A summary of model selection is shown in Table 4. When, sex was considered as a covariate on (Model-3), it caused massive drop (about 141 unit) in the AIC value compared to the base model (Model-2). Further, considering sex as a covariate on (Model-4) significantly improved the model fit. However, considering sex on (Model-5) did not further improve the model fit (as AIC was increased), thus keeping Model-4 as the current best choice. Since, the estimates of in Model-4 were negligible, these were fixed to 0 (Model-6), which further lowered the AIC value by about 7 unit and produced similar estimates as compared to Model-4. Therefore, Model-6was considered as the final model.

**Table 4. Summary of model selection. represents the difference between the two consecutive models unless otherwise stated; the drop and gain in AIC values (compared to the previous model) is represented by negative and positive signs respectively.**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Model No.** | **Covariate on** | **AIC** | **AIC** |  | |  | |  | | **(kg)** |
| 1 | - | 296.53 | - | 1 (FIXED) | | 1 (FIXED) | | 1 (FIXED) | | 2.67 |
| 2 | - | 154.06 | -142.47 | 0.87 | | 2.34 | | 1.21 | | 1.26 |
| 3 | Sex on | 12.97 | -141.09 | 0.20 | 0.02 | 0.86 | | 0.78 | | 0.62 |
| 4 | Sex on and | -37.96 | -50.93 | 0.02 | 0.02 | 0.78 | 0.71 | 0.72 | | 0.47 |
| 5 | Sex on , and | -37.77 | 0.19 | 0.01 (Male) | 0.01 (Female) | 0.780 (Male) | 0.69 (Female) | 0.72 (Male) | 0.72 (Female) | 0.47 |
| **6** | Sex on | **-44.94** | **-6.98 a** | **0 (FIXED)** | | **0.77**  **(Male)** | **0.70**  **(Female)** | **0.72** | | **0.47** |
| extended fat-free mass in Indians; , and are Janmahasatian’s model parameters (fixed), total body weight; body mass index; ethnicity specific body composition parameters; AIC Alaike Information Criteria; standard deviation of additive error; a (Model 5 – Model 3) | | | | | | | | | | |