

# THE IMPACT OF LINGKAR SEHAT BANYUWANGI MODEL

## BASIC RESULTS SUMMARY

### PARTICIPANT FLOW

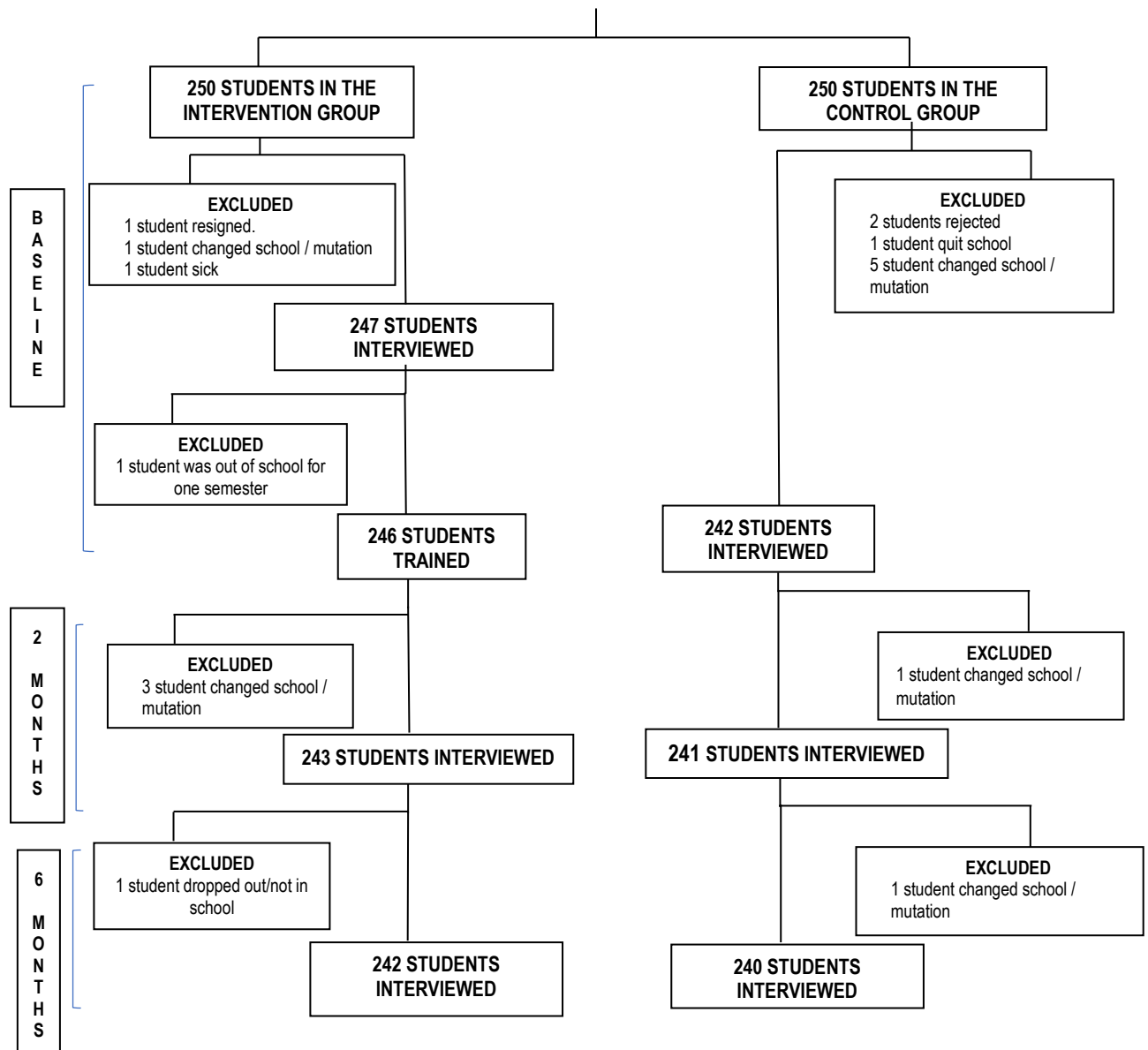
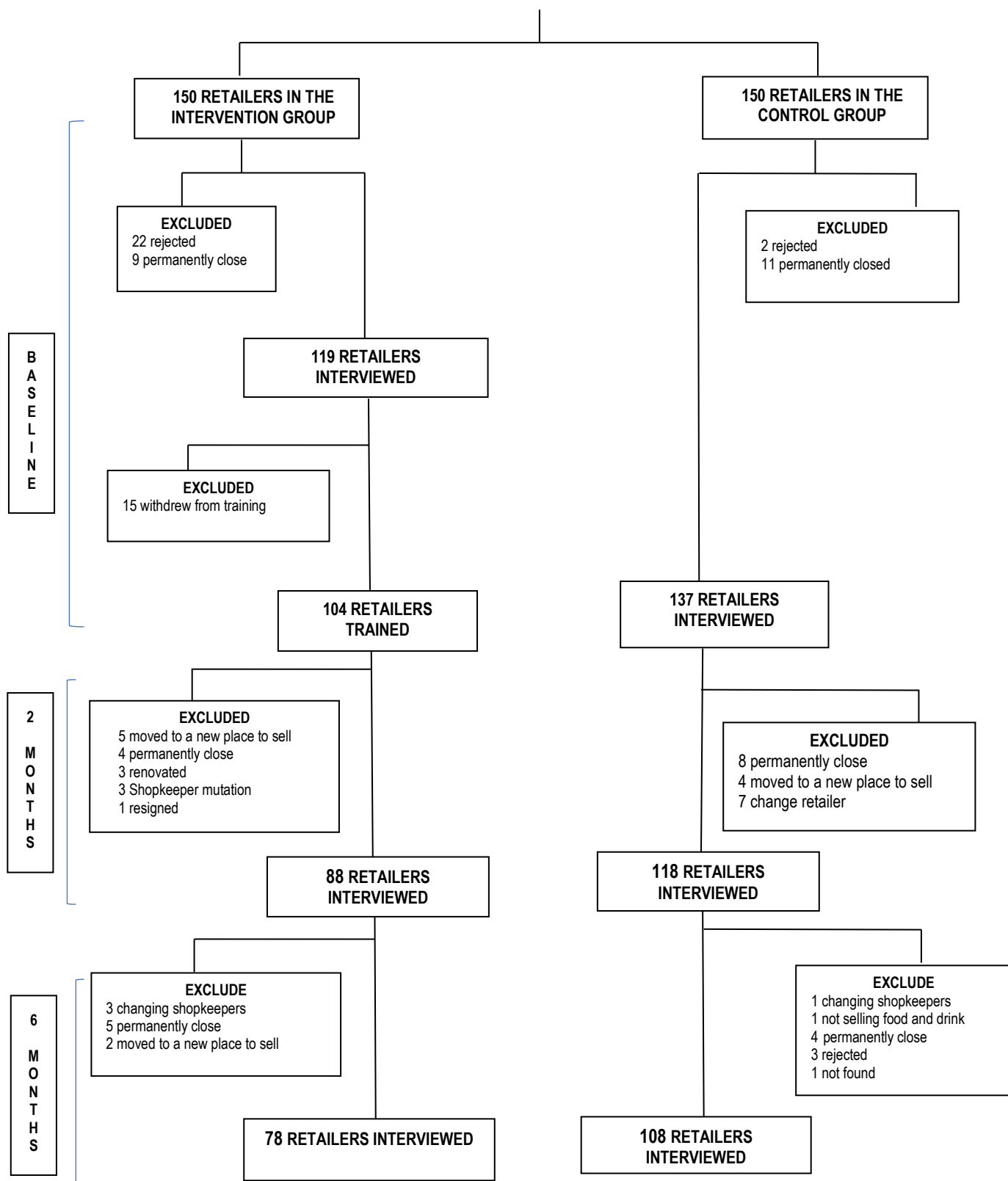


