

**Table 1 Particulars of coverage**

Region	Type of Institution	Total number of Institutions in the urban areas of the State			Number of Institutions Selected			Number of Subjects Covered		
		Govt.	Private	Total	Govt.	Private	Total	Govt.	Private	Total
Telangana	Schools	512	3981	4493	6	9	15	1224	926	2150
	Jr. Colleges	244	996	1240	4	5	9	268	310	578
	<b>Pooled</b>	<b>756</b>	<b>4977</b>	<b>5733</b>	<b>10</b>	<b>14</b>	<b>24</b>	<b>1492</b>	<b>1236</b>	<b>2728</b>
Coastal Andhra	Schools	390	2479	2869	6	7	13	1025	847	1872
	Jr. Colleges	162	746	908	4	4	8	499	330	829
	<b>Pooled</b>	<b>552</b>	<b>3225</b>	<b>3777</b>	<b>10</b>	<b>11</b>	<b>21</b>	<b>1524</b>	<b>1177</b>	<b>2701</b>
Rayalaseema	Schools	64	960	1024	6	7	13	1038	899	1937
	Jr. Colleges	96	299	395	4	4	8	343	433	776
	<b>Pooled</b>	<b>160</b>	<b>1259</b>	<b>1419</b>	<b>10</b>	<b>11</b>	<b>21</b>	<b>1381</b>	<b>1332</b>	<b>2713</b>
State Pooled	Schools	966	7420	8386	18	23	41	3287	2672	5959
	Jr. Colleges	502	2041	2543	12	13	25	1110	1073	2183
	<b>Pooled</b>	<b>1468</b>	<b>9461</b>	<b>10929</b>	<b>30</b>	<b>36</b>	<b>66</b>	<b>4397</b>	<b>3745</b>	<b>8142</b>

**Table 2 Particulars of Coverage of Subjects by age/Gender**

Age (Completed Years)	Telangana			Coastal Andhra			Rayalaseema			Pooled		
	Boys	Girls	Pooled	Boys	Girls	Pooled	Boys	Girls	Pooled	Boys	Girls	Pooled
<b>12</b>	194	239	433	243	208	451	262	218	480	699	665	1364
<b>13</b>	275	327	602	315	252	567	305	205	510	895	784	1679
<b>14</b>	323	343	666	302	254	556	358	241	599	983	838	1821
<b>15</b>	202	226	428	218	235	453	293	170	463	713	631	1344
<b>16</b>	162	165	327	214	212	426	255	146	401	631	523	1154
<b>17</b>	143	129	272	139	109	248	171	89	260	453	327	780
<b>Pooled</b>	<b>1299</b>	<b>1429</b>	<b>2728</b>	<b>1431</b>	<b>1270</b>	<b>2701</b>	<b>1644</b>	<b>1069</b>	<b>2713</b>	<b>4374</b>	<b>3768</b>	<b>8142</b>

**Table 3 Household (%) Characteristics of the Adolescents**

Variable	Sub-variables	Telangana			Andhra			Rayalaseema			State Pooled		
		LSE	HSE	Pooled	LSE	HSE	Pooled	LSE	HSE	Pooled	LSE	HSE	Pooled
Community	Scheduled Tribe	12.6	1.6	7.4	6.9	1.4	4.4	3.9	1.7	2.8	7.8	1.6	4.9
	Scheduled Caste	24.2	9.1	17.1	18.1	8.3	13.6	20.6	4.9	12.9	21.0	7.4	14.5
	Backward Class	52.3	34.6	43.9	53.8	38.1	45.5	48.6	31.1	40.0	51.6	34.5	43.5
	Others	11.0	54.8	31.6	21.1	52.1	35.6	27.0	62.3	44.4	19.6	56.5	37.2
Occupation of Father	Laborer	51.6	3.8	29.0	69.9	16.5	45.0	67.8	11.1	39.9	63.0	10.5	38.0
	Service	22.6	58.4	39.6	9.6	42.8	25.1	4.4	49.6	26.6	12.3	50.3	30.4
	Business	13.9	31.2	22.0	9.5	32.5	20.2	9.1	31.2	20.0	10.8	31.6	20.7
	Artisans	6.2	1.2	3.8	6.3	3.9	5.2	13.0	4.3	8.7	8.4	3.1	5.9
	Others	5.8	5.4	5.6	4.7	4.2	4.5	5.7	3.8	4.8	5.4	4.5	5.0
Occupation of Mother	Laborer	38.4	1.4	21.0	36.5	2.5	20.7	43.9	4.3	24.3	39.5	2.7	22.0
	Service	7.4	15.4	11.1	1.6	9.2	5.1	1.0	13.0	6.9	3.4	12.6	7.7
	Business	3.7	3.5	3.6	2.4	3.8	3.1	3.1	6.2	4.6	3.1	4.5	3.8
	Artisans	3.6	2.4	3.0	3.5	2.3	2.9	7.6	2.3	5.0	4.9	2.3	3.7
	Housewife	45.5	75.5	59.7	55.4	81.2	67.4	43.0	73.8	58.2	48.0	76.8	61.8
	Others	1.4	1.8	1.6	0.6	1.0	0.8	1.4	0.4	0.9	1.1	1.0	1.1

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**Table 3 Household (%) Characteristics of the Adolescents (Contd.)**

Variable	Sub-variables	Telangana			Andhra			Rayalaseema			State Pooled		
		LSE	HSE	Pooled	LSE	HSE	Pooled	LSE	HSE	Pooled	LSE	HSE	Pooled
<b>Literacy status of Father</b>	Illiterate	34.1	1.1	18.5	30.8	2.7	17.7	38.1	2.8	20.7	34.3	2.2	19.0
	Read & Write	19.3	2.5	11.4	22.4	5.0	14.3	20.1	6.6	13.5	20.6	4.7	13.0
	1 – 5 <sup>th</sup> std	12.1	2.5	7.6	21.4	9.5	15.8	18.8	8.4	13.6	17.4	6.8	12.3
	6 – 8 <sup>th</sup> std	10.6	5.4	8.2	10.5	13.8	12.1	10.4	10.4	10.4	10.5	9.9	10.2
	9 – 12 <sup>th</sup> std	16.0	29.1	22.2	9.4	33.4	20.6	6.5	29.7	18.0	10.7	30.7	20.3
	College & Above	3.9	58.4	29.6	1.5	33.3	16.3	1.5	39.8	20.3	2.3	43.9	22.1
<b>Literacy status of Mother</b>	Illiterate	61.8	5.9	35.4	51.4	8.2	31.3	65.0	15.1	40.4	59.3	9.8	35.7
	Read & Write	12.8	5.3	9.3	16.4	5.2	11.1	13.4	5.8	9.7	14.2	5.4	10.0
	1 – 5 <sup>th</sup> std	10.9	7.7	9.4	21.2	18.5	20.0	14.0	13.3	13.7	15.4	13.1	14.3
	6 – 8 <sup>th</sup> std	8.6	13.8	11.0	6.9	19.2	12.7	4.7	16.4	10.5	6.8	16.5	11.4
	9 – 12 <sup>th</sup> std	4.3	37.6	20.0	3.2	34.3	17.7	1.9	29.4	15.4	3.1	33.7	17.7
	≥ College	0.6	29.4	14.2	0.5	14.3	6.9	0.1	19.9	9.8	0.4	21.2	10.3
<b>Family Size</b>	1 – 4	29.4	44.1	36.3	39.6	48.5	43.7	28.7	48.8	38.6	32.6	47.2	39.5
	>= 5	70.6	55.9	63.7	60.2	51.5	56.3	71.3	51.2	61.4	67.4	52.8	60.5

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**Table 3 Household (%) Characteristics of the Adolescents (Contd.)**

Variable	Sub-variables	Telangana			Andhra			Rayalaseema			State Pooled		
		LSE	HSE	Pooled	LSE	HSE	Pooled	LSE	HSE	Pooled	LSE	HSE	Pooled
Type of Residence	Parents	82.2	90.4	86.1	86.9	89.7	88.2	80.4	89.9	85.1	83.2	90.0	86.5
	Hostel	12.8	6.1	9.6	7.5	6.5	7.0	12.9	6.4	9.7	11.0	6.3	8.8
	Relatives	3.3	2.6	3.0	5.2	3.5	4.4	4.1	3.4	3.8	4.2	3.2	3.7
	Others	1.7	0.9	1.4	0.4	0.2	0.3	2.6	0.3	1.5	1.6	0.5	1.1
Type of House	Kutcha	8.6	0.7	4.9	25.8	2.2	14.8	19.4	1.6	10.6	17.9	1.5	10.1
	Semi-Pucca	58.4	12.3	36.6	38.5	23.8	31.7	26.4	12.2	19.4	41.3	16.0	29.2
	Pucca	33.0	87.0	58.5	35.6	73.9	53.5	54.2	86.2	70.0	40.7	82.5	60.7
Living Rooms at Home (Nos)	1 – 3	93.0	36.8	66.5	91.2	53.3	73.6	95.7	48.6	72.5	93.3	46.2	70.8
	4 – 6	6.7	52.6	28.3	8.6	40.5	23.5	4.2	46.5	25.1	6.5	46.6	25.6
	>= 7	0.3	10.6	5.2	0.2	6.1	3.0	0.1	4.9	2.5	0.2	7.2	3.5
Type of fuel used at home	Fire Wood	48.4	1.5	26.2	68.1	5.5	38.9	79.3	9.3	44.8	65.0	5.5	36.6
	Kerosene	6.3	0.9	3.7	4.2	1.3	2.8	3.1	1.9	2.5	4.5	1.3	3.0
	LPG / Bio gas	45.3	97.7	70.0	27.8	93.2	58.3	17.7	88.8	52.7	30.5	93.2	60.4
Play ground Availability	At school	86.5	80.7	83.8	86.4	73.5	80.4	88.7	79.7	84.2	87.2	78.0	82.8
	Near residence	39.2	57.4	47.8	24.3	40.3	31.7	31.4	45.3	38.3	31.6	47.7	39.3
Presence of Home Garden	Yes	17.8	36.4	26.6	10.3	27.1	18.1	6.1	16.8	11.4	11.5	26.6	18.7

**Table 4 Possession of Household articles (%)**

	Telangana			Andhra			Rayalaseema			State Pooled		
	LSE	HSE	Pooled	LSE	HSE	Pooled	LSE	HSE	Pooled	LSE	HSE	Pooled
Radio	26.1	54.7	39.6	19.6	41.9	30.0	29.0	55.3	42.0	24.8	50.8	37.2
TV	70.0	98.1	83.3	61.1	96.3	77.5	63.1	96.0	79.3	64.8	96.8	80.0
Refrigerator	4.4	74.5	37.5	1.2	38.3	18.5	0.7	47.8	24.0	2.1	53.6	26.7
Washing Machine	1.4	35.5	17.5	0.4	11.2	5.4	0.1	19.1	9.5	0.7	22.0	10.8
Two Wheeler	21.4	81.4	49.7	11.3	58.5	33.3	17.2	62.5	39.5	16.6	67.4	40.8
Car	0.6	23.5	11.4	0.1	6.4	3.1	0.2	7.2	3.6	0.3	12.3	6.0
Telephone	9.1	59.4	32.8	4.1	44.8	23.0	5.4	47.5	26.1	6.2	50.5	27.3
Mobile	35.9	91.1	62.0	14.8	56.3	38.8	21.6	75.2	48.0	24.1	77.6	49.6
Computer	0.8	29.1	14.1	0	7.6	3.5	0.1	9.3	4.6	0.3	15.3	7.5
Audio System	14.4	59.8	35.9	9.8	40.0	23.8	9.8	51.7	30.5	11.4	50.6	30.1
Home Theater	1.0	12.7	6.5	0.6	6.8	3.4	0.4	4.4	2.4	0.7	7.9	4.1
Internet	0.2	12.8	6.2	0	3.3	1.6	0.1	3.2	1.6	0.1	6.4	3.1

