above regression model have a significant overall fit and the model is accepted.

4.2.5.2 Factors Affecting Utilization of Health Care Services of Patients with Bronchial Asthma in B.H. Siyambalanduwa.

According to table 4.13 income, distance and perception had significant relation with utilization of health care facilities.

Income Variable: Coefficient of income variable was significant at 95% of confidence interval because P value is less than 0.05. The coefficient of income is positive it implies that if patients income increase by one percent, utilization of health care services will increase by 0.000101 percent.

Distance Variable: Coefficient of distance variable was significant at 95% of confidence interval because P value is less than 0.05. The negative sign of the coefficient implies that if distance increase by one percent utilization of health care services will reduce by 0.04147 percent.

Perception Variable: Coefficient of perception variable was significant at 95% of confidence interval because P value is less than 0.05. The coefficient of perception is

positive it implies that if patient's perception increase by one percent, utilization of health care services will increase by 0.529396 percent.

4.2.6 Factors Affecting to I.H.D. patients using B.H.Siyambalanduwa

Table 4.14 OLS Estimated for Utilization of B.H. Siyambalanduwa by Patients with I.H.D.

Variable	Coefficient	t- statistics	Prob.
C	-1.0279	-0.76548	0.4515
AGE	0.011099	0.647161	0.5237
EXPEN	-7.92E-05	-0.22112	0.8269
INCOME	6.53E-05	2.531479	0.0183*
DISTEN	-0.05167	-2.24252	0.0344*
PERC	0.77212	4.072995	0.0004*
HHOLD	-0.00323	-0.02659	0.979
DEPEN	0.215591	0.957417	0.3479
DI	-0.2879	-0.86297	0.3967
D2	0.783564	2.022668	0.0544*
F statistics	6.98479		
R-squared	0.723703		
N	34		

*sign in above table is significant

$$\text{Utilization} = -1.028 + 0.011\text{AGE} + 7.92\text{E-}05\text{EXPEN} + 6.53\text{E}05\text{ INCOME} - 0.051\text{DISTEN} \\ + 0.772\text{PERC} - 0.003\text{HHOLD} + 0.216\text{DEPEN} - 0.288\text{D1} + 0.783\text{D2}$$

4.2.6.1 Setting Hypothesis:

Null Hypothesis : $H_0: \beta_i = 0$

Alternative Hypothesis: $H_a: \beta_i \neq 0$

F- Ratio for a test of overall significance as a matter of course. The value of the F- statistic or calculated F- value or F_{cal} 6.98479 The critical F- value of table value of F- at degree of freedom (k, N-k-1), where k=9, N=34 and $\alpha=0.05$ level of significance $F_{tab}(9, 24) = 2.30$ and P value at 0.05 level of significance (1.96), calculated value of $F >$ critical F value.

This means all coefficients in above regression model were not equal to zero simultaneously. Because of it we can reject the null hypothesis and we can accept the alternative hypothesis. It means we can conclude that above regression model have a significant overall fit and the model is accepted.

4.2.6.2 Factors Affecting Utilization of Health Care Services of Patients with Ischemic Heart Disease in B.H. Siyambalanduwa.

According to table 4.14 income, distance and perception had significant relation with utilization of health care facilities.

Income Variable: Coefficient of income variable was significant at 95% of confidence interval because P value is less than 0.05. The coefficient of income is positive it implies that if patients income increase by one percent, utilization of health care services will increase by 6.53E-05 percent.

Distance Variable: Coefficient of distance variable was significant at 95% of confidence interval because P value is less than 0.05. The negative sign of the coefficient implies that if distance increase by one percent utilization of health care services will reduce by 0.05167 percent.

Perception Variable: Coefficient of perception variable was significant at 95% of confidence interval because P value is less than 0.05. The coefficient of perception is positive it implies that if patient's perception increase by one percent, utilization of health care services will increase by 0.77212 percent.

4.2.7 Factors Affecting to V.F. patients using B.H.Siyambalanduwa

Table 4.15 OLS Estimated for Utilization of B.H. Siyambalanduwa by Patients with V.F.

Variable	Coefficient	t- statistics	Prob.
C	0.074966	0.060221	0.9525
AGE	-0.0443	-1.31218	0.2019
EXPEN	-0.002059	-1.97909	0.0594*
INCOME	1.85E-05	0.741116	0.4658
DISTEN	-0.01136	-0.34606	0.7323
PERC	0.716916	2.806704	0.0098*
HHOLD	-0.291298	-2.05316	0.0511*
DEPEN	-0.59392	-1.98644	0.0585*
DI	0.032515	0.069961	0.9448
D2	0.446864	1.069109	0.2957
F statistics	3.592966		
R-squared	0.57399		
N	34		

*sign in above table is significant

$$\text{Utilization} = -1.075 - 0.044\text{AGE} + 0.002\text{EXPEN} + 1.85\text{E-}05\text{INCOME} - 0.011\text{DISTEN} \\ + 0.717\text{PERC} + 0.291\text{HHOLD} - 0.594\text{DEPEN} + 0.032\text{DI} + 0.447\text{D2}$$

4.2.7.1 Setting Hypothesis:

Null Hypothesis : $H_0: \beta_i = 0$

Alternative Hypothesis: $H_a: \beta_i \neq 0$

F- Ratio for a test of overall significance as a matter of course. The value of the F- statistic or calculated F- value or F_{cal} 3.592966 The critical F- value of table value of F- at degree of freedom (k, N-k-1), where k=9, N=34 and $\alpha=0.05$ level of significance $F_{tab}(9, 24) = 2.30$ and P value at 0.05 level of significance (1.96), calculated value of $F >$ critical F value.

