CHAPTER III

CLINICAL STUDIES

OBSERVATION OF BLOOD PRESSURE

3.1 Introduction

The prevalence of hypertension has been reported to be higher in obese as compared to non obese children which increases significantly with body mass index (Mohan *et al.,* 2004). Hypertension is defined as the blood pressure reading that exceeds a threshold that separates individuals at risk for adverse outcomes from those with no increased risk (Staessen *et al.,* 2003; Hayden, 2003). A sustained elevation in blood pressure increases the risk of an adverse outcome, such as stroke and myocardial events (Belay *et al.,* 2004; Lande *et al.,* 2003; Barker, 2003). Many efforts have focused on the primary prevention and control of hypertension in adults (Lande *et al.,* 2003). Nevertheless, the increasing incidence of hypertension in younger age groups has drawn attention to the severity and complications of the disease in children and adolescents (Belay *et al.,* 2004; Lande *et al.,* 2003; Barker, 2003). Public health implications of hypertension in children are overwhelming because many of these individuals will eventually face medical sequel into adulthood (Sorof *et al.,* 2004; Lande *et al.,* 2003). Obesity has become an epidemic in children, reaching almost 16 percent in recent years. A direct relationship between weight status and systolic blood pressure has also been reported (Reich *et al.,* 2003).

Obesity is also a major risk factors for Non-Communicable Diseases (NCDs) such as Non-Insulin-Dependant Diabetes Mellitus (NIDDM), Cardiovascular Disease (CVD) and cancer (Troiano *et al.,* 1996; Manson *et al.,* 1987). Childhood obesity has a correlation with increased levels of lipids, lipoproteins, hypertension, insulin resistance and morbidity from coronary heart disease in adults

(Venkatnarayan *et al.,* 2001). Hypertension is the most common and most potent universal contributor to cardiovascular mortality. Elevated blood pressure, labile or fixed, systolic or diastolic, at any age is a contributor to all forms of cardiovascular disease (Kannel, 1975). Hypertension in obese children may occur due to increased cardiac output, increased blood volume, excessive sodium intake, increased steroid production, and alteration in receptors for various pressure substances. Hypertension in adolescents can be explained by biological maturation and hormonal changes (Szklo, 1979). Hypertension in obesity results in increased intravascular volume, increased sympathetic nervous system activity, sodium retention and hyperinsulinaemia (Feld *et al.,* 1998). An epidemiological study on school children in Delhi found that prevalence of hypertension was high both in boys and girls, and BMI showed a positive correlation with systolic as well as diastolic blood pressure (Laroia *et al.,* 1989). Similar correlation was established by other studies (Anand and Tandon, 1996; Verma *et al.,* 1994). A study conducted in Texas, USA on children with mean age of 13.5±1.7 years showed the prevalence of elevated hypertension to be 4.5% after screening them thrice (Sorof *et al.,* 2004). Higher BMI and especially increased truncal or abdominal fat is an important determinant of blood glucose levels, insulin resistance, and the development of diabetes (Stamler *et al.,* 1997; Abate, 1996; Yamashita, 1996). Childhood obesity has been found to have a positive correlation with endocrinal dysfunction, lipid profile, hypertension, insulin resistance and morbidity from coronary heart disease in adulthood (Venkatnarayan *et al.,* 2001). The American Heart Association has recently added obesity to its list of major risk factors for heart disease (Klein *et al.,* 2002).

3.2 Materials and Methods

A cross-sectional study was conducted among school going children of Tirunelveli area, Tamilnadu. All relevant and required information were collected from both the sexes of the student by supplying a questionnaire. A registered nurse from Sudharson hospital, Vannarapetai, Tirunelveli has performed the blood pressure measurements with an automated Dinamap 8100 XL monitor. If the readings indicated that the blood pressure was elevated or in the range for hypertension (based on normative blood pressure tables that take into account height, age and gender measured on at least three separate occasions), a second and third reading was taken after the student has rested for an additional 20 minutes. In this study blood pressure was assessed on a single set of 3 measurements for all participants and the average of systolic blood pressure and diastolic blood pressure was recorded.