**Table 5.1 Mean ( $\pm$  SD) Heights (Cm), Weights (Kg) and BMI of Adolescent Boys**

Age (Yrs)	Telangana				Coastal Andhra				Rayalaseema				Pooled			
	n	Height	Weight	BMI	n	Height	Weight	BMI	n	Height	Weight	BMI	n	Height	Weight	BMI
12	194	148.8 $\pm$ 7.95	37.2 $\pm$ 8.85	16.7 $\pm$ 2.98	231	145.6 $\pm$ 8.60	34.3 $\pm$ 8.91	15.9 $\pm$ 2.63	244	144.5 $\pm$ 7.66	33.1 $\pm$ 7.88	15.7 $\pm$ 2.53	669	146.1 $\pm$ 8.23	34.7 $\pm$ 8.69	16.0 $\pm$ 2.73
13	274	153.5 $\pm$ 9.43	39.9 $\pm$ 10.51	16.8 $\pm$ 3.05	300	148.6 $\pm$ 9.17	36.2 $\pm$ 8.14	16.2 $\pm$ 2.30	295	148.2 $\pm$ 8.53	35.5 $\pm$ 8.43	16.0 $\pm$ 2.51	869	150.0 $\pm$ 9.35	37.1 $\pm$ 9.24	16.3 $\pm$ 2.65
14	321	158.5 $\pm$ 9.12	43.3 $\pm$ 8.99	17.1 $\pm$ 2.40	299	155.0 $\pm$ 9.68	40.7 $\pm$ 9.05	16.8 $\pm$ 2.48	353	154.4 $\pm$ 9.11	40.1 $\pm$ 9.65	16.7 $\pm$ 2.63	973	155.9 $\pm$ 9.45	41.3 $\pm$ 9.34	16.8 $\pm$ 2.51
15	202	162.6 $\pm$ 8.01	46.3 $\pm$ 9.54	17.4 $\pm$ 2.67	217	159.5 $\pm$ 8.28	44.6 $\pm$ 9.00	17.4 $\pm$ 2.67	258	160.2 $\pm$ 8.43	44.7 $\pm$ 9.90	17.3 $\pm$ 2.71	677	160.7 $\pm$ 8.34	45.1 $\pm$ 9.55	17.3 $\pm$ 2.69
16	161	164.9 $\pm$ 7.41	48.7 $\pm$ 9.93	17.8 $\pm$ 3.01	213	163.7 $\pm$ 6.48	49.2 $\pm$ 8.02	18.3 $\pm$ 2.45	236	164.4 $\pm$ 7.30	48.2 $\pm$ 8.63	17.8 $\pm$ 2.49	610	164.3 $\pm$ 7.06	48.7 $\pm$ 8.79	17.9 $\pm$ 2.63
17	143	167.9 $\pm$ 6.21	54.8 $\pm$ 11.98	19.3 $\pm$ 3.58	139	164.4 $\pm$ 6.43	50.4 $\pm$ 8.38	17.9 $\pm$ 2.59	149	165.5 $\pm$ 6.34	48.9 $\pm$ 6.50	17.8 $\pm$ 2.10	431	165.9 $\pm$ 6.48	51.3 $\pm$ 9.54	18.5 $\pm$ 2.89
12-14	789	154.3 $\pm$ 9.74	40.6 $\pm$ 9.81	16.8 $\pm$ 2.80	830	150.1 $\pm$ 10.0	37.3 $\pm$ 9.08	16.3 $\pm$ 2.48	892	149.6 $\pm$ 9.48	36.7 $\pm$ 9.27	16.1 $\pm$ 3.00	251 1	151.2 $\pm$ 9.95	38.1 $\pm$ 9.54	16.4 $\pm$ 2.64
15-17	506	164.8 $\pm$ 7.64	49.4 $\pm$ 10.96	18.0 $\pm$ 3.15	569	162.3 $\pm$ 7.52	47.7 $\pm$ 8.87	18.0 $\pm$ 2.61	643	162.9 $\pm$ 7.90	46.9 $\pm$ 8.93	17.5 $\pm$ 2.50	171 8	163.3 $\pm$ 7.77	47.9 $\pm$ 9.60	17.8 $\pm$ 2.75
<b>12-17</b>	<b>1295</b>	<b>158.4</b> $\pm$ <b>10.33</b>	<b>44.1</b> $\pm$ <b>11.13</b>	<b>17.3</b> $\pm$ <b>3.0</b>	<b>1399</b>	<b>155.0</b> $\pm$ <b>10.88</b>	<b>41.5</b> $\pm$ <b>10.36</b>	<b>17.0</b> $\pm$ <b>2.67</b>	<b>1535</b>	<b>155.2</b> $\pm$ <b>11.0</b>	<b>41.0</b> $\pm$ <b>10.43</b>	<b>16.7</b> $\pm$ <b>2.65</b>	<b>422</b> <b>9</b>	<b>156.2</b> $\pm$ <b>10.9</b>	<b>42.1</b> $\pm$ <b>10.7</b>	<b>17.0</b> $\pm$ <b>2.77</b>

**Table 5.2 Mean ( $\pm$  SD) Heights (Cm), Weights (Kg) and BMI of Adolescent Girls**

Age (Yrs)	Telangana				Coastal Andhra				Rayalaseema				Pooled			
	n	Height	Weight	BMI	n	Height	Weight	BMI	n	Height	Weight	BMI	n	Height	Weight	BMI
12	239	148.8 $\pm$ 6.74	38.9 $\pm$ 8.50	17.5 $\pm$ 2.30	198	146.6 $\pm$ 6.79	36.8 $\pm$ 7.65	17.0 $\pm$ 2.8	210	146.7 $\pm$ 7.43	36.1 $\pm$ 7.90	16.6 $\pm$ 2.60	647	147.4 $\pm$ 7.05	37.4 $\pm$ 8.13	17.0 $\pm$ 2.84
13	325	151.1 $\pm$ 6.53	40.9 $\pm$ 8.43	17.8 $\pm$ 2.90	239	149.2 $\pm$ 5.99	40.1 $\pm$ 7.93	17.9 $\pm$ 3.04	198	150.4 $\pm$ 6.47	39.8 $\pm$ 8.54	17.5 $\pm$ 3.27	762	150.3 $\pm$ 6.40	40.3 $\pm$ 8.30	17.7 $\pm$ 3.04
14	343	152.0 $\pm$ 6.31	42.3 $\pm$ 7.96	18.3 $\pm$ 2.85	253	150.5 $\pm$ 6.27	41.3 $\pm$ 6.70	18.2 $\pm$ 2.58	232	152.3 $\pm$ 6.13	42.4 $\pm$ 8.90	18.2 $\pm$ 3.09	828	151.6 $\pm$ 6.28	42.0 $\pm$ 7.89	18.2 $\pm$ 2.84
15	225	152.5 $\pm$ 6.07	43.4 $\pm$ 8.14	18.6 $\pm$ 3.08	233	152.3 $\pm$ 5.95	42.2 $\pm$ 7.13	18.2 $\pm$ 2.55	153	153.2 $\pm$ 5.52	43.7 $\pm$ 8.22	18.6 $\pm$ 3.04	611	152.6 $\pm$ 5.90	43.0 $\pm$ 7.80	18.4 $\pm$ 2.88
16	163	154.5 $\pm$ 5.98	44.8 $\pm$ 8.11	18.8 $\pm$ 3.28	212	152.5 $\pm$ 5.60	43.6 $\pm$ 7.34	18.8 $\pm$ 3.02	139	152.8 $\pm$ 5.53	43.7 $\pm$ 7.56	18.7 $\pm$ 3.07	514	153.2 $\pm$ 5.74	44.0 $\pm$ 7.66	18.7 $\pm$ 3.11
17	126	155.3 $\pm$ 5.64	46.8 $\pm$ 10.70	19.3 $\pm$ 3.94	109	152.4 $\pm$ 5.88	44.7 $\pm$ 7.80	19.2 $\pm$ 2.98	79	152.6 $\pm$ 5.53	43.8 $\pm$ 7.55	18.8 $\pm$ 3.15	314	153.6 $\pm$ 5.84	45.3 $\pm$ 9.08	19.1 $\pm$ 3.43
12-14	907	150.8 $\pm$ 6.62	40.9 $\pm$ 8.38	17.8 $\pm$ 2.92	690	148.9 $\pm$ 6.51	39.6 $\pm$ 7.63	17.7 $\pm$ 2.86	640	149.8 $\pm$ 7.06	39.5 $\pm$ 8.85	17.4 $\pm$ 3.06	2237	150.0 $\pm$ 6.77	40.1 $\pm$ 8.32	17.7 $\pm$ 2.95
15-17	514	153.8 $\pm$ 6.04	44.6 $\pm$ 8.91	18.8 $\pm$ 3.38	554	152.3 $\pm$ 5.78	43.2 $\pm$ 8.00	18.5 $\pm$ 2.85	371	152.9 $\pm$ 5.51	43.6 $\pm$ 7.82	18.6 $\pm$ 3.07	1439	153.0 $\pm$ 5.84	43.9 $\pm$ 8.09	18.7 $\pm$ 3.10
12-17	1421	151.9 $\pm$ 6.57	42.2 $\pm$ 8.76	18.2 $\pm$ 3.12	1244	150.4 $\pm$ 6.43	41.2 $\pm$ 7.74	18.1 $\pm$ 2.88	1011	151.0 $\pm$ 6.70	41.0 $\pm$ 8.72	17.9 $\pm$ 3.12	3676	151.2 $\pm$ 7.00	41.6 $\pm$ 8.43	18.1 $\pm$ 3.04