This means all coefficients in above regression model were not equal to zero simultaneously. Because of it we can reject the null hypothesis and we can accept the

alternative hypothesis. It means we can conclude that above regression model have a significant overall fit and the model is accepted.

4.2.7.2 Factors Affecting Utilization of Health Care Services of Patients with Viral Fever in B.H. Siyambalanduwa.

According to table 4.15 expenditure, perception, household and dependents had significant relation with utilization of health care facilities.

Expenditure Variable: Coefficient of cost variable was significant at 95% of confidence interval because P value is less than 0.05. The negative sign of the coefficient implies that if patient's health care expenditure increase by one percent, utilization of health care services will reduce by 0.002059 percent.

Perception Variable: Coefficient of perception variable was significant at 95% of confidence interval because P value is less than 0.05. The coefficient of perception is positive it implies that if patient's perception increase by one percent, utilization of health care services will increase by 0.716916 percent.

Household Variable: Coefficient of household variable was significant at 95% of confidence interval because P value is less than 0.05. The negative sign of the coefficient implies that if household size increase by one percent, utilization of health care services will decrease by 0.291298 percent.

Number of Dependents in Family Variable: Coefficient of dependents variable was significant at 95% of confidence interval because P value is less than 0.05. The negative sign of the coefficient implies that if number of dependents in the family increase by one percent, utilization of health care services will decrease by 0.59392 percent.

4.2.8 Factors Affecting to Patients with Common Three Diseases in B.H. Siyambalanduwa

Table 4.16 OLS Estimated for Utilization of B.H. Siyambalanduwa by Patients with Common Three Diseases

Variable	Coefficient	t- statistics	Prob.
C	0.530707	0.889705	0.3759
AGE	-0.01529	-1.54092	0.1268
EXPEN	-0.000635	-4.34372	0.0034*
INCOME	2.78E-05	1.874848	0.064
DISTEN	-0.02021	-1.47814	0.1428
PERC	0.720236	6.226414	0.0014*
HHOLD	0.086042	1.113754	0.2683
DEPEN	-0.14911	-1.11819	0.2664
D1	-0.2042	-0.95889	0.3401
D2	0.001516	0.006776	0.9946
F statistics	17.22355		
R-squared	0.627548		
N	102		

*sign in above table is significant

$$\text{Utilization} = 0.531 - 0.015\text{AGE} + 0.001\text{EXPEN} + 2.78\text{E-}05\text{INCOME} - 0.02\text{DISTEN} \\ + 0.72\text{PERC} + 0.086\text{HHOLD} - 0.149\text{DEPEN} - 0.204\text{D1} + 0.001\text{D2}$$

4.2.8.1 Setting Hypothesis:

Null Hypothesis : $H_0: \beta_i = 0$

Alternative Hypothesis: $H_a: \beta_i \neq 0$

F- Ratio for a test of overall significance as a matter of course. The value of the F- statistic or calculated F- value or F_{cal} 17.22355 The critical F- value of table value of F- at degree of freedom (k, N-k-1), where k=9, N=102 and $\alpha=0.05$ level of significance $F_{tab}(9, 92) = 2.04$ and P value at 0.05 level of significance (1.96), calculated value of $F >$ critical F value.

This means all coefficients in above regression model were not equal to zero simultaneously. Because of it we can reject the null hypothesis and we can accept the

alternative hypothesis. It means we can conclude that above regression model have a significant overall fit and the model is accepted.

4.2.8.2 Factors Affecting Utilization of Health Care Services of Patients with Common Three Diseases in B.H. Siyambalanduwa.

According to table 4.12 expenditure, and perception had significant relation with utilization of health care facilities.

Expenditure Variable: Coefficient of cost variable was significant at 95% of confidence interval because P value is less than 0.05. The negative sign of the coefficient implies that if patient's health care expenditure increase by one percent, utilization of health care services will reduce by 0.000635 percent.

Perception Variable: Coefficient of perception variable was significant at 95% of confidence interval because P value is less than 0.05. The coefficient of perception is positive it implies that if patient's perception increase by one percent, utilization of health care services will increase by 0.720236 percent.

4.2.9 Factors Affecting to B.A. patients using D.H.Dambagalla

Table 4.17 OLS Estimated for Utilization of D.H.Dambagalla by Patients with B.A.