Blood pressure of the subjects are measured after a five-minute period of rest, with the back supported and the legs uncrossed. Constrictive clothing was removed from around the upper arm, and it was rested on a table at heart level. The blood pressure cuff was evenly and snugly applied around the upper arm above the elbow, and the stethoscope was placed over the crease of the elbow. The cuff was inflated to 150 millimeters of mercury (mmHg) above the point where radial artery pulse (the artery above the thumb at the wrist) disappears. The pressure in the cuff was then slowly released at 2 mmHg per second. The first of two consecutive sounds as cuff pressure decreases was called the systolic blood pressure, the pressure to open the artery occluded with the cuff. The diastolic blood pressure was recorded at the absence of sounds with continued deflation of the blood pressure cuff. Blood pressure was generally recorded to the nearest 2 mmHg. For example, a blood

pressure of 125/85 mmHg indicates a systolic blood pressure of 120 mmHg and a diastolic blood pressure of 85 mmHg. Abnormal blood pressures observed were confirmed after a check up for two subsequent days. Optimal blood pressure considered was 120/80 mmHg. High blood pressure, or hypertension, was defined as either a systolic blood pressure greater than 140 mmHg or a diastolic blood pressure greater than 90 mmHg. Systolic blood pressure is a more powerful predictor of cardiovascular events than diastolic blood pressure. In order to test the validity of the observed results and to test the significance of difference between the observed value and hypothetical value (normal population) of samples, the 'Z' test was employed using the Microsoft excel equation version 2.1.

3.3 Results and Discussion

Figure 3.1 Observation of blood pressure among the students of both sexes.

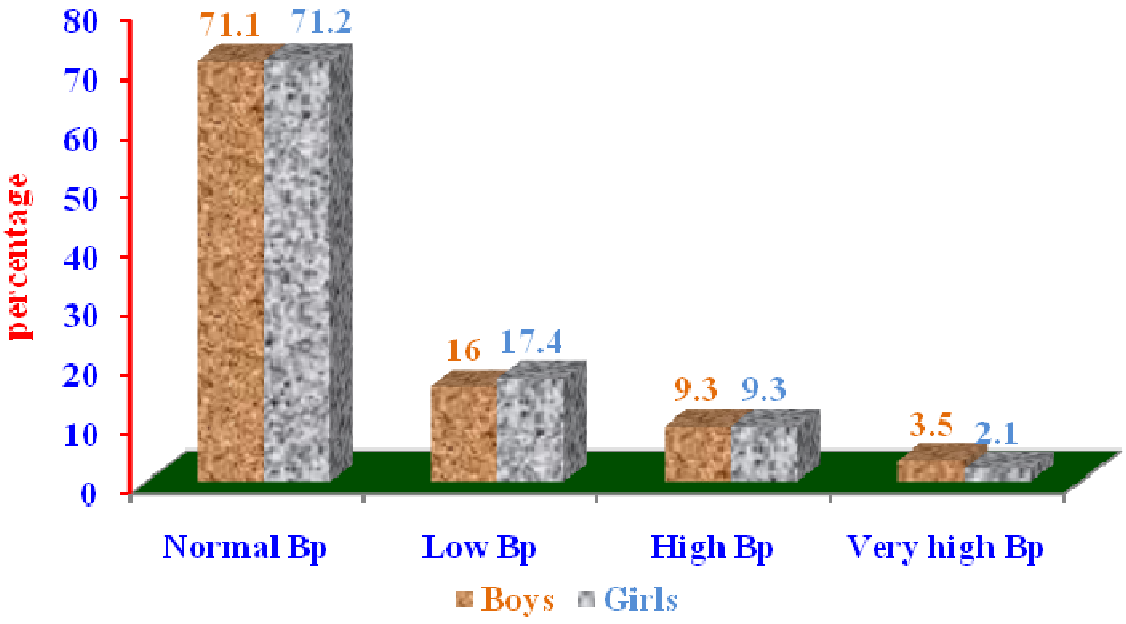

Table 3.1 Observation of blood pressure in relation to age and body weight among students (Boys) of Tirunelveli Town. Values indicated in the parenthesis are the percentage.