**Table 6.1 Mean ( $\pm$  SD), MUAC (Cm), Waist Circumference (Cm), and Hip Circumference (Cm) of Adolescent Boys**

Age (Yrs)	Telangana				Coastal Andhra				Rayalaseema				Pooled			
	n	MUAC	Waist Circum.	Hip Circum.	n	MUAC	Waist Circum.	Hip Circum.	n	MUAC	Waist Circum.	Hip Circum.	n	MUAC	Waist Circum.	Hip Circum.
12	128	19.2 $\pm$ 2.77	59.4 $\pm$ 6.98	72.8 $\pm$ 7.71	231	19.0 $\pm$ 2.67	59.4 $\pm$ 7.34	72.2 $\pm$ 8.03	244	19.0 $\pm$ 2.75	59.2 $\pm$ 6.75	70.9 $\pm$ 7.62	603	19.1 $\pm$ 2.72	59.3 $\pm$ 7.02	71.8 $\pm$ 7.82
13	212	19.8 $\pm$ 2.78	60.7 $\pm$ 6.60	74.8 $\pm$ 6.90	300	19.3 $\pm$ 2.66	59.7 $\pm$ 6.20	73.3 $\pm$ 7.05	925	19.5 $\pm$ 2.67	60.4 $\pm$ 7.07	72.9 $\pm$ 7.30	807	19.5 $\pm$ 2.70	60.2 $\pm$ 6.64	73.5 $\pm$ 7.14
14	295	20.9 $\pm$ 2.69	62.3 $\pm$ 5.75	78.3 $\pm$ 7.20	299	20.2 $\pm$ 2.68	61.9 $\pm$ 6.09	76.7 $\pm$ 7.21	353	20.7 $\pm$ 2.97	63.0 $\pm$ 7.46	76.4 $\pm$ 8.04	947	20.6 $\pm$ 2.80	62.4 $\pm$ 6.55	77.0 $\pm$ 7.56
15	198	21.8 $\pm$ 2.93	64.0 $\pm$ 6.70	80.5 $\pm$ 7.58	217	21.3 $\pm$ 2.87	63.4 $\pm$ 6.50	79.9 $\pm$ 6.97	258	21.5 $\pm$ 2.93	64.2 $\pm$ 6.96	79.8 $\pm$ 7.76	673	21.5 $\pm$ 2.91	63.9 $\pm$ 6.74	80.0 $\pm$ 7.46
16	161	22.4 $\pm$ 3.06	65.0 $\pm$ 7.14	81.4 $\pm$ 7.26	213	22.4 $\pm$ 2.44	65.6 $\pm$ 5.93	82.9 $\pm$ 5.83	235	22.4 $\pm$ 2.39	65.3 $\pm$ 5.68	82.4 $\pm$ 6.65	609	22.4 $\pm$ 2.60	65.4 $\pm$ 6.18	82.3 $\pm$ 6.56
17	142	24.2 $\pm$ 3.39	69.1 $\pm$ 8.72	85.7 $\pm$ 8.37	139	23.0 $\pm$ 2.47	66.4 $\pm$ 6.22	84.0 $\pm$ 6.30	146	22.7 $\pm$ 2.16	65.6 $\pm$ 4.64	82.9 $\pm$ 5.00	427	23.3 $\pm$ 2.79	67.0 $\pm$ 6.88	84.2 $\pm$ 6.77
12-14	635	20.2 $\pm$ 2.83	61.2 $\pm$ 6.40	76.0 $\pm$ 7.53	830	19.6 $\pm$ 2.71	60.4 $\pm$ 6.58	74.2 $\pm$ 7.64	892	19.8 $\pm$ 2.90	61.1 $\pm$ 7.32	73.7 $\pm$ 8.00	2357	19.9 $\pm$ 2.82	60.9 $\pm$ 6.83	74.5 $\pm$ 7.80
15-17	501	22.7 $\pm$ 3.25	65.8 $\pm$ 7.74	82.3 $\pm$ 8.01	569	22.1 $\pm$ 2.70	64.9 $\pm$ 6.34	82.0 $\pm$ 6.63	639	22.1 $\pm$ 2.62	64.9 $\pm$ 6.05	81.5 $\pm$ 6.93	1709	22.3 $\pm$ 2.86	65.2 $\pm$ 6.70	81.9 $\pm$ 7.17
12-17	1136	21.3 $\pm$ 3.26	63.2 $\pm$ 7.40	78.7 $\pm$ 8.34	1399	20.6 $\pm$ 2.98	62.3 $\pm$ 6.86	77.4 $\pm$ 8.20	1531	20.8 $\pm$ 3.00	62.7 $\pm$ 7.07	76.9 $\pm$ 8.47	4066	20.9 $\pm$ 3.08	62.7 $\pm$ 7.10	77.6 $\pm$ 8.37

**Table 6.2 Mean ( $\pm$  SD) MUAC (Cm), Waist Circumference (Cm) and Hip Circumference (Cm) of Adolescent Girls**

Age (Yrs)	Telangana			Coastal Andhra			Rayalaseema			Pooled						
	n	MUAC	Waist Circum.	Hip Circum.	n	MUAC	Waist Circum.	Hip Circum.	n	MUAC	Waist Circum.	Hip Circum.	n	MUAC	Waist Circum.	Hip Circum.
12	194	20.2 $\pm$ 2.50	59.3 $\pm$ 5.86	77.0 $\pm$ 7.26	198	20.2 $\pm$ 2.50	59.1 $\pm$ 6.03	78.5 $\pm$ 8.13	209	20.0 $\pm$ 2.70	59.9 $\pm$ 6.47	76.7 $\pm$ 7.56	601	20.1 $\pm$ 2.57	59.4 $\pm$ 6.14	77.4 $\pm$ 7.70
13	262	20.7 $\pm$ 2.45	59.1 $\pm$ 5.50	79.3 $\pm$ 7.04	238	21.2 $\pm$ 2.63	61.0 $\pm$ 6.10	81.5 $\pm$ 7.52	198	21.1 $\pm$ 2.92	61.8 $\pm$ 6.98	80.5 $\pm$ 7.76	698	20.9 $\pm$ 2.66	60.5 $\pm$ 6.25	80.4 $\pm$ 7.46
14	281	21.0 $\pm$ 2.23	59.8 $\pm$ 6.09	80.9 $\pm$ 6.40	253	21.4 $\pm$ 2.19	60.9 $\pm$ 5.37	82.9 $\pm$ 5.86	232	21.7 $\pm$ 3.10	63.9 $\pm$ 8.03	83.0 $\pm$ 7.55	766	21.4 $\pm$ 2.52	61.4 $\pm$ 6.75	82.2 $\pm$ 6.66
15	188	22.0 $\pm$ 2.87	61.8 $\pm$ 7.25	83.0 $\pm$ 7.80	233	21.5 $\pm$ 2.34	61.3 $\pm$ 5.81	83.7 $\pm$ 6.06	153	21.9 $\pm$ 2.81	62.8 $\pm$ 6.86	84.7 $\pm$ 7.28	574	21.8 $\pm$ 2.65	61.8 $\pm$ 6.61	83.7 $\pm$ 7.02
16	115	21.6 $\pm$ 2.29	60.0 $\pm$ 5.68	83.7 $\pm$ 6.34	212	22.2 $\pm$ 2.58	62.2 $\pm$ 6.86	85.3 $\pm$ 6.94	131	22.1 $\pm$ 2.71	61.6 $\pm$ 6.74	85.4 $\pm$ 6.97	458	22.0 $\pm$ 2.56	61.5 $\pm$ 6.60	84.9 $\pm$ 6.83
17	58	21.8 $\pm$ 2.40	59.5 $\pm$ 6.66	83.8 $\pm$ 8.56	109	22.6 $\pm$ 2.84	63.3 $\pm$ 7.30	87.0 $\pm$ 7.41	78	22.1 $\pm$ 2.63	62.6 $\pm$ 6.70	86.0 $\pm$ 6.51	245	22.3 $\pm$ 2.69	62.2 $\pm$ 7.10	85.9 $\pm$ 7.51
12-14	737	20.7 $\pm$ 2.40	59.4 $\pm$ 5.82	79.3 $\pm$ 7.02	689	20.9 $\pm$ 2.49	60.4 $\pm$ 5.88	81.2 $\pm$ 7.35	639	20.9 $\pm$ 3.00	62.0 $\pm$ 7.41	80.2 $\pm$ 8.05	2065	20.9 $\pm$ 2.63	60.5 $\pm$ 6.46	80.2 $\pm$ 7.50
15-17	361	21.8 $\pm$ 2.62	60.9 $\pm$ 6.74	83.3 $\pm$ 7.50	554	22.0 $\pm$ 2.57	62.0 $\pm$ 6.57	84.9 $\pm$ 6.80	362	22.0 $\pm$ 2.73	62.3 $\pm$ 6.80	85.3 $\pm$ 7.01	1277	21.9 $\pm$ 2.63	61.8 $\pm$ 6.70	84.6 $\pm$ 7.09
12-17	1098	21.1 $\pm$ 2.54	59.9 $\pm$ 6.18	80.6 $\pm$ 7.42	1243	21.4 $\pm$ 2.58	61.1 $\pm$ 6.24	82.9 $\pm$ 7.35	1001	21.4 $\pm$ 2.95	62.1 $\pm$ 7.20	82.0 $\pm$ 8.06	3342	21.3 $\pm$ 2.69	61.0 $\pm$ 6.58	81.9 $\pm$ 7.65