Figure 1. Flow chart of student participation in the intervention and control groups



**Figure 2.** Flow chart of retailer's participation in the intervention and control group

## BASELINE CHARACTERISTICS

**Table 1. Characteristics of students**

| Variables                     | Categories                | N=488                       |       |                        |       | N=482                       |       |                        |       |
|-------------------------------|---------------------------|-----------------------------|-------|------------------------|-------|-----------------------------|-------|------------------------|-------|
|                               |                           | Intervention Groups (N=246) |       | Control Groups (N=242) |       | Intervention Groups (N=240) |       | Control Groups (N=242) |       |
|                               |                           | N                           | %     | N                      | %     | N                           | %     | N                      | %     |
| Characteristics of Student    |                           |                             |       |                        |       |                             |       |                        |       |
| Student's Gender              | Male                      | 121                         | 49.19 | 114                    | 47.11 | 120                         | 49.59 | 112                    | 46.67 |
|                               | Female                    | 125                         | 50.81 | 128                    | 52.89 | 122                         | 50.41 | 128                    | 53.33 |
| Student's Level Of School     | Elementary Schools        | 47                          | 19.11 | 44                     | 18.18 | 47                          | 19.42 | 44                     | 18.33 |
|                               | Junior High Schools       | 199                         | 80.89 | 198                    | 81.81 | 195                         | 80.58 | 196                    | 81.67 |
| Parent's Education            | Elementary Schools Level  | 73                          | 29.67 | 74                     | 30.58 | 72                          | 29.75 | 74                     | 30.83 |
|                               | Junior High Schools Level | 33                          | 13.41 | 67                     | 27.69 | 33                          | 13.64 | 66                     | 27.5  |
|                               | Senior High Schools Level | 108                         | 43.9  | 79                     | 32.64 | 105                         | 43.39 | 79                     | 32.92 |
|                               | Academy/DI/DII/DIII       | 12                          | 4.88  | 7                      | 2.89  | 12                          | 4.96  | 7                      | 2.92  |
|                               | Diploma/ University       | 20                          | 8.13  | 15                     | 6.2   | 20                          | 8.26  | 14                     | 5.83  |
|                               |                           |                             |       |                        |       |                             |       |                        |       |
| Parent's Employment           | employess                 | 35                          | 14.23 | 20                     | 8.26  | 35                          | 14.46 | 20                     | 8.33  |
|                               | self-employes             | 67                          | 27.24 | 90                     | 37.19 | 67                          | 27.69 | 89                     | 37.08 |
|                               | farmer and fisher         | 2                           | 0.81  | 15                     | 6.2   | 2                           | 0.83  | 15                     | 6.25  |
|                               | housewives                | 114                         | 46.34 | 94                     | 38.84 | 110                         | 45.45 | 93                     | 38.75 |
|                               | others                    | 28                          | 11.38 | 23                     | 9.5   | 28                          | 11.57 | 23                     | 9.58  |
| Parent's Socioeconomic status | Poorest                   | 58                          | 23.58 | 40                     | 16.53 | 56                          | 23.14 | 40                     | 16.67 |
|                               | Poorer                    | 39                          | 15.85 | 60                     | 24.79 | 37                          | 15.29 | 60                     | 25    |
|                               | Middle                    | 41                          | 16.67 | 56                     | 23.14 | 41                          | 16.94 | 56                     | 23.33 |
|                               | Richer                    | 59                          | 23.98 | 38                     | 15.7  | 59                          | 24.38 | 37                     | 15.42 |
|                               | Richest                   | 49                          | 19.92 | 48                     | 19.83 | 49                          | 20.25 | 47                     | 19.58 |

**Table 2. Characteristics of retailers**

| Variables                         | Categories               | N=241                       |       |                        |       | N=186                      |       |                        |       |
|-----------------------------------|--------------------------|-----------------------------|-------|------------------------|-------|----------------------------|-------|------------------------|-------|
|                                   |                          | Intervention Groups (N=104) |       | Control Groups (N=137) |       | Intervention Groups (N=78) |       | Control Groups (N=108) |       |
|                                   |                          | N                           | %     | N                      | %     | N                          | %     | N                      | %     |
| <b>Retailer's Level Of School</b> | Elementary School Level  | 26                          | 25    | 25                     | 18.25 | 23                         | 29.49 | 22                     | 20.37 |
|                                   | Junior High School Level | 19                          | 18.27 | 38                     | 27.74 | 14                         | 17.95 | 29                     | 26.85 |
|                                   | Senior High School Level | 43                          | 41.35 | 62                     | 45.26 | 30                         | 38.46 | 47                     | 43.52 |
|                                   | Academy/DI/DII/DIII      | 2                           | 1.92  | 5                      | 3.65  | 2                          | 2.56  | 5                      | 4.63  |
|                                   | Diploma/ University      | 14                          | 13.46 | 7                      | 5.11  | 9                          | 11.54 | 5                      | 4.63  |
| <b>Retailer's Gender</b>          | Male                     | 33                          | 31.73 | 47                     | 34.31 | 23                         | 29.49 | 32                     | 29.63 |
|                                   | Female                   | 71                          | 68.27 | 90                     | 65.69 | 55                         | 70.51 | 76                     | 70.37 |

