This chapter presents and summarizes the results of this study and is organized into sections as follows: Section 4.1 - Survey Response Rate; 4.2 - Demographic characteristics of AT users; 4.3 - Device related characteristics; 4.4 - Tool Translation; 4.5 - Psychosocial outcomes of retained primary AT in Group I; 4.6 - Psychosocial outcomes for retained and rejected primary devices in Group II; 4.7 - Association between the primary retained and rejected AT device; 4.8 - Predicting device rejection for AT users in Group I; 4.9 - The summary.

In this study, subjects with locomotor disability of varied diagnostic conditions were surveyed across 17 centres and the local community in six states of India. The study population was divided in two groups, the Group-I comprised the major part and the AT users in this group were subjected to one time interview. Group-II comprised of a small subgroup of AT users, and were interviewed twice at different point of time. The psychosocial outcomes in respect to the devices retained or rejected by the subjects were captured using PIADS and Ladder Scale. The interaction of various factors and their influence on the user’s perspective is stated and discussed.

4.1 Survey Response Rate

In the Group I, a total of 404 assistive technology users with varied locomotor disability agreed to participate, however, the survey could be completed for 395 subjects. Of the nine subjects who did not complete the study, the centre requested to discontinue the interview for two subjects without citing sufficient reason and the remaining seven subjects themselves requested to discontinue due to time constraints. Thus the dropout rate for the survey was only 2.2% and therefore may be considered as excellent response rate.

In Group I, a total of 761 different types of primary devices (954 individual devices) were used by the 395 subjects. At the time of survey, a total of 616 primary devices (730 individual devices) were in use and 145 primary devices (224 individual devices) were rejected. Thus, the overall retention rate for primary devices was at 80.94% (for individual devices, it was 76.51%) and the rate of rejection for primary device was found to be 19.05% (for individual device, it was 23.48%).
In the Group II, 65 subjects were interviewed first time on day one of the new device use and after three months of the device usage. However, at the end of three months, data could be obtained from 58 subjects only. Of the seven subjects for whom the data could not be obtained, three subjects could not be contacted back, two subjects refused, one died, and one subject’s condition deteriorated, therefore, a dropout rate of 10.76%. Of the 58 subjects assigned for 58 primary device (79 individual devices), six primary devices (10.34%) were rejected and 52 primary devices (89.65%) were retained after three months. The survey obtained the psychosocial outcomes for every device in use using the PIADS and Ladder Scale.

However, for psychosocial outcome response and analysis only the primary devices have been taken into account.

4.2 Demographic characteristics of the AT users

In this section, the socio-demographic, condition specific characteristics of the AT users; summary of the retained & rejected AT devices used by Group-I AT users and retained Group-II devices; and device specific characteristics of four most prevalent devices—wheelchair, tricycle, crutches & knee ankle foot orthosis (KAFO) used by AT users in Group-I had been analyzed.

4.2.1 Socio-demographic characteristics

The characteristics described are age, gender, type of organization, local support, migration, social support, work status, educational status, living status and the socioeconomic status for Group I is described in Table 4.1.
Table 4.1