**Table 7.1 Mean ( $\pm$  SD) Skin fold Thickness (mm) Measurements of Adolescent Boys by site**

Age (yrs)	Telangana					Coastal Andhra					Rayalaseema					Pooled				
	n	Triceps	Biceps	Sub-scapular	Supra-iliac	n	Triceps	Biceps	Sub-scapular	Supra-iliac	n	Triceps	Biceps	Sub-scapular	Supra-iliac	n	Triceps	Biceps	Sub-scapular	Supra-iliac
12	127	9.6 $\pm$ 5.0	5.6 $\pm$ 2.8	8.5 $\pm$ 5.0	8.6 $\pm$ 6.3	231	9.9 $\pm$ 4.8	6.2 $\pm$ 3.4	9.1 $\pm$ 6.7	8.1 $\pm$ 6.3	243	9.5 $\pm$ 5.2	6.2 $\pm$ 3.8	8.5 $\pm$ 5.9	10.0 $\pm$ 8.8	601	9.7 $\pm$ 4.9	6.0 $\pm$ 3.4	8.7 $\pm$ 6.0	9.0 $\pm$ 7.4
13	213	8.9 $\pm$ 4.2	5.1 $\pm$ 2.2	8.2 $\pm$ 4.4	7.9 $\pm$ 5.2	300	9.7 $\pm$ 4.7	5.8 $\pm$ 3.1	8.7 $\pm$ 4.8	7.4 $\pm$ 4.9	295	9.2 $\pm$ 4.7	5.9 $\pm$ 3.5	8.2 $\pm$ 4.8	9.4 $\pm$ 7.4	808	9.3 $\pm$ 4.6	5.7 $\pm$ 3.0	8.4 $\pm$ 4.7	8.3 $\pm$ 6.0
14	295	8.8 $\pm$ 4.0	5.0 $\pm$ 2.3	8.7 $\pm$ 4.0	8.5 $\pm$ 6.6	299	9.1 $\pm$ 4.7	5.4 $\pm$ 2.8	8.9 $\pm$ 5.8	7.4 $\pm$ 4.6	353	8.9 $\pm$ 5.0	5.8 $\pm$ 3.6	8.6 $\pm$ 5.4	9.9 $\pm$ 8.5	947	9.0 $\pm$ 4.6	5.5 $\pm$ 3.0	8.7 $\pm$ 5.1	8.7 $\pm$ 6.9
15	198	8.8 $\pm$ 4.9	4.9 $\pm$ 2.4	8.8 $\pm$ 4.4	8.5 $\pm$ 5.8	217	9.1 $\pm$ 4.8	5.2 $\pm$ 3.0	9.3 $\pm$ 5.5	7.7 $\pm$ 5.1	258	9.3 $\pm$ 5.3	5.6 $\pm$ 3.2	9.1 $\pm$ 5.2	9.8 $\pm$ 7.2	673	9.1 $\pm$ 5.0	5.2 $\pm$ 2.9	9.1 $\pm$ 5.1	8.7 $\pm$ 6.3
16	161	9.0 $\pm$ 5.7	4.8 $\pm$ 3.0	9.6 $\pm$ 5.2	9.0 $\pm$ 6.9	213	8.9 $\pm$ 4.6	5.3 $\pm$ 3.3	9.3 $\pm$ 4.6	7.6 $\pm$ 4.8	235	9.1 $\pm$ 4.6	5.2 $\pm$ 2.7	9.3 $\pm$ 3.8	9.6 $\pm$ 5.3	609	9.0 $\pm$ 4.9	5.1 $\pm$ 3.0	9.4 $\pm$ 4.5	8.8 $\pm$ 5.7
17	143	10.4 $\pm$ 5.5	5.2 $\pm$ 2.9	12.0 $\pm$ 5.9	11.3 $\pm$ 7.3	139	9.2 $\pm$ 5.1	5.4 $\pm$ 3.2	10.1 $\pm$ 4.6	8.3 $\pm$ 5.4	246	8.5 $\pm$ 3.7	4.7 $\pm$ 2.4	9.1 $\pm$ 3.0	9.3 $\pm$ 4.0	428	9.4 $\pm$ 4.9	5.1 $\pm$ 2.8	10.4 $\pm$ 4.8	9.7 $\pm$ 5.8
12-14	635	9.0 $\pm$ 4.3	5.2 $\pm$ 2.4	8.5 $\pm$ 4.3	8.3 $\pm$ 6.1	830	9.6 $\pm$ 4.7	5.8 $\pm$ 3.1	8.9 $\pm$ 5.7	7.6 $\pm$ 5.2	891	9.2 $\pm$ 4.9	5.9 $\pm$ 3.6	8.4 $\pm$ 5.4	9.8 $\pm$ 8.2	2356	9.3 $\pm$ 4.7	5.7 $\pm$ 3.2	8.6 $\pm$ 5.3	8.6 $\pm$ 6.8
15-17	502	9.3 $\pm$ 5.4	5.0 $\pm$ 2.8	10.0 $\pm$ 5.3	9.4 $\pm$ 6.7	569	9.0 $\pm$ 4.8	5.3 $\pm$ 3.2	9.5 $\pm$ 4.9	7.8 $\pm$ 5.1	639	9.0 $\pm$ 4.7	5.2 $\pm$ 2.8	9.2 $\pm$ 4.3	9.6 $\pm$ 5.9	1710	9.1 $\pm$ 4.9	5.2 $\pm$ 2.9	9.5 $\pm$ 4.8	8.9 $\pm$ 5.9
12-17	1137	9.2 $\pm$ 4.8	5.1 $\pm$ 2.6	9.1 $\pm$ 4.8	8.8 $\pm$ 6.4	1399	9.3 $\pm$ 4.7	5.6 $\pm$ 3.1	9.1 $\pm$ 5.4	7.7 $\pm$ 5.2	1530	9.1 $\pm$ 4.9	5.7 $\pm$ 3.3	8.7 $\pm$ 4.9	9.7 $\pm$ 7.3	4066	9.2 $\pm$ 4.8	5.5 $\pm$ 3.0	9.0 $\pm$ 5.1	8.8 $\pm$ 6.5

**Table 7.2 Mean ( $\pm$  SD) Skin fold Thickness (mm) Measurements of Adolescent Girls by site**

Age (yrs)	Telangana					Coastal Andhra					Rayalaseema					Pooled				
	n	Triceps	Biceps	Sub-scapular	Supra-iliac	n	Triceps	Biceps	Sub-scapular	Supra-iliac	n	Triceps	Biceps	Sub-scapular	Supra-iliac	n	Triceps	Biceps	Sub-scapular	Supra-iliac
12	177	12.7 $\pm$ 5.4	6.5 $\pm$ 2.9	11.8 $\pm$ 5.9	11.6 $\pm$ 5.0	198	14.7 $\pm$ 5.7	8.0 $\pm$ 3.8	12.8 $\pm$ 5.9	11.9 $\pm$ 6.0	208	12.9 $\pm$ 4.9	7.4 $\pm$ 3.6	13.1 $\pm$ 6.6	14.4 $\pm$ 7.5	583	13.4 $\pm$ 5.4	7.4 $\pm$ 3.5	12.6 $\pm$ 6.2	12.7 $\pm$ 6.4
13	246	13.2 $\pm$ 5.3	6.6 $\pm$ 2.4	12.5 $\pm$ 5.3	11.9 $\pm$ 5.8	238	15.9 $\pm$ 6.3	8.6 $\pm$ 4.2	14.4 $\pm$ 6.9	13.7 $\pm$ 7.3	182	14.0 $\pm$ 5.6	8.2 $\pm$ 4.1	14.9 $\pm$ 7.8	15.8 $\pm$ 8.4	666	14.4 $\pm$ 5.9	7.7 $\pm$ 3.7	13.8 $\pm$ 6.7	13.6 $\pm$ 7.3
14	271	13.4 $\pm$ 4.3	6.6 $\pm$ 2.7	13.1 $\pm$ 4.6	12.1 $\pm$ 4.5	253	16.7 $\pm$ 5.5	8.8 $\pm$ 4.4	15.4 $\pm$ 6.1	14.1 $\pm$ 5.9	219	14.5 $\pm$ 5.9	8.0 $\pm$ 4.1	14.9 $\pm$ 7.7	16.0 $\pm$ 8.5	743	14.9 $\pm$ 5.4	7.8 $\pm$ 3.9	14.4 $\pm$ 6.3	13.9 $\pm$ 6.6
15	175	15.4 $\pm$ 5.5	7.4 $\pm$ 3.0	15.2 $\pm$ 6.3	15.1 $\pm$ 6.4	233	16.0 $\pm$ 6.0	8.5 $\pm$ 4.2	15.3 $\pm$ 6.9	13.9 $\pm$ 6.7	153	15.8 $\pm$ 6.4	8.3 $\pm$ 3.8	16.5 $\pm$ 7.1	17.8 $\pm$ 8.5	561	15.7 $\pm$ 6.0	8.1 $\pm$ 3.8	15.6 $\pm$ 6.8	15.3 $\pm$ 7.3
16	113	14.5 $\pm$ 5.0	6.6 $\pm$ 3.0	14.7 $\pm$ 5.8	14.3 $\pm$ 6.9	212	17.3 $\pm$ 5.9	9.1 $\pm$ 4.2	17.5 $\pm$ 7.7	14.9 $\pm$ 6.8	131	16.7 $\pm$ 6.2	8.2 $\pm$ 3.7	17.4 $\pm$ 7.4	17.6 $\pm$ 9.0	546	16.4 $\pm$ 5.9	8.2 $\pm$ 3.9	16.7 $\pm$ 7.3	15.5 $\pm$ 7.6
17	58	15.7 $\pm$ 6.4	6.4 $\pm$ 3.2	15.5 $\pm$ 6.6	14.7 $\pm$ 6.6	109	18.3 $\pm$ 6.9	9.8 $\pm$ 4.7	18.3 $\pm$ 8.2	15.9 $\pm$ 7.4	78	17.6 $\pm$ 6.3	8.0 $\pm$ 3.6	17.1 $\pm$ 7.4	17.7 $\pm$ 8.0	245	17.5 $\pm$ 6.7	8.4 $\pm$ 4.3	17.3 $\pm$ 7.6	16.2 $\pm$ 7.5
12-14	694	13.1 $\pm$ 4.9	6.6 $\pm$ 2.7	12.5 $\pm$ 5.2	11.9 $\pm$ 5.1	689	15.9 $\pm$ 5.9	8.5 $\pm$ 4.2	14.3 $\pm$ 6.5	13.4 $\pm$ 6.5	609	13.8 $\pm$ 5.5	7.9 $\pm$ 4.0	14.3 $\pm$ 7.4	15.4 $\pm$ 8.2	1992	14.3 $\pm$ 5.6	7.6 $\pm$ 3.7	13.7 $\pm$ 6.4	13.5 $\pm$ 6.8
15-17	346	15.1 $\pm$ 5.5	6.9 $\pm$ 3.1	15.1 $\pm$ 6.2	14.7 $\pm$ 6.6	554	16.9 $\pm$ 6.3	9.0 $\pm$ 4.3	16.7 $\pm$ 7.6	14.7 $\pm$ 6.9	362	16.5 $\pm$ 6.3	8.2 $\pm$ 3.7	16.9 $\pm$ 6.3	17.7 $\pm$ 8.5	1262	16.3 $\pm$ 6.1	8.2 $\pm$ 3.9	16.3 $\pm$ 7.2	15.6 $\pm$ 7.5
12-17	1040	13.8 $\pm$ 5.2	6.7 $\pm$ 2.8	13.4 $\pm$ 5.7	12.9 $\pm$ 5.8	1243	16.4 $\pm$ 6.0	8.7 $\pm$ 4.2	15.5 $\pm$ 7.0	13.9 $\pm$ 6.7	971	14.8 $\pm$ 6.0	8.0 $\pm$ 3.9	15.3 $\pm$ 7.5	16.3 $\pm$ 8.4	3254	15.0 $\pm$ 5.9	7.9 $\pm$ 3.8	14.7 $\pm$ 6.9	14.3 $\pm$ 7.1

**Table 8 Mean ( $\pm$  SD) BMI of Adolescent According to age/sex specific BMI centiles\* – by Gender**

Age & Sex Specific BMI Centiles	Nutritional Grade	Gender	Region						Pooled	
			Telangana		Coastal Andhra		Rayalaseema			
			n	BMI $\pm$ SD	n	BMI $\pm$ SD	n	BMI $\pm$ SD	n	BMI $\pm$ SD
< 85 <sup>th</sup>	Non-Overweight/Obese	Boys	1220	16.8 $\pm$ 2.17	1349	16.7 $\pm$ 2.12	1472	16.4 $\pm$ 2.0	4041	16.6 $\pm$ 2.11
		Girls	1310	17.6 $\pm$ 2.25	1168	17.7 $\pm$ 2.21	938	17.3 $\pm$ 2.35	3416	17.6 $\pm$ 2.27
		<b>Pooled</b>	<b>2530</b>	<b>17.2 <math>\pm</math> 2.25</b>	<b>2517</b>	<b>17.2 <math>\pm</math> 2.21</b>	<b>2410</b>	<b>16.8 <math>\pm</math> 2.21</b>	<b>7457</b>	<b>17.1 <math>\pm</math> 2.23</b>
$\geq$ 85 - < 95 <sup>th</sup>	Overweight	Boys	65	24.8 $\pm$ 1.82	45	24.9 $\pm$ 1.75	57	24.3 $\pm$ 1.58	167	24.7 $\pm$ 1.73
		Girls	98	24.8 $\pm$ 1.79	69	24.8 $\pm$ 1.57	67	24.9 $\pm$ 1.57	234	24.8 $\pm$ 1.66
		<b>Pooled</b>	<b>163</b>	<b>24.8 <math>\pm</math> 1.79</b>	<b>114</b>	<b>24.8 <math>\pm</math> 1.63</b>	<b>124</b>	<b>24.6 <math>\pm</math> 1.59</b>	<b>401</b>	<b>24.7 <math>\pm</math> 1.68</b>
$\geq$ 95 <sup>th</sup>	Obese	Boys	10	30.3 $\pm$ 2.40	5	30.0 $\pm$ 2.77	6	29.9 $\pm$ 2.30	21	30.1 $\pm$ 2.34
		Girls	13	30.9 $\pm$ 3.60	7	30.6 $\pm$ 1.59	6	30.2 $\pm$ 2.53	26	30.7 $\pm$ 2.87
		<b>Pooled</b>	<b>23</b>	<b>30.7 <math>\pm</math> 3.09</b>	<b>12</b>	<b>30.4 <math>\pm</math> 2.07</b>	<b>12</b>	<b>30.1 <math>\pm</math> 2.30</b>	<b>47</b>	<b>30.4 <math>\pm</math> 2.63</b>