Boys –Age (Years)	Category	Normal Bp	Low Bp	High Bp	Very High Bp	Total Hypertensive cases
	N.W (n=55)	47 (53.4)	5 (5.7)	3 (3.4)	0	3 (3.4)
	U.W (n=24)	13 (14.8)	11 (12.5)	0	0	-
	O.W (n=9)	1 (1.1)	0	5 (5.7)	3 (3.4)	8 (9.1)
13 (N = 88)	Total (n=88)	61 (69.3)	16 (18.2)	8 (9.1)	3 (3.4)	88 (20.4)
	N.W (n=47)	39 (48.1)	5 (6.2)	3 (3.7)	0	3 (3.7)
	U.W (n=24)	9 (11.1)	15 (18.5)	0	0	-
	O.W (n=10)	6 (7.4)	0	2 (2.5)	2 (2.5)	4 (4.9)
14 (N = 81)	Total (n=81)	54 (66.7)	20 (24.7)	5 (6.2)	2 (2.5)	7 (8.6)
	N.W (n=49)	43 (52.4)	2 (2.4)	3 (0.7)	1 (1.2)	4 (4.8)
	U.W (n=20)	9 (10.9)	11 (13.4)	0	0	-
	O.W (n=13)	7 (8.5)	0	4 (4.9)	2 (2.4)	6 (7.3)
15 (N = 82)	Total (n=82)	59 (71.9)	13 (15.9)	7 (8.5)	3 (3.7)	82 (19.1)
	N.W (n=65)	60 (65.2)	0	4 (4.3)	1 (1.1)	5 (5.4)
	U.W (n=12)	3 (3.3)	9 (9.8)	0	0	-
	O.W (n=15)	8 (8.7)	0	5 (5.4)	2 (2.2)	7 (7.6)
16 (N = 92)	Total (n=92)	71 (77.2)	9 (9.8)	9 (9.8)	3 (3.3)	92 (21.4)
	N.W (n=62)	54 (62.1)	1 (1.1)	5 (5.7)	2 (2.3)	7 (8.0)
	U.W (n=11)	1 (1.1)	10 (11.5)	0	0	-
	O.W (n=14)	6 (6.9)	0	6 (6.9)	2 (2.3)	8 (9.2)
17 (N = 87)	Total (n=87)	61 (70.1)	11 (12.6)	11 (12.6)	4 (4.6)	15 (17.2)
	Over all Total (n=430)	306 (71.1)	69 (16.0)	40 (9.3)	15 (3.5)	55 (12.8)

N.W = Normal Weight, U.W = Underweight, O.W = Overweight, Bp = Blood Pressure.

Table 3.2 Observation of blood pressure in relation to age and body weight among students (Girls) of Tirunelveli Town. Values indicated in the parenthesis are the percentage.