Variable	Coefficient	t- statistics	Prob.
C	1.535396	2.663917	0.0136
AGE	0.068645	7.943822	0.0321*
EXPEN	-0.00048	-2.33273	0.0284*
INCOME	5.76E-05	2.904672	0.0078*
DISTEN	-0.006849	-0.45147	0.6557
PERC	0.039585	0.39084	0.6994
HHOLD	-0.19012	-2.46553	0.0212*
DEPEN	0.245831	1.167754	0.2544
DI	-0.06705	-0.32344	0.7492
D2	0.288662	1.43788	0.1634
F statistics	14.8237		
R-squared	0.847535		
N	34		

*sign in above table is significant

$$\text{Utilization} = 1.535 + 0.069\text{AGE} - 0.0004\text{EXPEN} + 5.76\text{E-}05\text{ INCOME} - 0.007\text{ DISTEN} + 0.039\text{PERC} \\ - 0.19\text{HHOLD} + 0.246\text{DEPEN} - 0.067\text{DI} + 0.289\text{D2}$$

4.2.9.1 Setting Hypothesis:

Null Hypothesis : $H_0: \beta_i = 0$

Alternative Hypothesis: $H_a: \beta_i \neq 0$

F- Ratio for a test of overall significance as a matter of course. The value of the F- statistic or calculated F- value or F_{cal} 14.8237 The critical F- value of table value of F- at degree of freedom (k, N-k-1), where k=9, N=34 and $\alpha=0.05$ level of significance $F_{tab}(9, 24) = 2.30$ and P value at 0.05 level of significance (1.96), calculated value of $F >$ critical F value.

This means all coefficients in above regression model were not equal to zero simultaneously. Because of it we can reject the null hypothesis and we can accept the alternative hypothesis. It means we can conclude that above regression model have a significant overall fit and the model is accepted.

4.2.9.2 Factors Affecting Utilization of Health Care Services of Patients with Bronchial Asthma in D.H. Dambagalla

According to table 4.17 age, expenditure, income and household had significant relation with utilization of health care facilities.

Age Variable: Coefficient of age variable was significant at 95% of confidence interval because P value is less than 0.05. The coefficient of age is positive it implies that if patient's age increase by one percent utilization of health care services will increase by 0.068645 percent.

Expenditure Variable: Coefficient of cost variable was significant at 95% of confidence interval because P value is less than 0.05. The negative sign of the coefficient implies that if patient's health care expenditure increase by one percent, utilization of health care services will reduce by 0.00048 percent.

Income Variable: Coefficient of income variable was significant at 95% of confidence interval because P value is less than 0.05. The coefficient of income is positive it implies that if patients income increase by one percent, utilization of health care services will increase by 5.76E-05 percent.

Household Variable: Coefficient of household variable was significant at 95% of confidence interval because P value is less than 0.05. The negative sign of the coefficient implies that if household size increase by one percent, utilization of health care services will decrease by 0.19012 percent.

4.2.10 Factors Affecting to I.H.D. patients using D.H. Dambagalla

Table 4.18 OLS Estimated for Utilization of D.H.Dambagalla by Patients with I.H.D.

Variable	Coefficient	t- statistics	Prob.
C	2.821031	2.67937	0.0131
AGE	0.000801	0.07043	0.9444
EXPEN	-0.00021	-0.84876	0.4044
INCOME	5.05E-05	2.630481	0.0147*
DISTEN	-0.07302	-4.58827	0.0001*
PERC	0.44423	2.944104	0.0071*
HHOLD	-0.00551	-0.07198	0.9432
DEPEN	-0.05315	-0.27616	0.7848
DI	0.032343	0.130348	0.8974
D2	0.168457	0.59115	0.5599
F statistics	8.518653		
R-squared	0.761592		
N	34		

*sign in above table is significant

$$\text{Utilization} = 2.821 + 0.0008\text{AGE} - 0.0002\text{EXPEN} + 5.05\text{E-}05\text{INCOME} - 0.073\text{DISTEN} \\ + 0.444\text{PERC} - 0.005\text{HHOLD} - 0.053\text{DEPEN} + 0.032\text{DI} + 0.168\text{D2}$$

4.2.10.1 Setting Hypothesis:

Null Hypothesis : $H_0: \beta_i = 0$

Alternative Hypothesis: $H_a: \beta_i \neq 0$

F- Ratio for a test of overall significance as a matter of course. The value of the F- statistic or calculated F- value or F_{cal} 8.518653 The critical F- value of table value of F- at degree of freedom (k, N-k-1), where k=9, N=34 and $\alpha=0.05$ level of significance $F_{tab}(9, 24) = 2.30$ and P value at 0.05 level of significance (1.96), calculated value of $F >$ critical F value.

This means all coefficients in above regression model were not equal to zero simultaneously. Because of it we can reject the null hypothesis and we can accept the alternative hypothesis. It means we can conclude that above regression model have a significant overall fit and the model is accepted.

4.2.10.2 Factors Affecting Utilization of Health Care Services of Patients with Ischemic Heart Disease in D.H. Dambagalla

According to table 4.18 income, distance and perception had significant relation with utilization of health care facilities.

Income Variable: Coefficient of income variable was significant at 95% of confidence interval because P value is less than 0.05. The coefficient of income is positive it implies that if patients income increase by one percent, utilization of health care services will increase by 5.05E-05 percent.

Distance Variable: Coefficient of distance variable was significant at 95% of confidence interval because P value is less than 0.05. The negative sign of the coefficient implies that if distance increase by one percent utilization of health care services will reduce by 0.07302 percent.

Perception Variable: Coefficient of perception variable was significant at 95% of confidence interval because P value is less than 0.05. The coefficient of perception is positive it implies that if patient's perception increase by one percent, utilization of health care services will increase by 0.44423 percent.

4.2.11 Factors Affecting to V.F. patients using D.H. Dambagalla

Table 4.19 OLS Estimated for Utilization of D.H.Dambagalla by Patients with V.F.