\* Tim Cole (IOTF) References

**Table 9 Prevalence (%) of overweight and obesity among Adolescents by Age and Gender**

Age (Yrs)	Gender	Regions									State Pooled		
		Telangana			Coastal Andhra			Rayalaseema					
		n	Overweight	Obese	n	Overweight	Obese	n	Overweight	Obese	n	Overweight	Obese
12	Boys	194	7.7	0.5	231	3.5	0.9	244	3.7	0.8	669	4.8	0.7
	Girls	239	9.6	0.8	198	5.1	0.5	210	3.3	1.0	647	6.2	0.8
	<i>Pooled</i>	433	8.8	0.7	429	4.2	0.7	454	3.5	0.9	1316	5.5	0.8
13	Boys	274	4.0	1.8	300	2.0	0.3	295	3.4	0.7	869	3.1	0.9
	Girls	325	6.2	0.9	239	7.9	0.8	198	8.6	0.5	762	7.3	0.8
	<i>Pooled</i>	599	5.2	1.3	539	4.6	0.6	493	5.5	0.6	1631	5.1	0.9
14	Boys	321	2.8	0.3	299	3.0	0.3	353	4.5	0.3	973	3.5	0.3
	Girls	343	6.4	0.6	253	4.3	0.4	232	8.6	0.4	828	6.4	0.5
	<i>Pooled</i>	664	4.7	0.5	552	3.6	0.4	585	6.2	0.3	1801	4.8	0.4
15	Boys	202	5.0	0.5	217	4.1	0.5	258	3.9	0.4	677	4.3	0.4
	Girls	225	5.8	0.9	233	3.4	0.4	153	7.2	0.7	611	5.2	0.7
	<i>Pooled</i>	427	5.4	0.7	450	3.8	0.4	411	5.1	0.5	1288	4.7	0.5
16	Boys	161	5.0	0	213	3.8	0	236	3.8	0	610	4.1	0
	Girls	163	6.1	1.2	212	6.6	0.5	139	4.3	0.7	514	5.8	0.8
	<i>Pooled</i>	324	5.6	0.6	425	5.2	0.2	375	4.0	0.3	1124	4.9	0.4
17	Boys	143	8.4	1.4	139	3.6	0	149	2.0	0	431	4.6	0.5
	Girls	126	7.9	1.6	109	6.4	0.9	79	7.6	0	314	7.3	1.0
	<i>Pooled</i>	269	8.2	1.5	248	4.8	0.4	228	3.9	0	745	5.8	0.7
<b>Pooled</b>	<b>Boys</b>	<b>1295</b>	<b>5.0</b>	<b>0.8</b>	<b>1399</b>	<b>3.2</b>	<b>0.4</b>	<b>1535</b>	<b>3.7</b>	<b>0.4</b>	<b>4229</b>	<b>3.9</b>	<b>0.5</b>
	<b>Girls</b>	<b>1421</b>	<b>6.9</b>	<b>0.9</b>	<b>1244</b>	<b>5.5</b>	<b>0.6</b>	<b>1011</b>	<b>6.6</b>	<b>0.6</b>	<b>3676</b>	<b>6.4</b>	<b>0.7</b>
	<b><i>Pooled</i></b>	<b>2716</b>	<b>6.0</b>	<b>0.8</b>	<b>2643</b>	<b>4.3</b>	<b>0.5</b>	<b>2546</b>	<b>4.9</b>	<b>0.5</b>	<b>7905</b>	<b>5.1</b>	<b>0.6</b>

**Table 10 Prevalence (%) of Overweight and Obesity among Urban Adolescents by type of Institution and Gender**

Type of School/ College	Gender	Regions									State Pooled		
		Telangana			Coastal Andhra			Rayalaseema					
		n	Overweight	Obese	n	Overweight	Obese	n	Overweight	Obese	n	Overweight	Obese
Govt.	Boys	685	1.3	0	741	0.9	0.1	928	1.2	0.1	2354	1.1	0.1
	Girls	798	2.8	0.3	779	4.0	0.5	419	4.1	0.5	1996	3.5	0.4
	<i>Pooled</i>	<i>1483</i>	<i>2.1</i>	<i>0.1</i>	<i>1520</i>	<i>2.5</i>	<i>0.3</i>	<i>1347</i>	<i>2.1</i>	<i>0.2</i>	<i>4350</i>	<i>2.2</i>	<i>0.2</i>
Private	Boys	610	9.2	1.6	658	5.8	0.6	607	7.6	0.8	1875	7.5	1.0
	Girls	623	12.2	1.8	465	8.2	0.6	592	8.4	0.7	1680	9.8	1.1
	<i>Pooled</i>	<i>1233</i>	<i>10.7</i>	<i>1.7</i>	<i>1123</i>	<i>6.8</i>	<i>0.6</i>	<i>1199</i>	<i>8.0</i>	<i>0.8</i>	<i>3555</i>	<i>8.6</i>	<i>1.0</i>
Pooled	<b>Boys</b>	<b>1295</b>	<b>5.0</b>	<b>0.8</b>	<b>1399</b>	<b>3.2</b>	<b>0.4</b>	<b>1535</b>	<b>3.7</b>	<b>0.4</b>	<b>4229</b>	<b>3.9</b>	<b>0.5</b>
	<b>Girls</b>	<b>1421</b>	<b>6.9</b>	<b>0.9</b>	<b>1244</b>	<b>5.5</b>	<b>0.6</b>	<b>1011</b>	<b>6.6</b>	<b>0.6</b>	<b>3676</b>	<b>6.4</b>	<b>0.7</b>
	<i><b>Pooled</b></i>	<i><b>2716</b></i>	<i><b>6.0</b></i>	<i><b>0.8</b></i>	<i><b>2643</b></i>	<i><b>4.3</b></i>	<i><b>0.5</b></i>	<i><b>2546</b></i>	<i><b>4.9</b></i>	<i><b>0.5</b></i>	<i><b>7905</b></i>	<i><b>5.1</b></i>	<i><b>0.6</b></i>

**Table 11 Prevalence (%) of Overweight and Obesity among Urban Adolescents by Socio-economic Status and Gender**

Socio Economic Status	Gender	Region									Pooled		
		Telangana			Coastal Andhra			Rayalaseema					
		n	Over-weight	Obese	n	Over-weight	Obese	n	Over-weight	Obese	n	Over-weight	Obese
Low	Boys	683	1.5	0	768	0.8	0	856	1.6	0	2307	1.3 <sup>a</sup>	0
	Girls	749	2.3	0.1	671	2.8	0.4	424	3.8	0.2	1844	2.8 <sup>b</sup>	0.3
	<b>Pooled</b>	<b>1432</b>	<b>1.9</b>	<b>0.1</b>	<b>1439</b>	<b>1.7</b>	<b>0.2</b>	<b>1280</b>	<b>2.3</b>	<b>0.1</b>	<b>4151</b>	<b>2.0<sup>a</sup></b>	<b>0.1</b>
High	Boys	612	9.0	1.6	631	6.2	0.8	679	6.3	0.9	1922	7.1 <sup>a</sup>	1.1
	Girls	672	12.1	1.8	573	8.7	0.7	587	8.7	0.9	1832	9.9 <sup>b</sup>	1.1
	<b>Pooled</b>	<b>1284</b>	<b>10.6</b>	<b>1.7</b>	<b>1204</b>	<b>7.4</b>	<b>0.7</b>	<b>1266</b>	<b>7.4</b>	<b>0.9</b>	<b>3754</b>	<b>8.5<sup>b</sup></b>	<b>1.1</b>
<b>Pooled</b>		<b>2716</b>	<b>6.0</b>	<b>0.8</b>	<b>2643</b>	<b>4.3</b>	<b>0.5</b>	<b>2546</b>	<b>4.9</b>	<b>0.5</b>	<b>7905</b>	<b>5.1</b>	<b>0.6</b>

Note : Variations in superscripts indicates significant (p<0.05) difference between groups of that variable

**Table 12 Distribution (%) of Overweight/ Obese Adolescents by Household characteristics**

Variable		Region			State Pooled (n = 7905)
		Telangana (n = 2716)	Coastal Andhra (n = 2643)	Rayalaseema (n = 2546)	
<b>Community</b>	Scheduled Tribe	1.5	3.4	2.9	2.3 <sup>a</sup>
	Scheduled Caste	4.1	3.3	2.5	3.4 <sup>a</sup>
	Backward Class	4.3	3.3	4.1	3.9 <sup>a</sup>
	Others	13.1	7.5	7.4	9.1 <sup>b</sup>
<b>Occupation of Father</b>	Labourer	2.9	2.4	2.2	2.5 <sup>a</sup>
	Cultivator	1.2	2.2	1.7	1.8 <sup>a</sup>
	Service	8.2	7.8	9.0	8.3 <sup>b,c</sup>
	Business	11.4	7.1	8.3	9.0 <sup>b</sup>
	Artisans	1.9	3.6	2.6	2.7 <sup>a,c</sup>
	Father not alive	5.8	2.4	7.1	5.0 <sup>c</sup>
	Others	7.1	8.6	0	5.9 <sup>b,c</sup>
<b>Occupation of Mother</b>	Laborer	1.7	1.2	1.7	1.5
	Cultivator	1.4	2.3	0.5	1.5
	Service	8.9	8.3	15.0	10.6
	Business	5.2	3.8	14.9	8.7
	Artisans	2.4	2.5	3.1	2.7
	Housewife	8.5	5.6	5.3	6.5
	Mother not alive	11.1	0	0	4.9
	Others	12.0	9.1	0	8.7
<b>Literacy status of Father</b>	Illiterate	1.8	1.5	1.5	1.6 <sup>a</sup>
	Read & Wright	3.9	3.4	4.0	3.8 <sup>b</sup>
	1-5 <sup>th</sup> Standard	3.9	2.6	3.4	3.2 <sup>b</sup>
	6-8 <sup>th</sup> Standard	4.1	4.4	3.9	4.1 <sup>b,c</sup>
	9-12 <sup>th</sup> Standard	6.0	5.5	5.9	5.8 <sup>c,e</sup>
	College & above	13.4	11.8	11.3	12.4 <sup>d</sup>
	Father not alive	5.8	2.4	7.1	5.0 <sup>b,e</sup>

Note : Variations in superscripts indicates significant (p<0.05) difference between groups of that variable