Girls-Age (Years)	Category	Normal Bp	Low Bp	High Bp	Very High Bp	Total
13 (N = 74)	N.W (n=52)	45 (60.8)	6 (8.1)	1 (1.3)	0	1 (1.3)
	U.W (n=16)	5 (6.8)	11 (14.9)	0	0	-
	O.W (n=6)	2 (2.7)	0	4 (5.4)	0	4 (5.4)
	Total (n=74)	52 (70.3)	17 (22.9)	5 (6.8)	0	5 (6.7)
14 (N = 93)	N.W (n=66)	53 (56.9)	4 (4.3)	7 (7.5)	2 (2.1)	9 (9.7)
	U.W (n=16)	4 (4.3)	12 (12.9)	0	0	-
	O.W (n=11)	7 (7.5)	0	3 (3.2)	1 (1.1)	4 (4.3)
	Total (n=93)	64 (68.8)	16 (17.2)	10 (10.8)	3 (3.2)	13 (13.9)
15 (N = 84)	N.W (n=47)	45 (53.6)	0	2 (2.4)	0	2 (2.4)
	U.W (n=22)	12 (14.3)	10 (11.9)	0	0	-
	O.W (n=15)	8 (9.5)	0	5 (5.9)	2 (2.4)	7 (8.3)
	Total (n=84)	65 (77.3)	10 (11.9)	7 (8.3)	2 (2.4)	9 (10.7)
16 (N = 100)	N.W (n=62)	54 (54)	1 (1)	6 (6)	1 (1)	7 (7.0)
	U.W (n=25)	6 (6)	19 (19)	0	0	-
	O.W (n=13)	7 (7)	0	5 (5)	1 (1)	6 (6.0)
	Total (n=100)	67 (67)	20 (20)	11 (11)	2 (2)	13 (13.0)
17 (N = 79)	N.W (n=57)	51 (64.5)	2 (2.5)	4 (5.1)	0	4 (5.1)
	U.W (n=12)	2 (2.5)	10 (12.6)	0	0	-
	O.W (n=10)	5 (6.3)	0	3 (3.8)	2 (2.5)	5 (6.3)
	Total (n=79)	58 (73.4)	12 (15.2)	7 (8.9)	2 (2.5)	9 (11.4)
	Over all Total (n=430)	306 (71.2)	75 (17.4)	40 (9.3)	9 (2.1)	49 (11.4)

N.W = Normal Weight, U.W = Underweight, O.W = Overweight, Bp = Blood Pressure

Table 3.3 The mean of observed blood pressure among the male students of different ages and ± indicates the SD. The values given are the mean of the observed values and ± are the SD. The values given in the parenthesis are the Z value which are significant at 0.05% level. The percent increase/decrease of Bp compared to control also given.

Boys age in years	Normal BP (Control)		Low Bp		High Bp		V. High Bp	
	SBP	DBP	SBP	DBP	SBP	DBP	SBP	DBP
13	109.7 ± 1.9	71.5 ± 1.1	97.8 ± 0.7 (63.5) 10.8%	62.7 ± 0.7 (50.4) 12.3%	118.7 ± 1.0 (24.7) 8.2%	79.3 ± 0.5 (42.7) 10.9%	123.3 ± 0.6 (40.8) 12.4%	78.0 ± 1.0 (11.2) 9.1%
14	112.0 ± 1.4	71.6 ± 1.2	98.7 ± 1.2 (50.9) 11.9%	67.5 ± 0.8 (24.1) 5.7%	120 ± 0.7 (25.2) 7.1%	80.6 ± 0.5 (36.7) 12.6%	124.5 ± 0.7 (24.9) 11.2%	80.5 ± 0.7 (17.8) 12.4%
15	113.7 ± 1.0	72.5 ± 0.9	101.7 ± 1.0 (42.2) 10.6%	66.2 ± 0.9 (24.5) 8.7%	122.4 ± 0.9 (23.5) 7.7%	77.6 ± 0.9 (13.7) 7.0%	125.7 ± 1.1 (17.9) 10.6%	84.3 ± 0.6 (35.4) 16.3%
16	118.2 ± 1.2	80.1 ± 1.0	102.3 ± 0.5 (95.4) 13.5%	67.3 ± 0.7 (53.9) 15.9%	124.2 ± 0.7 (26.9) 5.1%	80.6 ± 0.7 (2.1)* 0.6%	127.3 ± 0.6 (27.3) 7.7%	85.7 ± 0.6 (16.8) 6.9%
17	119.1 ± 0.8	80.7 ± 0.7	103.1 ± 0.7 (75.8) 13.4%	69.5 ± 0.5 (70.5) 13.9%	124.8 ± 0.6 (31.5) 4.8%	81.7 ± 1.1 (3.2) 1.2%	129.5 ± 0.6 (36.0) 8.7%	89.5 ± 0.6 (30.6) 10.9%
Total	114.5 ± 1.3	75.3 ± 0.9	100.7 ± 0.8	66.6 ± 0.7	122 ± 0.8	79.9 ± 0.7	126.1 ± 0.7	83.6 ± 0.7