Socio-demographic characteristics of subjects in Group I

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Socio-demographic characteristics</th>
<th>n (%): (n=395)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Age (years)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt; 20</td>
<td>100 (25.3)</td>
</tr>
<tr>
<td></td>
<td>20-30</td>
<td>146 (37.0)</td>
</tr>
<tr>
<td></td>
<td>30-40</td>
<td>68 (17.2)</td>
</tr>
<tr>
<td></td>
<td>40-50</td>
<td>37 (9.4)</td>
</tr>
<tr>
<td></td>
<td>50-60</td>
<td>31 (7.8)</td>
</tr>
<tr>
<td></td>
<td>≥ 60</td>
<td>13 (3.3)</td>
</tr>
<tr>
<td>2</td>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>282 (71.4)</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>113 (28.6)</td>
</tr>
<tr>
<td>3</td>
<td>Type of Organization</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Residential</td>
<td>74 (18.7)</td>
</tr>
<tr>
<td></td>
<td>Non-residential</td>
<td>152 (38.5)</td>
</tr>
<tr>
<td></td>
<td>Mixed</td>
<td>169 (42.8)</td>
</tr>
<tr>
<td>4</td>
<td>Availability of Local Support</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>181 (45.8)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>214 (54.2)</td>
</tr>
<tr>
<td>5</td>
<td>Migration</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>107 (27.1)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>288 (72.8)</td>
</tr>
<tr>
<td>6</td>
<td>Availability of Social Support</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>282 (71.4)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>113 (28.6)</td>
</tr>
<tr>
<td>7</td>
<td>Work status</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Student</td>
<td>93 (23.5)</td>
</tr>
<tr>
<td></td>
<td>Job-open market</td>
<td>90 (22.8)</td>
</tr>
<tr>
<td></td>
<td>Job – institution based</td>
<td>158 (40)</td>
</tr>
<tr>
<td></td>
<td>Unemployed</td>
<td>54 (13.7)</td>
</tr>
<tr>
<td>8</td>
<td>Educational status</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Primary</td>
<td>78 (19.7)</td>
</tr>
<tr>
<td></td>
<td>7&lt;sup&gt;th&lt;/sup&gt; to 11&lt;sup&gt;th&lt;/sup&gt; Standard</td>
<td>138 (34.9)</td>
</tr>
<tr>
<td></td>
<td>12&lt;sup&gt;th&lt;/sup&gt; Standard and above</td>
<td>179 (45.3)</td>
</tr>
<tr>
<td>9</td>
<td>Living status</td>
<td></td>
</tr>
<tr>
<td></td>
<td>With family</td>
<td>293 (74.1)</td>
</tr>
<tr>
<td></td>
<td>Residential set up</td>
<td>93 (23.5)</td>
</tr>
<tr>
<td></td>
<td>Others (staying alone)</td>
<td>9 (2.3)</td>
</tr>
<tr>
<td>10</td>
<td>Socioeconomic Status</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>11 (2.8)</td>
</tr>
<tr>
<td></td>
<td>Upper middle</td>
<td>53 (13.3)</td>
</tr>
<tr>
<td></td>
<td>Lower middle</td>
<td>207 (52.3)</td>
</tr>
<tr>
<td></td>
<td>Poor</td>
<td>87 (22.0)</td>
</tr>
<tr>
<td></td>
<td>Others (separated from family)</td>
<td>37 (9.4)</td>
</tr>
</tbody>
</table>
For the Group 1, the minimum age was 12 years and maximum age of the subjects was upto 70 years (M=30.68 years, SD ± 13.41). From Table 4.1, it is evident that the maximum number of subjects (37.0%) using AT were in the age band of 20-30 year, with 71.4% being males. And 42.8% AT users were availing rehabilitation services from mixed type of set-up. Among the AT users, 54.1% felt that they did not receive any local support to avail any rehabilitation services; and 71.1% expressed that they had received social support. Approximately 40% of AT user were engaged in institution based job and 73.9% subjects were either staying with their families or were having regular contacts with them.

4.2.2 Condition Specific Characteristics

The condition specific characteristics were diagnosis, age of onset of locomotor problem, duration of locomotor problem, extent of involvement with and without bladder - bowel involvement and extent of involvement of the lower extremity and is depicted in Table 4.2.
Table 4.2

**Condition Specific Characteristics of subjects in Group I**

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Condition specific characteristics</th>
<th>n (%).</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Diagnosis</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Polio</td>
<td>201(50.8)</td>
</tr>
<tr>
<td></td>
<td>Spinal Cord Injury</td>
<td>84(21.2)</td>
</tr>
<tr>
<td></td>
<td>Amputation</td>
<td>56(14.1)</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>54(13.6)</td>
</tr>
<tr>
<td>2.</td>
<td>Age of Onset of Locomotor Problem</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;5 years</td>
<td>227(57.4)</td>
</tr>
<tr>
<td></td>
<td>5-10 years</td>
<td>24(6.0)</td>
</tr>
<tr>
<td></td>
<td>10-20 years</td>
<td>49(12.4)</td>
</tr>
<tr>
<td></td>
<td>20-30 years</td>
<td>57(14.4)</td>
</tr>
<tr>
<td></td>
<td>≥30 years</td>
<td>38(9.6)</td>
</tr>
<tr>
<td>3.</td>
<td>Duration of Locomotor Problem</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt;20 years</td>
<td>95(24.0)</td>
</tr>
<tr>
<td></td>
<td>20-30 years</td>
<td>134(33.9)</td>
</tr>
<tr>
<td></td>
<td>30-40 years</td>
<td>108(27.3)</td>
</tr>
<tr>
<td></td>
<td>≥40 years</td>
<td>58(14.5)</td>
</tr>
<tr>
<td>4.</td>
<td>Extent of Involvement- A</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bladder-bowel (BB) affected</td>
<td>75(19.0)</td>
</tr>
<tr>
<td></td>
<td>Bladder –bowel not affected</td>
<td>320(81.0)</td>
</tr>
<tr>
<td>5.</td>
<td>Extent of Involvement- B</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Single lower limb (L/L) affected</td>
<td>127(32.2)</td>
</tr>
<tr>
<td></td>
<td>Bilateral (Bil) (L/L) affected</td>
<td>142(35.8)</td>
</tr>
<tr>
<td></td>
<td>Bil L/L  &amp; BB affected</td>
<td>57(14.3)</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>69(17.5)</td>
</tr>
</tbody>
</table>