**Table 13 Distribution (%) of Overweight/ Obese Adolescents by Household characteristics**

Variable		Region			State Pooled (n = 7905)
		Telangan a (n = 2716)	Coastal Andhra (n = 2643)	Rayalaseema (n = 2546)	
Literacy status of mother	Illiterate	2.2	2.0	2.4	2.2 <sup>a</sup>
	Read & Write	5.2	3.0	2.9	3.7 <sup>b</sup>
	1 <sup>st</sup> to 5 <sup>th</sup> Standard	5.1	4.4	5.4	4.8 <sup>b</sup>
	6 <sup>th</sup> to 8 <sup>th</sup> Standard	5.7	6.8	4.1	5.6 <sup>b</sup>
	9 <sup>th</sup> to 12 <sup>th</sup> Standard	9.4	7.2	8.5	8.4 <sup>c</sup>
	College & Above	17.8	12.3	16.1	16.1 <sup>d</sup>
	Mother not alive	11.1	0	0	4.9 <sup>a,b,c,d</sup>
Family size	≤4	9.6	5.9	7.6	7.6
	≥5	5.3	3.9	3.9	4.4
Type of house	Pucca	10.0	6.6	6.3	7.6
	Semi pucca	2.4	3.7	3.4	3.1
	Kutchra	1.5	0.8	2.4	1.4
No. of rooms in the house	≤3	3.1	3.8	3.7	3.5
	4-6	13.1	7.1	9.3	10.1
	≥7	21.3	11.7	14.1	17.0
Type of cooking fuel used at home	Firewood	1.0	1.7	2.3	1.8
	Kerosene	2.0	2.6	4.5	2.9
	LPG/Bio gas	9.3	7.0	7.9	8.2
Playground at school	Available	6.0	4.5	5.2	5.2
	Not available	11.4	5.9	6.1	7.8
Playground near residence	Available	7.1	5.0	5.7	6.1
	Not available	6.6	4.7	5.1	5.4
Presence of home garden	Available	9.7	5.8	5.7	7.7
	Not available	5.8	4.5	5.3	5.2

Note : Variations in superscripts indicates significant (p<0.05) difference between groups of that variable

**Table 14 Distribution (%) of Adolescents (cases and control group) according to their habits and Practices by Gender**

Variable	Region						State Pooled					
	Telangana		Coastal Andhra		Rayalaseema		Cases			Controls		
	Cases (128)	Controls (273)	Cases (105)	Controls (209)	Cases (81)	Controls (145)	Boys (135)	Girls (179)	Pooled (314)	Boys (270)	Girls (357)	Pooled (627)
% Participating in Out-door Sports & Games	51.6	74.4	63.8	64.1	46.9	55.9	67.4	44.7	54.5	84.4	53.2	66.7
Average duration (hrs/wk)	2.4	4.4	2.5	3.7	1.8	2.6	3.5	1.4	2.3	5.9	2.2	3.7
% Participating in in-door Sports & Games	62.5	75.1	75.2	68.9	67.9	63.4	70.4	66.5	68.2	74.4	67.2	70.3
Average duration (hrs/wk)	2.1	3.2	2.1	2.6	2.0	2.0	2.5	1.7	2.1	3.3	2.3	2.7
% Practicing in Physical exercise daily	58.6	55.3	43.8	40.2	29.6	33.8	49.6	43.6	46.2	51.5	40.6	45.3
Average duration (hrs/wk)	4.4	5.0	4.2	4.5	1.5	3.0	5.1	3.0	3.5	5.3	3.2	4.1
% Participate in household activities	68.0	75.8	67.6	77.5	77.8	79.8	71.1	69.8	70.4	77.0	77.3	77.2
Average duration (min/day)	30	42	36	60	48	48	30	42	36	42	54	48
% Participation in NCC/ NSS/ Scouts & Guides	11.7	11.0	9.5	7.2	3.7	2.1	7.4	10.1	8.9	8.9	6.7	7.7
% Watching TV during School day	90.5	83.9	89.5	91.4	92.6	91.0	85.2	87.7	86.6	86.3	89.4	88.0
Average duration (hrs/day)	1.3	1.2	1.5	1.3	1.6	1.2	1.3	1.5	1.4	1.3	1.2	1.2
% Watch TV during holidays	89.1	90.1	97.1	95.7	98.8	97.2	91.1	96.6	94.3	91.5	95.2	93.6
Average duration (hrs/day)	3.6	3.2	4.4	3.4	3.9	3.5	4.0	3.9	3.9	3.4	3.3	3.3
% Doing home work/ reading/tuition	99.2	98.2	100.0	99.5	100.0	100.0	99.3	100.0	99.7	98.9	99.2	99.0
Average duration (hrs/day)	3.3	3.2	3.2	3.4	3.4	3.3	3.3	3.3	3.3	3.4	3.2	3.3
% of adolescents nap during a day	15.6	17.2	21.9	5.3	2.5	2.8	16.3	12.8	14.3	10.0	9.8	9.9
Average duration (min/day)	12	6	12	6	0	0	12	6	12	6	6	6
Average duration of Sleep at night (hrs/day)	7.0	7.3	7.2	7.4	7.4	7.4	7.2	7.2	7.2	7.3	7.4	7.4

**Table 15 Distribution (%) of Adolescents of 12-17 year old by their Habits and Practices**

Variable		Region						State Pooled					
		Telangana		Coastal Andhra		Rayalaseema		Cases			Control		
		Cases (128)	Control (273)	Cases (105)	Control (209)	Cases (81)	Control (145)	Boys (135)	Girls (179)	Pooled (314)	Boys (270)	Girls (357)	Pooled (627)
<b>Distance from residence to school</b>	< 1	28.1	39.9	37.1	43.5	71.6	71.0	40.7	43.6	42.4	45.6	50.4	48.3
	1 - 4	45.3	39.1	40.0	36.8	24.7	24.1	39.2	37.5	38.2	37.4	33.0	34.9
	5 – 10	21.8	16.1	18.2	12.5	1.2	21.1	15.6	15.2	15.3	12.3	11.3	11.6
	> 10	4.7	4.8	4.8	7.2	2.5	2.8	4.4	3.9	4.1	4.8	5.3	5.1
<b>Mode transport from residence to school</b>	Walking	22.7	26.4	33.3	30.0	55.6	49.0	30.4	38.0	34.7	28.5	36.1	32.9
	Public Transport	8.6	13.6	10.5	12.0	4.9	4.1	8.1	8.4	8.3	10.7	10.9	10.8
	Bicycle	14.8	15.0	30.5	39.7	27.2	33.8	32.6	10.2	23.2	34.4	22.4	27.6
	School bus/Auto	13.6	32.5	20.0	15.8	8.6	10.4	20.0	20.9	23.8	21.8	22.4	22.2
	Scooter	10.2	0.1	44.8	2.4	3.7	2.8	6.7	6.7	6.7	3.3	6.2	4.9
	Car	7.0	3.7	1.0	0	0	0	2.2	3.9	3.2	1.1	2.0	1.6
<b>Frequency of consumption of Fatty Foods</b>	Daily	14.8	17.9	5.7	14.4	7.4	6.9	14.1	6.7	9.9	18.5	10.9	14.2
	2-3 times a wk	40.6	31.1	53.3	51.7	35.8	37.2	43.0	44.1	43.6	37.0	41.5	39.4
	Once in 15 days	13.3	18.3	18.1	13.9	14.8	17.2	17.8	13.4	15.3	18.1	15.4	16.6
	Once in a month	23.4	24.2	16.2	15.3	27.2	23.4	16.3	26.3	22.0	17.8	23.5	21.1
	Not consuming	7.8	8.5	6.7	4.8	14.8	15.2	8.9	9.5	9.2	8.5	6.7	8.6
<b>Reasons for consumption of fatty Foods</b>	Like very much	73.4	72.9	66.7	67.9	69.1	61.4	74.8	66.5	70.1	68.9	68.3	68.6
	Peer pressure	5.5	2.2	3.8	1.9	1.2	5.5	2.2	5.0	3.8	4.4	1.7	2.9
	Prestige foods	3.1	1.8	6.7	5.7	2.5	2.8	3.7	4.5	4.1	3.0	3.6	3.3
	Parents pressure	1.6	5.9	11.4	13.9	13.6	11.7	4.4	10.6	8.0	6.7	12.3	9.9
	Others	7.0	7.3	2.9	2.4	1.2	0	5.9	2.8	4.1	7.0	1.7	4.0

**Table 16 Distribution (%) of overweighted and control Adolescents with their Habits, Practices and Perceptions**

Variables		Region						State Pooled					
		Telangana		Coastal Andhra		Rayalaseema		Cases			Controls		
		Cases (128)	Controls (273)	Cases (105)	Controls (209)	Cases (81)	Controls (145)	Boys (135)	Girls (179)	Pooled (314)	Boys (270)	Girls (357)	Pooled (627)
<b>Perception about body size</b>	Normal	16.4	67.4	23.8	48.7	25.9	63.4	25.2	18.4	21.3	68.8	53.8	60.3
	Lean	3.9	15.8	4.8	22.5	8.6	18.6	5.9	5.0	5.4	19.3	18.2	18.7
	Overweight/Obese	74.2	9.9	58.1	14.4	53.1	10.3	63.7	63.1	63.4	7.8	14.3	11.5
	No idea	5.5	7.0	13.3	14.4	12.3	7.6	5.2	13.4	9.9	1.1	13.7	9.6
<b>Desirable body size</b>	Present size	7.8	48.7	19.0	35.9	16.0	45.5	17.8	10.6	13.7	45.2	42.6	43.7
	Slim down	89.1	27.5	69.5	21.1	79.0	20.0	75.6	83.2	79.9	17.4	30.3	24.7
	Put on weight	1.6	20.1	3.8	25.1	3.7	25.5	3.7	2.2	2.9	31.9	16.5	23.1
	No idea	1.6	3.7	7.6	14.4	1.2	9.0	3.0	3.9	3.5	5.6	10.6	8.5
<b>Type of Diet</b>	Vegetarian	22.7	22.7	21.0	17.2	23.5	22.8	21.5	22.9	22.3	19.3	22.1	20.9
	Vegetarian + Egg	10.2	14.3	16.2	20.1	12.3	23.4	11.9	13.4	12.7	14.4	21.3	18.3
	Non-Vegetarian	67.1	63.0	62.8	62.7	64.2	53.8	66.7	63.7	68.0	66.3	56.6	60.8
<b>Type of cooking oil used at home</b>	Ground Nut Oil	18.0	26.4	27.6	20.6	21.0	28.3	19.3	24.0	22.0	25.9	24.1	24.9
	Sun Flower Oil	66.4	56.0	50.5	54.1	46.9	36.6	66.7	48.0	56.1	51.1	50.7	50.9
	Palm Oil	10.2	10.8	13.3	19.6	24.7	29.7	10.4	18.4	15.0	17.4	18.2	17.9
	Mustered Oil	0	0.7	1.0	0	0	0	0	0.6	0.3	0	0.6	0.3
	Coconut Oil	0.8	0.4	1.9	0	0	0.7	0.7	1.1	1.0	0	0.6	0.3
	More than one Oil	4.7	6.3	5.8	5.8	7.4	4.8	3.0	7.8	5.8	5.6	5.9	5.7
<b>Practicing Dietary restrictions</b>		27.3	10.3	28.6	24.9	12.3	13.1	25.9	22.3	23.9	11.5	19.0	15.8
<b>Usage of Health tonics &amp; tabs for health promotion</b>		4.7	10.6	3.8	10.0	9.9	6.2	5.2	6.1	5.7	9.3	9.5	9.4