Variable	Coefficient	t- statistics	Prob.
C	0.83836	0.775947	0.4454
AGE	0.03134	3.860243	0.0007*
EXPEN	-0.00074	-0.7333	0.4705
INCOME	-3.01E-07	-0.01261	0.99
DISTEN	0.004545	0.170911	0.8657
PERC	0.443866	1.75582	0.0919
HHOLD	0.142955	1.134268	0.2679
DEPEN	-0.49027	-1.73388	0.0958
D1	0.088554	0.251918	0.8032
D2	0.057308	0.17079	0.8658
F statistics	5.450082		
R-squared	0.671461		
N	34		

*sign in above table is significant

$$\text{Utilization} = 0.838 + 0.031\text{AGE} - 0.001\text{EXPEN} - 3.01\text{E-}07\text{ INCOME} + 0.005\text{DISTEN} \\ + 0.444\text{PERC} + 0.1429\text{HHOLD} - 0.49\text{DEPEN} + 0.088\text{D1} + 0.057\text{D2}$$

4.2.11.1 Setting Hypothesis:

Null Hypothesis : $H_0: \beta_i = 0$

Alternative Hypothesis: $H_a: \beta_i \neq 0$

F- Ratio for a test of overall significance as a matter of course. The value of the F- statistic or calculated F- value or F_{cal} 5.450082 The critical F- value of table value of F- at degree of freedom (k, N-k-1), where k=9, N=34 and $\alpha=0.05$ level of significance $F_{tab}(9, 24) = 2.30$ and P value at 0.05 level of significance (1.96), calculated value of $F >$ critical F value.

This means all coefficients in above regression model were not equal to zero simultaneously. Because of it we can reject the null hypothesis and we can accept the

alternative hypothesis. It means we can conclude that above regression model have a significant overall fit and the model is accepted.

4.2.11.2 Factors Affecting Utilization of Health Care Services of Patients with Viral Fever in D.H. Dambagalla

According to table 4.19 ages had significant relation with utilization of health care facilities.

Age Variable: Coefficient of age variable was significant at 95% of confidence interval because P value is less than 0.05. The coefficient of age is positive it implies that if patient's age increase by one percent utilization of health care services will increase by 0.03134 percent.

4.2.12 Factors Affecting to Patients with Common Three Diseases in D.H. Dambagalla

Table 4.20 OLS Estimated for Utilization of D.H.Dambagalla by Patients with Common Three Diseases

Variable	Coefficient	t- statistics	Prob.
C	1.767973	3.384141	0.0011
AGE	0.031011	6.063481	0.0045*
EXPEN	-6.54E-05	-0.52265	0.6025
INCOME	3.13E-05	2.436753	0.0167*
DISTEN	-0.03662	-3.18633	0.002*
PERC	0.274197	2.819971	0.0059*
HHOLD	-0.02174	-0.3747	0.7087
DEPEN	-0.22661	-1.76252	0.0813
DI	0.047362	0.28495	0.7763
D2	0.106127	0.582009	0.562
F statistics	16.47253		
R-squared	0.61707		
N	102		

*sign in above table is significant

$$\text{Utilization} = 1.768 + 0.031\text{AGE} + 6.54\text{E-}05\text{EXPEN} + 3.13\text{E-}05\text{ INCOME} - 0.037\text{DISTEN} \\ + 0.274\text{PERC} - 0.022\text{HHOLD} - 0.227\text{DEPEN} + 0.047\text{D1} + 0.106\text{D2}$$

4.2.12.1 Setting Hypothesis:

Null Hypothesis : $H_0: \beta_i = 0$

Alternative Hypothesis: $H_a: \beta_i \neq 0$

F- Ratio for a test of overall significance as a matter of course. The value of the F- statistic or calculated F- value or F_{cal} 16.47253 The critical F- value of table value of F- at degree of freedom (k, N-k-1), where k=9, N=102 and $\alpha=0.05$ level of significance $F_{tab}(9, 92) = 2.30$ and P value at 0.05 level of significance (1.96), calculated value of $F >$ critical F value.

This means all coefficients in above regression model were not equal to zero simultaneously. Because of it we can reject the null hypothesis and we can accept the alternative hypothesis. It means we can conclude that above regression model have a significant overall fit and the model is accepted.

4.2.12.2 Factors Affecting Utilization of Health Care Services of Patients with Common Three Diseases in D.H. Dambagalla

According to table 4.20 age, income, distance and perception had significant relation with utilization of health care facilities.

Age Variable: Coefficient of age variable was significant at 95% of confidence interval because P value is less than 0.05. The coefficient of age is positive it implies that if patient's age increase by one percent utilization of health care services will increase by 0.031011 percent.

Income Variable: Coefficient of income variable was significant at 95% of confidence interval because P value is less than 0.05. The coefficient of income is

positive it implies that if patients income increase by one percent, utilization of health care services will increases by 3.13E-05 percent.

Distance Variable: Coefficient of distance variable was significant at 95% of confidence interval because P value is less than 0.05. The negative sign of the coefficient implies that if distance increase by one percent utilization of health care services will reduce by 0.03662 percent.

Perception Variable: Coefficient of perception variable was significant at 95% of confidence interval because P value is less than 0.05. The coefficient of perception is positive it implies that if patient's perception increase by one percent, utilization of health care services will increase by 0.274197 percent.