* Total non-significant at 0.05% level

Table 3.4 The mean of observed blood pressure among the female students of different ages and ± indicates the SD. The values given are the mean of the observed values and ± are the SD. The values given in the parenthesis are the Z value which are significant at 0.05% level. The percent increase/decrease of blood pressure compared to control also given.

Girls age in years	Normal BP (Control)		Low Bp		High Bp		V. High Bp	
	SBP	DBP	SBP	DBP	SBP	DBP	SBP	DBP
13	110.8 ± 1.0	72.2 ± 0.7	98.1 ± 0.7 (70.4) 11.5%	63.1 ± 0.8 (48.2) 12.6%	119.2 ± 0.4 (41.8) 7.6%	80.6 ± 0.5 (34.0) 11.6%	-	-
14	112.8 ± 1.0	71.9 ± 0.9	99.2 ± 0.9 (59.8) 12.1%	68.1 ± 0.9 (15.8) 5.3%	120.2 ± 0.6 (36.9) 6.6%	81.0 ± 0.8 (35.2) 12.7%	124.7 ± 0.6 (35.5) 10.6%	81.7 ± 0.6 (29.2) 13.6%
15	114 ± 0.9	73 ± 1.2	101.6 ± 1.1 (36.6) 10.9%	66.2 ± 1.0 (20.8) 9.3%	122.4 ± 0.9 (22.7) 7.4%	77.6 ± 0.9 (12.4) 6.3%	126 ± 1.4 (11.9) 10.5%	84.5 ± 0.7 (23.0) 15.7%
16	119.2 ± 0.8	80.1 ± 0.7	102.3 ± 0.5 (153.7) 14.2%	67.4 ± 0.6 (87.7) 15.9%	124.3 ± 0.7 (25.6) 4.3%	80.5 ± 0.7 (0.2)* 0.5%	127.5 ± 0.7 (16.7) 6.9%	86.5 ± 0.7 (11.9) 7.9%
17	119.6 ± 0.9	81.0 ± 0.8	103.8 ± 0.6 (94.6) 13.2%	70.0 ± 0.7 (51.7) 13.6%	124.3 ± 0.5 (25.3) 3.9%	80.8 ± 0.9 (0.5)* 0.2%	130.0 ± 1.4 (10.4) 8.7%	89.5 ± 0.7 (16.9) 10.5%
Total	115.3 ± 0.9	75.6 ± 0.8	101 ± 0.8	66.9 ± 0.8	122.1 ± 0.6	80.1 ± 0.7	101.6 ± 0.8	68.4 ± 0.5

* Non-significant at 0.05% level

Table 3.5 School-wise observation of blood pressure among the students of both sexes. The values in the parenthesis are the percentage observed.