**Table 17: Distribution (%) of Adolescent by BMI Grades\* and life style patterns**

Variable		Telangana			Coastal Andhra			Rayalaseema			State Pooled		
		Controls (n=273)	Cases (n=128)	P Value	Controls (n=209)	Cases (n=105)	P value	Controls (n=145)	Cases (n=81)	P Value	Controls (n=627)	Cases (n=314)	P Value
Participation in out door games (hrs/week)	None	25.6	48.4	0.001	35.9	36.2	0.024	44.1	53.1	0.200	33.3	45.5	0.001
	< 6	36.3	31.3		33.0	45.7		34.5	34.6		34.8	36.9	
	≥ 6	38.1	20.3		31.1	18.1		21.4	12.3		31.9	17.5	
Participation in indoor games (hrs/week)	None	24.9	37.5	0.017	31.1	24.8	0.015	36.6	32.1	0.719	29.7	31.8	0.020
	< 6	55.1	50.6		50.1	66.7		52.4	58.0		53.3	58.0	
	≥ 6	19.4	11.7		18.2	8.6		11.0	9.9		17.1	10.2	
Participation in HH activities (hrs/day)	None	18.3	25.0	0.113	21.5	27.6	0.024	20.0	22.2	0.917	19.8	25.2	0.013
	< 2	68.1	67.2		51.7	59.0		64.1	61.7		61.7	63.1	
	≥ 2	13.6	7.8		26.8	13.3		15.9	16.0		18.5	11.8	
Physical Exercise (h/wk)	None	43.6	38.3	0.460	60.8	57.1	0.799	66.2	69.1	0.836	54.5	52.5	0.574
	< 3	17.6	16.4		8.6	8.6		13.8	11.1		13.7	12.4	
	≥ 3	38.8	45.3		30.6	34.3		20.0	19.8		31.7	35.0	
TV viewing on school days (hrs/day)	None	16.1	19.5	0.301	8.6	10.5	0.113	9.0	7.4	0.004	12.0	13.4	0.001
	< 3	75.1	68.0		81.8	72.4		84.8	71.6		79.6	70.4	
	≥ 3	8.8	12.5		9.6	17.1		6.2	21.0		8.5	16.2	
TV viewing on holidays (hrs/day)	None	9.9	10.9	0.577	4.3	2.9	0.024	2.8	1.2	0.684	6.4	5.7	0.427
	< 3	18.7	22.7		30.6	17.1		20.7	18.5		23.1	19.7	
	≥ 3	71.4	66.4		65.1	80.0		76.6	80.2		70.5	74.5	

**18.1 Frequency (%) of consumption of various foods by the Adolescents of 12-17 years in Andhra Pradesh**

<b>Foods</b>	<b>Adolescents</b>	<b>Daily</b>	<b>Weekly</b>	<b>Monthly</b>	<b>Occasional</b>	<b>Never</b>	<b>χ<sup>2</sup> Value</b>
Plain Rice	Cases	98.4	1.6	0	0	0	-
	Controls	99.1	0.9	0	0	0	
Lemon Rice	Cases	3.9	35.9	23.0	27.2	10.0	5.4
	Controls	4.8	42.7	21.2	20.6	10.7	
Pulihora Rice	Cases	2.6	23.3	24.3	31.2	18.6	12.2*
	Controls	5.6	25.9	25.4	32.8	10.3	
Fried Rice	Cases	4.3	21.2	21.7	23.4	29.4	1.6
	Controls	5.4	17.9	21.2	23.4	32.1	
Veg Biryani	Cases	3	15.6	23.8	34.7	22.9	4.5
	Controls	2.6	11.7	27.7	30.9	27.1	
Puffed Rice	Cases	1.7	13.8	19.9	26.4	38.2	2.9
	Controls	3.4	13.3	18.8	29.9	34.6	
Rice Flakes	Cases	3.5	11.3	16.5	29.4	39.3	4.2
	Controls	3.6	12.3	19.0	33.4	31.7	
Veg Curry	Cases	77.5	11.7	4.3	1.7	4.8	6.5
	Controls	71.3	14.2	3.0	3.8	7.7	
Veg Fry	Cases	37.6	35.5	6.5	7.8	12.6	2.5
	Controls	32.6	41.0	6.4	8.1	11.9	
Dal / Sambar	Cases	40.8	48.7	6.1	2.2	2.2	6.5
	Controls	38.0	53.0	7.0	1.6	0.4	
GLV	Cases	23.9	55.3	10.4	5.6	4.8	1.8
	Controls	22	53.7	11.5	5.7	7.1	
Green Salad	Cases	9.5	16.9	13	19.0	41.6	1.9
	Controls	9.1	16.2	12.4	23.6	38.7	
Pickle	Cases	37.2	34.6	11.7	8.7	7.8	2.8
	Controls	39.1	32.6	10.1	11.9	6.3	
Papad	Cases	17.8	33.2	17.8	20.8	10.4	2.8
	Controls	15.4	36.4	14.1	23.4	10.7	
Idly	Cases	15.6	50.6	22.5	7.4	3.9	7.7
	Controls	17.5	49.9	15.8	11.5	5.3	
Upma	Cases	10.9	51.4	16.9	11.7	9.1	0.4
	Controls	10.2	53.6	15.8	10.9	9.5	
Vada	Cases	9.1	22.5	24.7	26.4	17.3	5.2
	Controls	7.2	21.2	19.4	30.6	21.6	
Dosa	Cases	9.6	50.5	20.8	11.3	7.8	2.3
	Controls	11.5	48.1	19.2	14.3	6.9	
Puri	Cases	8.7	33.3	29.0	21.2	7.8	2.1
	Controls	6.2	34.7	27.0	23.6	8.5	
Chapati	Cases	20.9	50.0	17.8	8.7	2.6	10.8*
	Controls	16.9	44.3	18.8	12.7	7.3	
Pulka	Cases	8.6	18.6	9.5	13.0	50.3	16.0*
	Controls	4.8	10.1	12.1	16.4	56.6	
Parota	Cases	4.4	14.2	14.3	19.9	47.2	4.4
	Controls	2.4	10.7	14	20.8	52.1	
Stuffed Parota	Cases	1.8	5.6	10	14.7	67.9	3.7
	Controls	2.0	4.0	6.7	14.5	72.8	
Nan	Cases	6.1	4.3	8.2	13.9	67.5	8.1
	Controls	4.0	2.4	5.1	11.9	76.6	

\* p < 0.05

**18.2 Frequency (%) of consumption of various foods by the Adolescents of 12-17 years in Andhra Pradesh**

<b>Foods</b>	<b>Adolescents</b>	<b>Daily</b>	<b>Weekly</b>	<b>Monthly</b>	<b>Occasional</b>	<b>Never</b>	<b>χ<sup>2</sup> value</b>
Dahi Vada	Cases	1.3	8.2	14.7	25.1	50.7	5.5
	Controls	1.8	5.2	10.7	26.5	55.8	
Bread	Cases	7.8	31.9	23.4	20.4	16.5	5.5
	Controls	10.7	24.9	25.6	23.4	15.4	
Jam	Cases	6.5	17.8	16	21.6	38.1	0.2
	Controls	6.6	17	16.4	20.8	39.2	
Sauce	Cases	3.5	11.3	9.1	12.6	63.5	3.5
	Controls	3.6	7.4	9.9	15.2	63.9	
Tea	Cases	30.7	11.2	3.5	7.4	47.2	7.4
	Controls	33.7	8.5	2.6	12.9	42.3	
Coffee	Cases	15.2	7.8	7.4	13.4	56.2	1.9
	Controls	14.3	8.7	5.8	16.6	54.6	
Milk	Cases	44.2	17.7	3	9.1	26	11.5*
	Controls	50.8	9.4	2.8	11.9	25.1	
Curd	Cases	55.4	20.3	3.9	8.7	11.7	1.2
	Controls	56.4	18.8	3.4	7.5	13.9	
Butter Milk	Cases	20.8	13.4	12.1	14.3	39.4	14.3*
	Controls	26	20.4	6.2	14.1	33.3	
Lassi	Cases	3.5	7.4	8.2	23.8	57.1	2.1
	Controls	4.8	7.1	9.7	20.2	58.2	
Ghee/ Butter	Cases	13.5	15.6	8.7	20.3	41.9	7.7
	Controls	18.9	11.9	8.5	25.1	35.6	
Egg	Cases	9.1	51.1	10.8	10.8	18.2	0.9
	Controls	8.2	52.3	12.6	10.5	16.4	
Non Veg Birinyani	Cases	2.6	16.9	18.6	22.1	39.8	1.0
	Controls	2.4	15.9	17	25.3	39.4	
Non Veg Curry	Cases	3.9	37.6	11.3	12.1	35.1	2.0
	Controls	3.6	41.8	12.8	10.9	30.9	
Non Veg Fry	Cases	2.2	29.5	12.1	9.5	46.7	5.7
	Controls	2.2	24.6	13.4	15.4	44.4	
Fish Curry	Cases	0.8	10.4	22.1	16	50.7	10.6*
	Controls	2.2	16.1	18.4	20.8	42.5	
Fish Fry	Cases	0.8	8.6	19.5	13	58.1	6.1
	Controls	1.4	12.5	15.9	17.2	53	
Prawns	Cases	1.3	2.6	7.3	11.3	77.5	5.4
	Controls	0.8	4	4.6	15.4	75.2	
Fruits	Cases	32	46.4	7.8	9.5	4.3	3.3
	Controls	38.2	42.5	7.6	8.9	2.8	
Fruit Juices	Cases	8.2	24.7	20.8	25.5	20.8	
	Controls	10.1	23.7	20.8	29	16.4	
Chips	Cases	11.7	27.3	22.1	21.2	17.7	
	Controls	7.9	25.5	22.6	24.8	19.2	
Biscuits	Cases	27.3	38	13.9	13.4	7.4	5.5
	Controls	33.7	37.4	9.9	13.7	5.3	
Bakery Items	Cases	10.8	20.4	23	23.7	22.1	1.6
	Controls	9.5	22	20	23.8	24.7	
Veg Puff	Cases	4.8	20.4	20.8	22.1	31.9	3.8
	Controls	5.4	17.2	17.4	21.6	38.4	