|                                     |            |    |       |     |       |    |       |    |       |
|-------------------------------------|------------|----|-------|-----|-------|----|-------|----|-------|
| <b>Ownership status of the shop</b> | Owner      | 84 | 80.77 | 108 | 78.83 | 65 | 83.33 | 86 | 79.63 |
|                                     | Shopkeeper | 20 | 19.23 | 29  | 21.17 | 13 | 16.67 | 22 | 20.37 |
| <b>Age Group Of Retailers</b>       | 15-24      | 12 | 11.54 | 16  | 11.68 | 7  | 8.97  | 9  | 8.33  |
|                                     | 25-34      | 18 | 17.31 | 28  | 20.44 | 9  | 11.54 | 16 | 14.81 |
|                                     | 35-44      | 32 | 30.77 | 43  | 31.39 | 27 | 34.62 | 36 | 33.33 |
|                                     | 45-54      | 22 | 21.15 | 23  | 16.79 | 19 | 24.36 | 22 | 20.37 |
|                                     | 55-64      | 19 | 18.27 | 17  | 12.41 | 15 | 19.23 | 16 | 14.81 |
|                                     | >=65       | 1  | 0.96  | 10  | 7.3   | 1  | 1.28  | 9  | 8.33  |

## OUTCOME MEASURES

**Table 3. Distribution of primary and secondary outcome**

| Variable                                   | Baseline |           |                     |                    |                |                    | 2 Months |           |                     |                   |                |                   | 6 Months |           |                     |                    |                |                   |
|--------------------------------------------|----------|-----------|---------------------|--------------------|----------------|--------------------|----------|-----------|---------------------|-------------------|----------------|-------------------|----------|-----------|---------------------|--------------------|----------------|-------------------|
|                                            | N        | %         | Intervention Groups |                    | Control Groups |                    | N        | %         | Intervention Groups |                   | Control Groups |                   | N        | %         | Intervention Groups |                    | Control Groups |                   |
|                                            |          |           | N                   | Mean±SD or %       | N              | Mean±SD or %       |          |           | N                   | Mean±SD or %      | N              | Mean±SD or %      |          |           | N                   | Mean±SD or %       |                |                   |
| Primary Outcome                            |          |           |                     |                    |                |                    |          |           |                     |                   |                |                   |          |           |                     |                    |                |                   |
| Intention to smoke (%)                     |          |           |                     |                    |                |                    |          |           |                     |                   |                |                   |          |           |                     |                    |                |                   |
| Yes                                        | 18       | 3.7<br>3  | 13                  | 5.37               | 5              | 2.08               | 25       | 5.1<br>9  | 17                  | 7.02              | 8              | 3.33              | 47       | 9.7<br>5  | 29                  | 11.98              | 18             | 7.5               |
| No                                         | 46<br>4  | 96.<br>27 | 22<br>9             | 94.6               | 23<br>5        | 97.92              | 45<br>7  | 94.<br>81 | 22<br>5             | 92.98             | 23<br>2        | 96.67             | 43<br>5  | 90.<br>25 | 21<br>3             | 88.02              | 22<br>2        | 92.5              |
| Higher Freq of Sugar Swetened Beverage (%) |          |           |                     |                    |                |                    |          |           |                     |                   |                |                   |          |           |                     |                    |                |                   |
| Higher                                     | 28<br>6  | 59.<br>34 | 13<br>4             | 55.37              | 15<br>2        | 63.33              | 24<br>8  | 51.<br>45 | 11<br>6             | 47.93             | 13<br>2        | 55                | 22<br>0  | 45.<br>64 | 95                  | 39.26              | 12<br>5        | 52.08             |
| Lower                                      | 19<br>6  | 40.<br>66 | 10<br>8             | 44.63              | 88             | 36.67              | 23<br>4  | 48.<br>55 | 12<br>6             | 52.07             | 10<br>8        | 45                | 26<br>2  | 54.<br>36 | 14<br>7             | 60.74              | 11<br>5        | 47.92             |
| Salt Intake (mg)                           | 47<br>1  | 100       | 23<br>8             | 1415.03±<br>966.43 | 23<br>3        | 1336.37±926.0<br>2 | 47<br>1  | 100       | 23<br>8             | 963.52±<br>552.26 | 23<br>3        | 899.28±<br>524.38 | 47<br>1  | 100       | 23<br>8             | 1012.56±<br>676.72 | 23<br>3        | 1069.87±<br>609.4 |
| Fat Intake (gram)                          | 48<br>2  | 100       | 24<br>2             | 72.7± 57.21        | 24<br>0        | 78.77± 62.38       | 48<br>2  | 100       | 24<br>2             | 52.33±<br>37.12   | 24<br>0        | 53.49±<br>35.13   | 48<br>2  | 100       | 24<br>2             | 48.87±<br>33.54    | 24<br>0        | 58.59±<br>36.08   |
| Students knowledge                         | 48<br>2  | 100       | 24<br>2             | 61.24±<br>15.46    | 24<br>0        | 59.96± 15.21       | 48<br>2  | 100       | 24<br>2             | 65.62±<br>13.51   | 24<br>0        | 59.58±<br>14.05   | 48<br>2  | 100       | 24<br>2             | 64.5± 14.23        | 24<br>0        | 59.95±<br>13.52   |
| Retailer's knowledge                       | 18<br>6  | 100       | 78                  | 69.49±<br>12.98    | 10<br>8        | 67.96± 14.58       | 18<br>6  | 100       | 78                  | 76.41±<br>11.84   | 10<br>8        | 68.43±<br>12.91   | 18<br>6  | 100       | 78                  | 76.41±<br>11.84    | 10<br>8        | 68.43±<br>12.91   |
|                                            |          |           |                     |                    |                |                    |          |           |                     |                   |                |                   |          |           |                     |                    |                |                   |
| Secondary Outcome                          |          |           |                     |                    |                |                    |          |           |                     |                   |                |                   |          |           |                     |                    |                |                   |
| Healthy expenditure                        | 46<br>8  | 100       | 23<br>5             | 11.79±25.65        | 23<br>3        | 6.3±18.72          | 46<br>8  | 100       | 23<br>5             | 13.38±27.25       | 23<br>3        | 8.48±23.02        | 46<br>8  | 100       | 23<br>5             | 14.97±28.7         | 23<br>3        | 11.29±22.94       |
| Sugar expenditure                          | 46<br>8  | 100       | 23<br>5             | 38.37±38.9         | 23<br>3        | 42.02± 39.48       | 46<br>8  | 100       | 23<br>5             | 39.49±<br>38.15   | 23<br>3        | 44.04±<br>39.52   | 46<br>8  | 100       | 23<br>5             | 42.93±<br>39.33    | 23<br>3        | 36.74±<br>36.93   |
| Salt expenditure                           | 46<br>8  | 100       | 23<br>5             | 19.55±<br>31.14    | 23<br>3        | 18.37± 31.06       | 46<br>8  | 100       | 23<br>5             | 13.86±<br>27.6    | 23<br>3        | 16.22±<br>27.14   | 46<br>8  | 100       | 23<br>5             | 12.71±<br>26.95    | 23<br>3        | 11.47±<br>24.17   |