4.2.13 Factors Affecting to Utilization of Health Care Services in Monaragala District

Table 4.21 Logit Estimated for Utilization of Health Services in Monaragala District

Variable	Coefficient	z- statistics	Prob.
C	0.506378	0.672425	0.5013
AGE	0.03256	3.0182	0.0025*
EXPEN	-0.00213	-5.12659	0.0001*
INCOME	0.000137	4.81839	0.0011*
HHOLD	0.002847	0.023709	0.9811
DEPEN	-0.46902	-2.27759	0.0228*
D1	0.233042	0.718887	0.4722
D2	-0.28568	-0.81118	0.4173
Log likelihood	-139.505		
N	408		

*sign in above table is significant

$$\text{Utilization} = 0.506 + 0.033\text{AGE} - 0.002\text{EXPEN} + 0.0001\text{INCOME} + 0.003\text{HHOLD} \\ - 0.469\text{DEPEN} + 0.233\text{D1} - 0.286\text{D2}$$

4.2.13.1 Setting Hypothesis:

Null Hypothesis : $H_0: \beta_i = 0$

Alternative Hypothesis: $H_a: \beta_i \neq 0$

4.2.13.2 Factors Affecting Utilization of Health Care Services of Patients with Common Three Diseases in Monaragala District.

According to table 4.21 age, expenditure, income and dependents had significant relation with utilization of health care facilities.

Age Variable: Coefficient of age variable was significant at 95% of confidence interval because P value less than 0.05. The coefficient of age is positive it implies that if patients age increase by one percent, probability to utilize health care services will increase by 0.03256 percent.

Expenditure Variable: Coefficient of cost variable was significant at 95% of confidence interval because P value is less than 0.05. The negative sign of the coefficient implies that if health care expenditure increases by one percent, probability to reduce utilization of health care services by 0.00213 percent.

Income Variable: Coefficient of income variable was significant at 95% of confidence interval because P value is less than 0.05. The coefficient of income is positive it implies that if patient's household income increases by one percent, probability to utilize health care services will increase by 0.00137 percent.

Number of Dependents in Family Variable: Coefficient of dependents variable was significant at 95% of confidence interval because P value is less than 0.05. The negative sign of the coefficient implies that if the number of dependents increases, probability to utilize health care services will reduce by 0.46902 percent.

4.3 Socio Economic Characteristics of Patients with Access to Public Health Care Facilities and People without Access to Public Health Care Facilities

Table-4.22 Socio-Economic Characteristics of Patients with Access to Public Health Care Facilities and People without Access to Public Health Care Facilities

	Patients with access Average	People without access Average
Age	42.19	39.18
Health expenditure	1,481.94	340.28
Household monthly income	15,883.66	6,960.78
Household size	5.78	5.93
Number of dependents in the family	1.75	2.11

According to the table- average age of patients with access to public hospitals and without access to public hospitals has not much difference. Patient's health care expenditure and household monthly income is highest for who have access. There is no much difference about household size. But number of dependents in the family is higher who has no access to the public health care facility.

4.4 The Expenditure of Medical Care Spend by Patients

Table 4.23 The Expenditure of Medical Care Spend by Patients

Category	Mean of expenditure in Sri Lankan rupee
1. D. G. H. Monaragala	1748
1.1.B.A.	2156
1.2.I.H.D.	2702
1.3.V.F.	387
2. B.H. Siyambalanduwa	1441
2.1.B.A.	1552
2.2.I.H.D.	2469
2.3.V.F	312
3. D.H. Dambagalla	1254
3.1.B.A.	1326
3.2.I.H.D.	2159
3.3.V.F	286

According to table 4.23 expenditure of medical care spent by patients varies in different levels of health care services. Patients at D.G.H. Monaragala mean of expenditure is highest (1748 rupee) than other institutions. At B.H. Siyambalanduwa and D.H. Dambagalla mean of expenditure is 1441 rupee and 1254 rupee respectively. According to diseases, mean of expenditure were highest for I.H.D. in all three levels of health care services.

Table 4.24 - Average cost for treatment by expenditure category and by place of treatment and disease

	1		2		3		4		5		6		7		8		TOTAL	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
D.G.H.Monaragala	463.21	17.8	573.52	22.1	258.75	9.97	419.16	16.3	204.28	7.9	209.72	8.1	203.3	7.8	262.56	10.1	2594.5	100
B.H.Siyambalanduwa	349.68	14.7	548.11	23	283.56	11.9	439.57	18.5	216.67	9.1	163.64	6.8	164	6.9	215.87	9.1	2381.1	100
D.H.Dambagalla	319.58	14.9	382.7	17.8	256.55	12	363.73	16.6	207.92	10	212	9.9	145.88	6.8	256.75	12	2145.11	100
Patients with B.A.	429.61	18.7	510	22.2	216.44	9.4	385.23	16.9	180.53	7.9	193.33	8.4	177	7.7	202.38	8.8	2294.52	100
Patients with I.H.D.	593.66	19.3	699.798	22.7	317.41	10.3	539.9	17.5	243.41	7.9	203.95	6.5	173.46	5.6	308.89	10	3080.48	100
Patients with V.F.	109.25	14	168.41	21.5	110	14.1	145.95	18.6	125	15.8	0	0	0	0	124	15.8	782.61	100