Blood Pressure	Normal Bp	Low Bp	High Bp	Very high Bp	Total hypertensive cases
Boys					
Aided School (n = 177)	130 (30.2)	33 (7.7)	9 (2.1)	5 (1.2)	14 (7.9)
Matriculation School (n = 176)	134 (31.1)	5 (1.2)	27 (6.3)	10 (2.3)	37 (21.0)
Municipal School (n = 77)	42 (9.7)	31 (7.2)	4 (0.9)	0	4 (5.2)
Total (n = 430)	306 (71.1)	69 (16.0)	40 (9.3)	15 (3.5)	55 (12.8)
Girls					
Aided School (n = 173)	133 (30.9)	26 (6.0)	12 (2.8)	2 (0.5)	14 (8.1)
Matriculation School (n = 174)	140 (32.6)	2 (0.5)	25 (5.8)	7 (1.6)	32 (18.4)
Municipal School (n = 83)	33 (7.7)	47 (10.9)	3 (0.7)	0	3 (3.6)
Total (n = 430)	306 (71.1)	75 (17.4)	40 (9.3)	9 (2.1)	49 (11.4)
Over all Total (n = 860)	612 (71.1)	144 (16.7)	80 (9.3)	24 (2.8)	104 (12.1)

Figure 3.2 School-wise observation of high blood pressure among the students of both sexes.

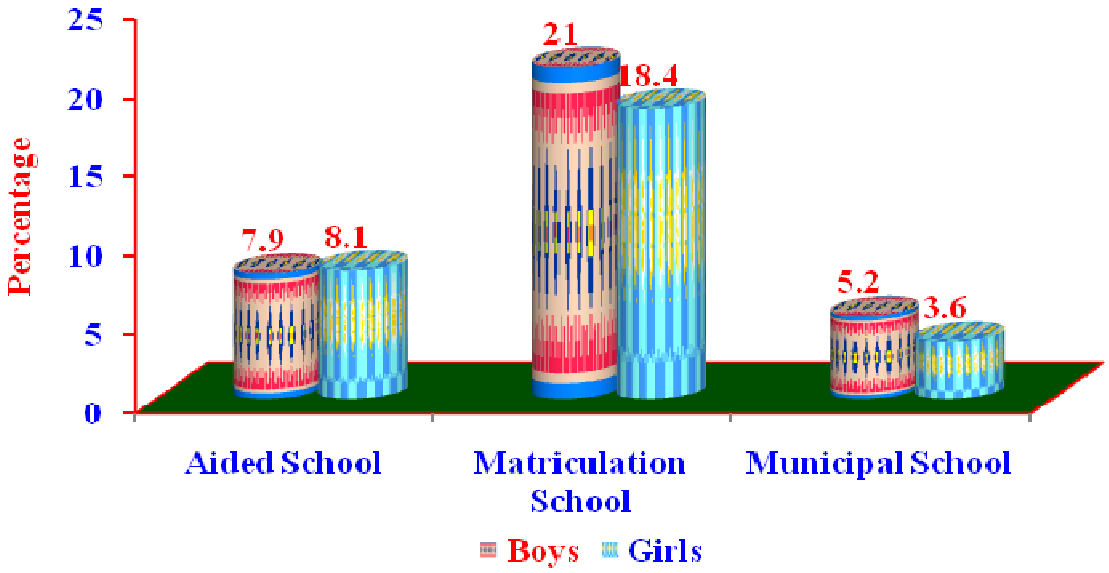

Table 3.6 School wise observation of various levels of blood pressure among the students of both sexes. The values given are the mean of the observed values and ± are the SD. The values given in the parenthesis are the Z values which are significant at 0.05% level. The percent increase/decrease of Bp compared to control also given.