From the Table 4.2, it was observed that 50.8% of subjects using AT were diagnosed with polio, 21.2% with spinal cord injury and 14.1% with amputation. Almost 57.4% had onset of the locomotor problem when they were below 5 years of age, with the minimum and maximum age of onset was from birth and 63 years of age respectively, and median age of
onset was at 3.50 years and interquartile range (IQR) at 17. As regards the duration of locomotor problem, 33.9% of AT users had been exposed to locomotor problem for 20-30 years, with subjects having a minimum exposure of one year to a maximum of 55 years of exposure with median duration of 20 years and IQR of 14 years. In regards to extent of involvement, of subjects had functioning of the bladder & bowel and 35.9% had bilateral lower limbs affected.

**4.3 Device Related Characteristics**

This section describes the summary of the various retained & rejected AT devices as used by the AT users and also presents the summary of the socio-demographic, condition and device specific characteristics of four most prevalent primary retained devices.

**4.3.1 Assistive devices prescribed to both the groups**

This subsection summarizes the various types of primary and individual devices prescribed to the subjects in the study and are depicted in Table 4.3.
Table 4.3

Number and percentage of devices retained, rejected and followed up.

<table>
<thead>
<tr>
<th>Device Name</th>
<th>Group I</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Retained device (%)</td>
<td>Rejected device (%)</td>
<td>Followed up device (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Primary device</td>
<td>Individual device</td>
<td>Primary device</td>
<td>Individual device</td>
<td>Primary device</td>
<td>Individual device</td>
<td></td>
</tr>
<tr>
<td>Wheelchair</td>
<td>178 (28.89)</td>
<td>188 (25.75)</td>
<td>4 (2.75)</td>
<td>4 (1.78)</td>
<td>11 (19.0)</td>
<td>11 (14.0)</td>
<td></td>
</tr>
<tr>
<td>Tricycle</td>
<td>87 (14.12)</td>
<td>91 (12.46)</td>
<td>11 (7.58)</td>
<td>11 (4.91)</td>
<td>5 (8.5)</td>
<td>5 (6.2)</td>
<td></td>
</tr>
<tr>
<td>Axillary Crutch</td>
<td>62 (10.06)</td>
<td>100 (13.69)</td>
<td>12 (8.27)</td>
<td>61 (27.23)</td>
<td>3 (5.2)</td>
<td>17 (21.4)</td>
<td></td>
</tr>
<tr>
<td>Stick/Cane/Quadripod</td>
<td>10 (1.62)</td>
<td>13 (1.78)</td>
<td>4 (2.75)</td>
<td>5 (2.23)</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Scooter</td>
<td>16 (2.59)</td>
<td>16 (2.19)</td>
<td>0</td>
<td>0</td>
<td>2 (3.3)</td>
<td>2 (2.4)</td>
<td></td>
</tr>
<tr>
<td>AFO</td>
<td>10 (1.62)</td>
<td>22 (3.01)</td>
<td>8 (5.51)</td>
<td>15 (6.69)</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>KAFO</td>
<td>93 (15.09)</td>
<td>107 (14.65)</td>
<td>9 (6.20)</td>
<td>12 (5.35)</td>
<td>10 (17.1)</td>
<td>11 (13.8)</td>
<td></td>
</tr>
<tr>
<td>HKAFO</td>
<td>25 (4.05)</td>
<td>29 (3.97)</td>
<td>80 (55.17)</td>
<td>80 (35.71)</td>
<td>5 (8.5)</td>
<td>5 (6.2)</td>
<td></td>
</tr>
<tr>
<td>BK Prosthesis</td>
<td>23 (3.73)</td>
<td>23 (3.15)</td>
<td>0</td>
<td>0</td>
<td>6 (10.2)</td>
<td>6 (7.6)</td>
<td></td>
</tr>
<tr>
<td>Paduka/Wooden block</td>
<td>4 (0.64)</td>
<td>4 (0.54)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Home modification</td>
<td>24 (3.89)</td>
<td>25 (3.42)</td>
<td>1 (0.68)</td>
<td>1 (0.44)</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Walker</td>
<td>9 (1.46)</td>
<td>17 (2.32)</td>
<td>2 (1.37)</td>
<td>6 (2.67)</td>
<td>0</td>
<td>1 (1.3)</td>
<td></td>
</tr>
<tr>
<td>AK Prosthesis</td>
<td>7 (1.13)</td>
<td>7 (0.95)</td>