1. = Travel cost
2. = Cost of drugs purchased from outside for specific disease
3. = Cost of drugs purchased from outside for other diseases
4. = Cost of investigations done out side for specific disease
5. = Cost of investigations done out side for other diseases
6. = Any other expenses for specific disease
7. = Any expenses for other diseases
8. = Cost of special food/nutriti on's prescribed by doctor

4.5 Average Cost for Treatment by Expenditure Category and by Place of Treatment and Disease

Table 4.24 describes the average cost of patient's medical care by category to by place and diseases. According to table 4.24 medical costs for patients in D.G.H.Monaragala is higher (2549.50 rupee) than other institutions and medical cost for patients with I.H.D. is higher (3080.48 rupee) than patients with other three diseases. From the patients health expenditure largest portion goes to drugs purchased outside for specific disease. According to institutions its highest at B.H.Siyambanduwa (23%) and 22.1% for D.G.H.Monaragala and 17.8% for D.H.Dambagalla, for diseases highest for patients with I.H.D. (22.7%) and 22.2% for B.A. and 21.5% for V.F. In D.G.H.Monaragala second largest percentage from patient's health care expenditure goes for travel (17.8%) and third for investigations done out side for specific disease. Same pattern can be observe in patients with B.A. and I.H.D. But patients at B.H.Siyambanduwa and D.H.Dambagalla spend send highest portion from their medical cost for investigation done outside for specific diseases and third largest portion for travel. Patients with V.F. spend second highest portion (18.6%) for investigation done outside for specific disease and third largest portion (15.8%) for investigation done outside for other diseases.

4.6 The Proportion of Income that Spend by Patient for Their Health Care in Percentage, According to Level of Health Care Services and Diseases.

Table 4.25 The Proportion of Income that Spent by Patient for Their Health Care in Percentage, According to Level of Health Care Services and Diseases.

Category	Propotion of income (%)
1. D.G.H. Monaragala	11.86
2. B.H. Siyambanduwa	9.66
3. D.H. Dambagalla	9.43
4. B.A.	12.03
5. I.H.D.	15.66
6. V.F.	3.27

According to table 4.25 more portion of income spent for health care by patients at D.G.H. Monaragala.(11.86%) Patients come for other levels of health services spent from their income 9.66% and 9.43% at B.H. Siyambalanduwa and D.H. Dambagalla respectively. According to diseases, for I.H.D. patients spent more portion (15.66%) from their income than other two diseases. Other than I.H.D. 12.03% and 3.27% from patient's income spent patients with B.A. and V.F. respectively.

4.7 Type of the Treatment Before Visiting Public Health Facility

Table 4.26 Type of the Treatment Before Visiting Public Health Facility

	B.A.		I.H.D.		V.F.		Total	
	No. of visits	%	No. of visits	%	No. of visits	%	No. of visits	%
1. Taken drug from drug store	14	31.8	12	31.59	10	38.46	36	33.31
2. Ritual treatment	6	13.6	7	18.42	3	11.54	16	14.64
3. Traditional treatment	7	15.9	6	15.78	3	11.54	16	14.64
4. Private medical practitioner	17	38.7	13	34.21	10	38.46	40	37.41
Total	44	100	38	100	26	100	108	100

From 306 patients who attend to the public hospital 108 patients (35.3%) had treatment before attending to public health care facility (table 4.26). From that 37.41 patients taken treatment from private practitioner before visiting to public hospital. 33.31% patients took drugs from drug store before attending to public hospital. Similar percentage of patients (14.64%) had ritual treatment and traditional treatment before attending to hospital. According to diseases also most patients had taken treatment from private practitioner or taken drug from drug store before attending to public health care facility.

4.8 Patients Perception about Health Care Facility

Table 4.27 Patients Perception About Health Care Facility (Weighted by patient)

	1	2	3	4	5	6	Total
D.G.H.Monaragala	10	50	10	20	05	05	100
B.H.Siyambalanduwa	20	40	5	10	15	10	100
D.H.Dambagalla	20	40	5	15	10	10	100
Total	50	90	20	45	30	25	

Values are in %

Note:

1. =Attention received before meeting doctor.
2. =Examination done by doctor.
3. =Attention done during the services by staff other than medical doctor.
4. =Environment of the hospital.
5. =Time spend to get treatment.
6. =Pharmacy section.

According to table 4.27, patients' perception is higher about examination done by doctor for all levels of health care facilities. But at D.G.H. Monaragala, patients had the highest perception about examination done by doctor. At D.G.H. Monaragala, perception about attention received before meeting doctor is lower than other facilities. D.G.H. Monaragala has higher perception about attention done during the services by staff other than medical doctor and environment of the hospital other than B.H. Siyambalanduwa and D.H. Dambagalla. Although B.H. Siyambalanduwa and D.H. Dambagalla have higher perceptions about time spent to get treatment and pharmacy section other than D.G.H. Monaragala. Patients' perception about all services provided by B.H. Siyambalanduwa and D.H. Dambagalla are almost the same. But D.H. Dambagalla has higher perception about environment of hospital section than B.H. Siyambalanduwa and B.H. Siyambalanduwa has higher perception about time spent to get treatment than D.H. Dambagalla.