\* p < 0.05

**18.3 Frequency of consumption of various Foods by the Adolescents  
of 12-17 year old**

<b>Foods</b>	<b>Adolescents</b>	<b>Daily</b>	<b>Weekly</b>	<b>Monthly</b>	<b>Occasional</b>	<b>Never</b>	<b>χ<sup>2</sup> Value</b>
Non-veg. Puf	Cases	2.5	10.4	12.1	15.6	59.4	4.4
	Controls	2.4	8.9	8.5	13.5	66.7	
Burger	Cases	2.1	6.1	10	15.2	66.6	11.7*
	Controls	1.4	2.6	6.4	12.1	77.5	
Pizza	Cases	1.4	6.1	10.4	16.0	66.1	7.5
	Controls	1.4	3.0	6.9	19.8	68.9	
Noodles	Cases	6.9	18.2	21.3	28.9	24.7	13.9*
	Controls	3.2	15.2	22.8	23.4	35.4	
Cakes	Cases	4.3	18.6	25.1	34.3	17.7	2.0
	Controls	3.8	16.5	23.5	39.6	16.6	
Ice-Cream	Cases	3.5	26.4	21.6	38.5	10.0	4.4
	Controls	5.6	25.7	26.3	34.5	7.9	
Chat Items	Cases	4.7	20	19.5	26.9	28.9	6.1
	Controls	4	17.4	17	23.2	38.4	
Samosa	Cases	7	28.2	23	29.2	12.6	2.6
	Controls	9.9	28.7	22.4	25.3	13.7	
Sweets	Cases	4.3	37.3	21.2	26.4	10.8	9.1
	Controls	10.1	31.3	21	28.9	8.7	
Soft Drinks	Cases	5.2	23.4	18.6	35.1	17.7	6.9
	Controls	4.2	16	20.4	41.4	18	
Health Drinks	Cases	26.4	5.7	6.1	12.6	49.2	8.4
	Controls	26.7	8	5	18.2	42.1	

\* p < 0.05

**Table 19.1 Average daily intake of Foodstuffs (g/day) by Overweight and Non-overweight Adolescents (12-17 years)**

Subjects	Variable	Cereals & Millets	Pulses & Legumes	Green Leafy Veg.	Other Veg.	Roots & Tubers	Condi-ments	Fruits	Fish	Other Flesh Foods	Milk & Milk Prod.	Fats & oils	Sugar & Jaggery
<b>Controls</b> (N=79)	<i>Mean</i>	279	34	16	33	42	13	56	5	8	161	19	8
	<i>SD</i>	106.8	35.1	47.2	53.2	51.8	9.5	70.2	28.8	17.6	156.2	18.7	14.1
<b>Cases</b> (N=53)	<i>Mean</i>	334	38	12	57	55	19	53	17	14	177	25.4	9
	<i>SD</i>	128.9	37.3	29.4	75.4	59.3	13.2	54.8	74.5	33.8	174.0	37.8	12.9
P value		0.009	0.007	NS	0.052	NS	0.013	<b>0.019</b>	NS	NS	NS	NS	NS

**Table 19.2 Average daily intake of Nutrients (per day) by Overweight and Non-overweight Adolescents (12-17 years)**

Subjects	Variable	Protein (g)	Total Fat (g)	Energy (Kcal)	Calcium (mg)	Iron (mg)	Vit. -A (µg)	Thiamin (mg)	Riboflavin (mg)	Niacin (mg)	Vit.-C (mg)	Free Folic Acid (µg)
<b>Controls</b> (N=79)	<i>Median</i>	39	17	1375	428	7.4	217	0.6	0.5	8	29	36
	<i>Mean</i>	41	19	1454	510	8	366	0.67	0.59	8	39	44
	<i>SD</i>	14.9	16.1	492.0	324.0	3.6	654.2	0.31	0.28	3.8	35.1	28.8
<b>Cases</b> (N=53)	<i>Median</i>	46	17	1699	515	10.2	188	0.7	0.6	10	42	41
	<i>Mean</i>	<b>51</b>	21	1740	603	11	258	0.79	0.56	10	58.1	46
	<i>SD</i>	21.6	18.9	567.5	501.9	5.3	259.8	0.35	0.30	3.7	56.5	24.6
P value		0.004	NS	0.003	NS	0.001	NS	0.043	NS	0.044	0.020	NS

**20. Mean Systolic and Diastolic Blood Pressure and Prevalence Hypertension among Adolescents of 12-17 years**

Variable		Region						State Pooled					
		Telangana		Coastal Andhra		Rayalaseema		Overweight			Control		
		Cases (126)	Control (261)	Cases (100)	Control (209)	Cases (81)	Control (145)	Boys (132)	Girls (175)	Pooled (307)	Boys (258)	Girls (357)	Pooled (615)
Systolic Blood Pressure	Mean	113.5	104.2	108.6	102.1	111.3	103.3	113.7	109.5	111.3	103.9	102.8	103.3
	SD	11.67	9.49	10.92	10.80	10.95	10.91	11.8	10.7	11.4	10.9	9.9	10.3
Diastolic Blood Pressure	Mean	72.1	66.3	75.7	71.1	72.9	68.4	74.2	72.8	73.4	68.7	68.2	66.4
	SD	9.81	7.94	8.59	8.14	8.43	8.71	8.9	9.3	9.2	8.9	8.1	8.5
Prevalence of HTN#		9.4*	1.8	11.4*	3.8	2.5	1.4	10.4	6.7	8.3*	7.8	0.6	3.7

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\* p < 0.05

**Table 21: Mean Body Fat percentage of Adolescents by Gender**

Nutritional Grade	Gender	Region						Pooled	
		Telangana		Coastal Andhra		Rayalaseema			
		n	Mean ± SD	n	Mean ± SD	n	Mean ± SD	n	Mean ± SD
Non-Overweight/ Obese	Boys	1087	16.8 ± 4.31	1349	16.8 ± 4.14	1467	17.1 ± 4.48	3903	16.9 ± 4.32
	Girls	990	26.2 ± 3.78	1167	27.8 ± 4.21	903	27.5 ± 4.34	3060	27.2 ± 4.17
Overweight	Boys	50	30.6 ± 2.99	50	31.1 ± 4.03	63	31.6 ± 4.31	163	31.2 ± 3.86
	Girls	50	34.6 ± 2.73	76	36.3 ± 3.40	68	36.9 ± 3.43	194	36.1 ± 3.36

**Table 22 Mean Body Fat percentage of Adolescents by Socioeconomic status**

Nutritional Grade	SES	Region						Pooled	
		Telangana		Coastal Andhra		Rayalaseema			
		n	Mean ± SD	n	Mean ± SD	n	Mean ± SD	n	Mean ± SD
Non-Overweight/ Obese	Low	1327	20.8 ± 6.07	1410	21.3 ± 6.72	1240	19.5 ± 6.24	3977	20.5 ± 6.40
	High	750	22.3 ± 6.32	1106	22.7 ± 6.97	1130	22.9 ± 6.72	2986	22.7 ± 6.72
Overweight	Low	27	32.7 ± 3.82	28	33.4 ± 6.05	31	32.5 ± 5.68	86	32.9 ± 5.26
	High	73	32.6 ± 3.39	98	34.4 ± 3.86	100	34.9 ± 4.23	271	34.1 ± 3.98

**Table 23 Factor-Loading ( $\geq 0.5$ ) matrix for major dietary patterns and their food/food groups Identified with overweight and obese Adolescents**

Factor labels																	
Bakery Items	Break-fast Items	Bread/Jam/Sauce	Non Vegetarian	Milk & Milk prods.	Cereal Based Foods	Sweets	Mixture/Samosa	Soft Drinks	Dahi-vada Lassi	Parota & papad	Hot Bever-ages	Chapatti	Non vege. Items	Veg Curry	Pickles	Plain rice	Pou-Ittry
Puff	Idly	Bread	Nonveg. Fry	Milk	Fried rice	Choco-lates	Mixture	Soft drink	Dahi-vada	Parota	Tea	Chapatti	Non-Vege. Curry	Veg Curry	Pickles	Plain rice	Egg
Burger	Upma	Jam	Fish	Curd	Veg_ Biryani	Sweets	Samosa	-	Lassi	Papad	Coffee	-	-	-	-	-	-
Pizza	Dosa	Sauce	Prawn	Butter milk	Lemon rice	-	-	-	-	-	-	-	-	-	-	-	-
Cakes & Pastries	Puri	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>13.7</b>	<b>4.2</b>	<b>3.6</b>	<b>3.5</b>	<b>3.4</b>	<b>3.0</b>	<b>2.8</b>	<b>2.6</b>	<b>2.5</b>	<b>2.4</b>	<b>2.3</b>	<b>2.2</b>	<b>2.2</b>	<b>2.0</b>	<b>1.9</b>	<b>1.9</b>	<b>1.8</b>	<b>1.7</b>

Note: Last row of the table explained the percentage of variation in each factor

**Table 24 Multiple Logistic regression analysis**

<b>Variable</b>	<b>Activity level/ Status</b>	<b>Odds Ratio</b>	<b>95% CI</b>
Out door Sports and Games (Participating $\geq$ 6h/wk is 1.0)	Not Participating	2.7	1.8 - 3.9
	Participating < 6 hrs/ wk	2.0	1.4 - 2.9
Watching of TV (Watching TV <3h/d is 1.0)	Viewing $\geq$ 3 hrs	1.6	1.0 - 2.8
Socio Economic Status (Low economic status is 1.0)	High SES	1.5	1.0 - 2.1
Participating in Household Activity (Not participating in HHS is 1.0)	No activity	1.8	1.1 - 2.9
	1- 2 hrs activity	1.7	1.0 - 2.6

**Table 25****Profile of Institutions, where the subjects are being educated**

Presence of	Type of	Institutions	P value
	Private	Government	
Play ground	66.7	93.1	NS
TV at school	85.2	96.6	NS
Basketball play	25.9	17.2	NS
Valley ball play	63.0	75.9	NS
Cricket play	81.5	82.8	NS
Tennikoit play	51.9	72.4	NS
Khokho	85.2	86.2	NS
Ball badminton	55.6	65.6	NS
Shuttle badminton	70.4	62.1	NS
Lawn tennis	14.8*	3.5	<0.05
Kabaddi	59.3	89.7	NS
Base ball	7.4	34.5*	<0.05
Yoga practice	66.7*	31.0	<0.01
Meditation	63.0*	27.6	<0.01
Cycling	33.8	13.8	NS
School drill	81.5	79.3	NS
PET teacher	90.3	83.9	NS

**Table 25 (Contd.) Profile of Institutions, where the subjects are being educated**

Variable	Type of School	Mean $\pm$ SD	Minimum	Maximum	P value
No. of Students	Private	827.8 $\pm$ 827.0	60	4169	NS
	Govt.	661.1 $\pm$ 372.5	160	2018	
No. of teachers	Private	33.0 $\pm$ 40.7	8	230	NS
	Govt.	18.4 $\pm$ 12.0	3	68	
No. of periods/week	Private	36.9 $\pm$ 12.4	5	60	NS
	Govt.	39.1 $\pm$ 12.3	5	80	
Duration of period	Private	0.466 $\pm$ 0.047	0.40	0.60	NS
	Govt.	.466 $\pm$ 0.039	0.40	0.55	
No. periods allotted for sports	Private	3.14 $\pm$ 2.6	0.0	12	NS
	Govt.	3.9 $\pm$ 2.6	1.0	10.5	
No. of periods played	Private	2.4 $\pm$ 1.9	0.0	7.0	NS
	Govt.	3.3 $\pm$ 2.8	0.0	10.5	
Teacher students ratio	Private	26.3 $\pm$ 12.8	4.3	59.4	P<0.01
	Govt.	21.0 $\pm$ 3.8	15.0	109.7	
School area (Sq. mts)	Private	12,066.1 $\pm$ 20,143.3	607.5	96,592.5	P<0.05
	Govt.	14,038.1 $\pm$ 16,133.9	567.0	60,750.0	

No. of Institutions surveyed: Private: 31; Government: 31