Type of school	Normal Bp (Control)		Low Bp		High Bp		Very high Bp	
	SBP	DBP	SBP	DBP	SBP	DBP	SBP	DBP
Boys								
Aided School	109.6 ± 1.9	71.6 ± 1.2	97.9 ± 0.7 (88.4) 10.7%	62.6 ± 0.7 (73.4) 12.6%	118.9± 1.0 (26.3) 8.5%	79.3 ± 0.5 (46.4) 10.7%	123.4 ± 0.5 (56.1) 12.6%	78.2 ± 0.8 (17.6) 16.6%
Matriculation School	118.6 ± 1.1	80.3 ± 0.9	102.9 ± 0.8 (62.8) 13.2%	68.3 ± 1.5 (26.8) 14.9%	124.7± 0.7 (42.7) 5.1%	81.6 ± 1.2 (5.4) 1.6%	128.4 ± 2.0 (15.3) 8.3%	88 ± 2.6 (9.4) 9.6%
Municipal School	113.7 ± 1.0	72.8 ± 0.9	99.7 ± 1.9 (38.3) 12.3%	67.1 ± 1.1 (27.7) 7.8%	122.5 ± 1.2 (189.7) 7.7%	77.7 ± 1.7 (91.0) 6.7%	-	-
Girls								
Aided School	112.4 ± 3.4	73.0 ± 2.9	101.2 ± 2.1 (26.5) 9.9%	66.2 ± 2.2 (15.5) 9.3%	121± 1.9 (15.3) 7.6%	78.3 ± 1.2 (14.8) 7.3%	123.5 ± 0.7 (22.2) 9.8%	78.5 ± 0.7 (10.9) 12.7%
Matriculation School	119.1 ± 1.1	80.7 ± 0.8	102.3 ± 0.5 (79.8) 14.1%	67.1 ± 0.7 (44.1) 16.8%	124.6 ± 0.7 (38.5) 4.6%	81.4 ± 1.1 (2.9) 0.9%	129.1 ± 1.7 (15.7) 8.4%	88.4 ± 2.1 (9.8) 9.5%`
Municipal School	111.5 ± 1.6	72.4 ± 0.9	99.2 ± 1.6 (51.1) 11.0%	65.7 ± 2.4 (18.2) 9.2%	119.3± 0.6 (23.6) 6.9%	80.3 ± 0.6 (23.7) 10.9%	-	-

The observed blood pressure values among the students of different age and sex showed a surprising information both to the medical faculty and to the society. Among the studied students of both sexes irrespective of age, about 71% has normal blood pressure, whereas the remaining 29% have abnormal blood pressure. Table 3.1 and 3.2 indicated that about 16% of boys and 17.4% of girls are having low blood pressure and 12.5% of boys and 11.4% of girls are having high blood pressure (Sorof *et al.,* 2004; Peters and Flack, 2003; Cervantes *et al.,* 2000). High blood pressure was observed mostly among overweight and obeic students of different age and sex (Table 3.1, 3.2; Gupta and Ahmad, 1990; Kotchen *et al.,* 1982). The mean blood pressure value of both systolic and diastolic are increased to a greater extent both in case of boys and girls of different age than the normal control group (Table 3.3,3.4). A significant increase of systolic and diastolic pressure was noted among the students with the increase of their age (Laroia *et al.,* 1989; Kotchen *et al.,* 1982) in both the sexes (Table 3.1,3.2). When compared to the municipal school students, the obeic students of both the sex of the aided and matriculation schools have a significant increase in their systolic and diastolic pressure. Prevalence of high blood pressure was very high among the obeic students (Rocchini *et al.,* 1988) of matriculation school students (Boys 21% and Girls 18.4%) than the aided (Boys 7.9% and Girls 8.1%) and government school (Boys 5.2% and Girls 3.6%) students (Table 3.5, 3.6; Figure 3.2). On the other hand there was a surprising observation namely low blood pressure due to underweight, was common among a limited percentage of students especially in the municipal school and aided school (Table 3.5,3.6). Among them the low blood pressure level observed showed a fall percentage of 8 to 18% in both the sex (Table 3.1,3.2). These observation clearly indicated that the significant increase in blood pressure level (hypertension)