4.9 Patients Perception About Health Services in Different Income Groups

Table 4.28 Patients Perception About Health Services in Different Income Groups

Household income group	Perception
Less than 5,000 rupee	3.4
5,000 to 10,000 rupee	3.7
10,000 to 15,000 rupee	3.8
15,000 to 20,000 rupee	3.9
More than 20,000 rupee	4.5

According to table 4.28 we can conclude that patient's perception getting higher when their income level increases. Patients with monthly income level less than 5,000 rupees has mean of perception 3.4 and it is less than perception of monthly income level within 5,000 rupees to 10,000 rupees. Who has more than 20,000 rupees household monthly income has highest perception about health care facility.

4.10 Identify Reason for Utilizing Each Health Care Facility

Table 4.29 Reasons for Visiting Each Health Care Facility

	D.G.H.Monaragala	B.H.Siyambalanduwa	D.H.Dambagalla
1. Close to home.	2	49	60
2. Large hospital	29	5	2
3. Good service	39	20	5
4. Past good experiences	10	10	10
5. Kind staff	3	9	10
6. Can't afford another hospital	2	5	13
7. Availability of many facilities	15	2	
Total	100	100	100

* Numbers in percentage (%)

According to table 4.23 reasons for patients visit to D.G.H.Monaragala is good service (39%). From other patients visits D.G.H.Monaragala, they think it's bigger than other facilities (29%) and availability of other services are higher than other

facilities. Most people visited to B.H.Siyambalanduwa and D.H.Dambagalla, because of those facilities close to their home. But percentage of patients thinks that good services higher at B.H.Siyambalanduwa than D.H.Dambagalla. But higher percentage (13%) comes to D.H.Dambagalla because they can't afford another hospital and 13% of patients at D.H.Dambagalla come to the facility because of the kindness of the staff more than other facilities. Reason of past experiences is same for all facilities (10%).

4.11 Identify the Source of Finance that Patient Spent for Their Health Care.

Table 4.30 Source of Finance that Patient Spent for Their Health Care for Last Three Visits.

	1	2	3	4	Total
1 st Visit	22	24	22	32	100
2 nd Visit	28	28	6.7	37.3	100
3 rd Visit	21	10	14.6	34.4	100
Current Visit	25.3	22.1	15.5	37.1	100

* Numbers in percentage (%)

Note: 1= House hold saving
 2= Borrow money
 3= Sell asset
 4= Monthly income

From the survey I had found that all respondents had replied as sources of finance as only following methods from, house hold saving, borrow money from some were, sell asset or from their monthly income.

According to table 4.24 majority of people finance their medical cost from household savings for all three visits. Other than from monthly income secondly patients finance their medical cost from household savings. At the third place many people had finance for their medical care from borrowing money. Finally at fourth place some people finance their medical cost from selling assets.

4.12 Discussion:

1. OLS estimation about AGE in D.G.H.Monaragala patients with B.A. and I.H.D. and OLS estimation about D.H.Dambagalla patients with B.A., V.F. and with all three diseases AGE coefficient is significant. The sign of coefficient is positive. It implies that at those patients with above diseases are more utilize health care facilities when they getting older. Most of older patients will frequently visit these facilities. Reason for these frequent visits as they mentioned at interview was that frequent health problems.

2. Expenditure has a strong significant relationship with utilization of health care services at OLS estimation about patients with V.F. and all three diseases at D.G.H.Monaragala, V.F. and all three diseases at B.H.Siyambalanduwa, B.A. patients at B.H.Dambagalla and OLS for common three diseases in Monaragala district. The sign of coefficient is negative for all. Negative sign implies that when expenditure increases patients health care utilization will decrease. In other word if expenditure increases, patient can not bare the cost of health care. There for patient will not come to seek medical care until the health condition get worse. This will increase burden to government to spend larger amount of money to treat severely ill patient but they could be treated before at primary stage.

3. OLS estimations show INCOME also has strong relation with utilization of health care facility. OLS estimation about patients with B.A., I.H.D. and all three diseases at D.G.H.Monaragala , B.A., I.H.D. at B.H.Siyambalanduwa, B.A., I.H.D. and all three diseases at D.H.Dambagalla and OLS for common three diseases in Monaragala district shows significant relationship between utilization and household monthly income. Sign of the coefficient is positive for all estimations and it implies that who has more income they utilize health services more frequently. From this result can conclude that low income people will be less utilizes health care facilities which actually they need. B.A and I.H.D. patients need to attend their clinics once in month regularly. Because of low income, if they can't afford to come for a clinic they skip

clinic visits. These steps will lead to worse patient's condition and get more burden to government and their family members.

4. Distance from home to health care facility also has significant relation. OLS estimations show it at patients with B.A. and all diseases at D.G.H.Monaragala, patients with B.A., I.H.D. at B.H.Siyambalanduwa and patients with B.A. and all diseases at D.H.Dambagalla. At all estimations the sign of coefficient is negative and it implies that increasing the distance for health care facilities reduces the utilization of health care facilities. One of the major reasons for this is may be the poor transportation. Because there are some people living in very remote areas of the village where the public transportation is limited. Therefore they suppose to hire a private vehicle by their own for transportation which is either very expensive or limited in number. Moreover if patient lives far away from the hospital it is consuming more time for them to reach the hospital. As mentioned before most of these people are farmers, and generate income from daily activities. So they suppose to spend very little time for their other activities.