|                        |         |          |         |                 |         |             |         |           |         |                 |         |                 |         |           |         |             |         |                 |
|------------------------|---------|----------|---------|-----------------|---------|-------------|---------|-----------|---------|-----------------|---------|-----------------|---------|-----------|---------|-------------|---------|-----------------|
| <b>Fat expenditure</b> | 46<br>8 | 100      | 23<br>5 | 14.06±<br>28.63 | 23<br>3 | 20.26± 33.1 | 46<br>8 | 100       | 23<br>5 | 20.69±<br>33.17 | 23<br>3 | 16.24±<br>31.29 | 46<br>8 | 100       | 23<br>5 | 19.45± 29.9 | 23<br>3 | 25.89±<br>33.23 |
| <b>Current Smoker</b>  |         |          |         |                 |         |             |         |           |         |                 |         |                 |         |           |         |             |         |                 |
| Yes                    | 30      | 6.2<br>2 | 21      | 8.68            | 9       | 3.75        | 29      | 6.0<br>2  | 21      | 8.68            | 8       | 3.33            | 46      | 9.5<br>4  | 28      | 11.57       | 18      | 7.5             |
| No                     | 45<br>2 | 93.<br>8 | 22<br>1 | 91.32           | 23<br>1 | 96.25       | 45<br>3 | 93.<br>97 | 22<br>1 | 91.3            | 23<br>2 | 96.67           | 43<br>6 | 90.<br>46 | 21<br>4 | 88.43       | 22<br>2 | 92.5            |
| <b>BMI (Kg/m²)</b>     | 48<br>2 | 100      | 24<br>2 | 19.27± 4        | 24<br>0 | 19.15± 4.65 | 48<br>2 | 100       | 24<br>2 | 19.5± 4.41      | 24<br>0 | 19.36± 4.65     | 48<br>2 | 100       | 24<br>2 | 20.27± 9.83 | 24<br>0 | 20.68±<br>17.78 |

#### ADVERSE EVENTS:

None