observed among the overweight and obeic students and also the significant fall in blood pressure level (Hypotension) observed among the underweight students were mainly influenced by their parental socio-economic status, their feeding behavior and changed lifestyle (Kapil, 2004). High and very high blood pressure mainly observed among the aided and matriculation students was influenced by their parents who either belong to middle class or higher income group (Mudur, 2003) whereas the economic status of the parents of underweight students was very poor and mostly they fall under the category of below poverty line population (Ambily Unnithan and Syamakuamari, 2008). Another important causative factor for hypertension in the present study was the changed feeding habit. Intake of excessive amount of non-vegetarian food items especially fried items which contain excessive cholesterol and salt may be another influencing agent of high blood pressure. Intake of excessive sodium increase the plasma sodium level (Chapter II; Table 3.5,3.6 and 3.7) that increase the hypertensive cases among humans (Kriba Ram Haldia *et al.,* 2005; Wardener *et al.,* 2004). There are abundant scientific evidence demonstrating the direct relation between salt intake and blood pressure (Knowels *et al.,* 2004; Mac Gregor and De Wardner, 2002; Hooper *et al.,* 2002; Chobanian and Hill, 2000). Sodium difference in blood is compared with difference in BP in the body mass index of the population which is well accepted as an important determinant of blood pressure (Aram and Chobanian, 2000). These severe blood pressure patterns show a strong correlation to adulthood hypertension (Sanchez-Bayle *et al.,*1999; Prineas *et al.,* 1980; Fixler *et al.,* 1980). The insidious and steady course of hypertension in adults indicated that it may have its route in childhood and adolescent age group but probably goes undetected (Chadha *et al.,*1999; Gupta and Ahmad, 1990). The high prevalence of sustained hypertension in the present study reflects the emerging

scenario of epidemic of cardiovascular diseases in the recent era (Reddy, 2002; Fagot-Campagna *et al.,* 2000). It also reflects the changing lifestyle (Popkin, 2001) and environmental interaction as a major factor of prevalence of hypertension in school going children. The incidence of hypertension observed in the present study further aggravated due to the increased prevalence of obesity (Menard *et al.,* 1999, Fixler *et al.,* 1980), thorough their westernized pattern of feeding habit, increased incident of sedentary lifestyle, increased fat content of diet, large scale use of vehicles and so on (Gupta and Ahmad, 1990).

The potential for blood pressure control in children based on weight reduction is supported by longitudinal tracking through adolescence and young adulthood (Ribeiro *et al.,* 2003; Friedman, 2002). Weight loss reduces sensitivity to salt and decreases other cardiovascular risk factors. Dietary counseling is recommended for obese children, including increasing consumption of fiber, vegetables, and fruit (Williams *et al.,*2002). The present findings show the need to encourage health care providers to screen children for high blood pressure, or ideally, to include blood pressure measurement in the child's routine physical examination, especially those who are overweight (NHBPEP, 1996).

3.4 Summary

Among the studied respondents of both sex irrespective of age, about 71% have normal blood pressure. About 12.5% of boys and 11.4% of girls have high blood pressure. A significant increase of systolic and diastolic pressure was noted among the students with the increase of their age. The mean blood pressure values of both systolic and diastolic were increased to a greater extent both in case of obeic boys and girls of all age than the normal control group. When compared to the municipal school students, the obeic students of both the sex of the aided school and

matriculation school have a significant increase in their systolic and diastolic pressure.

3.5 Conclusion

The findings of the present study concluded that the increasing level of obesity among the student community is mainly because of their changing mode of lifestyle and feeding habits. The care on the children by the elders are lacking in homes today and that might be one of the influential factors for such kind of occurrence. In order to avoid the increasing level of obesity in the present day community the elders have to promote healthy lifestyle practices to youngsters to prevent childhood obesity. There is an urgent need to address the problem and efforts should be made to prevent the epidemic of obesity and its associated health disasters. Students are to be trained for healthy lifestyle practices such as increased physical activity, restrictions on television watching or playing video games, avoiding the sedentary habits, avoiding over consumption of high calorie westernized foods. Parent community is to be educated about the importance of our Indian traditional food and implications about obesity which will avoid the prevalence of obesity to a greater extent.