5. Patient's perception about health care facility also has significant effect on utilization of health care services. In OLS results perception coefficient is significant in patients with B.A., V.F. and all diseases at D.G.H.monaragala, B.A., I.H.D., V.F. and all diseases at B.H.Siyambalanduwa and patients with I.H.D. and all diseases at D.H.Dambagalla. Sign of coefficient at all estimations are positive. It implies that when patient's perception about health care facility increases their utilization of that facility also will increase. To improve patient perception about facility policy should focus on improving quality of health care services. When patient's perception about health facility increases it is easy to get them to involved in the active participation of health promoting activities and health care service developing programs.

6. Number of households had significant effect on utilization of health care facility only in patients with V.F. at B.H.Siyambalanduwa and patients with B.A. at D.H.Dambagalla. The sign of coefficient at both estimations are negative. It implies that when the number of family member's increases, patients reduce their utilization

health care services. To verify these affects, need to further study. But the known reason is that increase household need to spend more for their goods and services. Because of these patients are prone to seek less costly methods like traditional treatments.

7. According to OLS results number of dependents in the family significantly affect to utilization of health care facility in patients with V.F. at B.H.Siyambalanduwa and patients with common three diseases in Monaragala district. The sign of the coefficient is negative. It implies that when number of dependents in household increases the utilization of health care services decreases. This is explained by when dependents increase in family, expenditure will increase and time need to spend for them also increases. This will force them to reduce other expenditures and time.

8. According OLS religion variable is significant only in patients with B.A. at D.G.H.Monaragala. The sign of the coefficient is positive. It implies that when patient is Buddhist they more prone to utilize health care services than patients with other religions. Gender coefficient is insignificant in all OLS estimations imply that gender not affect to utilization pattern of the patients.

9. Patient's expenditure for their medical care was highest at D.G.H.Monaragala. It will explain by those patients who come to the D.G.H.Monaragala has to bare larger amount for health care than other institution patients. Because of higher demand D.G.H.Monaragala has to face shortage of drugs and other services. So patients may need to get those extra drugs and services from private sector. In other hand at Monaragala district only Monaragala city has private hospital with lab facilities which is near to the D.G.H.Monaragala. In other hand patients come to D.G.H.Monaragala spends more money for their transportation and they come bypassing other institutions. Single explanation for this is patients believe of large hospital is D.G.H.Monaragala than other facilities. (See table 4.17)

10. I.H.D. patients spends higher amount than patients with other two diseases. Because of availability of new drugs which is not provided by public hospitals,

patients need to purchase from outside. At the present time I.H.D. treated by combining new drugs and old drugs. Those new drugs patients have to purchase from outside and explains that higher expenditure for health care. (See table 4.23)

11. From patients medical expenditure large amount they spend to purchase drug from outside for specific disease (see table 4.18). Reason behind this is unavailability or out of stock of drugs in the hospital pharmacy which are patients should receive free of charge. Patients at B.H.Siyambalanduwa and D.H.Dambagalla spend more portions from their health expenditure for investigations done outside for specific disease which is explaining nonavailability of proper laboratory services at lower levels of health care facilities. All patients had been spending reasonable amount for traveling.

12. Patients come to D.G.H.Monaragala spend higher portion from their income for their medical care and patients with I.H.D. spend higher portion from their income for their medical care, which is explained as above. (See table 4.25)

13. Before attending to public health care facility most patients got treatment from private practitioner or taken drug from drug store. Limitation of time and money patients forced to get treatment above methods than attending to health care facility. According to survey 25% patients who responded had been taken treatment from private practitioner or taken drug from drug store before attending to public health care facility. 35% patients over all had any kind of treatment before attending to hospital (see table 4.26). This is burden to patient and also to government. Patient has to spend twice for their health care and government facing that has to spend more resources to cure patients if they attend to hospital at late stages of diseases

14. D.G.H.Monaragala had patient's higher perception about doctor's examination, Attention done during the services by staff other than medical doctor and environment of hospital. But lower perception about attention received before meeting doctor, and time spends to get treatment and pharmacy section. This all explain the excess demand and over crowded long waiting lines reduced patient's perception about D.G.H.Monaragala. This will prove the results from other two hospitals that

perceptions about attention received before meeting doctor, and time spends to get treatment and pharmacy section has higher perception than D.G.H.Monaragala. (See table 4.27)

15. Monthly household income more than 20 000 rupee patients had higher perception about their health care facility than lesser income groups. The lower income group patients have lower perception about their health facility. (See 4.28)

16. Most people chosen D.G.H.Monaragala for their treatment because they think it is a large hospital (29%), they provide better services than others (39%) and availability of services more than other facilities (15%). Patients chosen D.G.H.Dambagalla(60%) and B.H.Siyambalanduwa(49%) because those facilities close to their home.but 13% of patients at D.H.Dambagalla responds that they cant afford to other hospitals because of cost. Over crowding of D.G.H.Monaragala can be reduces if patients believe increase about other facilities. (See table 4.29)

17. The sources of finance for patients medical cost was identified as following from household saving, borrow money, sell asset and monthly income. Most patients financed their medical cost from borrowing money for first visit, from monthly income for second and third visits. From overall 37.1% patients finance their medical cost from monthly income and 25.3% patients from household saving. But from other patients 22.1% borrow money and 15.5% sell asset to finance their medical cost. Its means 37.6% patients unable to pay by own for their medical cost. (See table 4.30)