<td>3 (2.06)</td>
<td>3 (1.33)</td>
<td>4 (6.9)</td>
<td>4 (5.1)</td>
<td></td>
</tr>
<tr>
<td>Patla</td>
<td>3 (0.48)</td>
<td>5 (0.68)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Stubbies</td>
<td>3 (0.48)</td>
<td>3 (0.41)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Elbow crutch</td>
<td>32 (5.19)</td>
<td>44 (6.02)</td>
<td>4 (2.75)</td>
<td>19 (8.48)</td>
<td>2 (3.3)</td>
<td>5 (6.2)</td>
<td></td>
</tr>
<tr>
<td>Motorized Tricycle</td>
<td>9 (1.46)</td>
<td>9 (1.23)</td>
<td>1 (0.68)</td>
<td>1 (0.44)</td>
<td>1 (1.6)</td>
<td>1 (1.3)</td>
<td></td>
</tr>
<tr>
<td>BE Prosthesis</td>
<td>4 (0.64)</td>
<td>4 (0.54)</td>
<td>0</td>
<td>0</td>
<td>2 (3.3)</td>
<td>2 (2.4)</td>
<td></td>
</tr>
<tr>
<td>Modified Shoe</td>
<td>4 (0.64)</td>
<td>8 (1.09)</td>
<td>0</td>
<td>0</td>
<td>2 (2.4)</td>
<td>2 (2.4)</td>
<td></td>
</tr>
<tr>
<td>Knee Brace</td>
<td>2 (0.32)</td>
<td>4 (0.54)</td>
<td>2 (1.37)</td>
<td>2 (0.89)</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Grab Bars</td>
<td>2 (0.32)</td>
<td>2 (0.27)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Powered Wheelchair</td>
<td>2 (0.32)</td>
<td>2 (0.27)</td>
<td>0</td>
<td>0</td>
<td>1 (1.6)</td>
<td>1 (1.3)</td>
<td></td>
</tr>
<tr>
<td>Modified Chair</td>
<td>2 (0.32)</td>
<td>2 (0.27)</td>
<td>1 (0.68)</td>
<td>1 (0.44)</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Spinal Brace</td>
<td>2 (0.32)</td>
<td>2 (0.27)</td>
<td>0</td>
<td>0</td>
<td>1 (1.6)</td>
<td>1 (1.3)</td>
<td></td>
</tr>
<tr>
<td>Modified Car</td>
<td>3 (0.48)</td>
<td>3 (0.41)</td>
<td>0</td>
<td>0</td>
<td>1 (1.6)</td>
<td>1 (1.3)</td>
<td></td>
</tr>
<tr>
<td>UE orthosis</td>
<td>0</td>
<td>0</td>
<td>3 (2.06)</td>
<td>3 (1.33)</td>
<td>1 (1.6)</td>
<td>1 (1.3)</td>
<td></td>
</tr>
<tr>
<td>Writing aid</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1 (1.6)</td>
<td>1 (1.3)</td>
<td></td>
</tr>
<tr>
<td>AE prosthesis</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1 (1.6)</td>
<td>1 (1.3)</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>616</strong></td>
<td><strong>730</strong></td>
<td><strong>145</strong></td>
<td><strong>224</strong></td>
<td><strong>58</strong></td>
<td><strong>79</strong></td>
<td></td>
</tr>
</tbody>
</table>
From Table 4.3 and Figure 4.1, it was observed amongst the Group-I, the total number of retained primary devices was 616 and rejected primary device was 145; and in Group-II the total primary devices were 58. The top four retained primary devices from Group-I with more than 10% of total devices were wheelchairs (28.89%), KAFO (15.09%), tricycles (14.12%) and crutches (axillary + elbow) (15.25%) besides others, thus showing a pattern of device usage in our Indian society.

![Figure 4.1: Retained primary devices](image)

Amongst the primary devices that were rejected by Group I users, the total was 145 devices, majority were hip knee ankle foot orthosis (HKAFO) (55.17%), axillary crutch (8.27%) and tricycle (7.58%). Amongst the followed up primary devices in Group II, majority were wheelchair (19%), KAFO (17.1%) and BK prosthesis (10.2%) users.

### 4.3.2 Characteristic of the retained primary devices

This section describes the socio-demographic, condition specific and device specific profile of four primary retained devices. These devices i.e. wheelchair, tricycle, crutches, KAFO were found to be more (>10%) and commonly used by people with locomotor disability as depicted in Table 4.3. The device group of crutches included both elbow and axillary crutches based on similar pattern of usage.
Table 4.4
Socio-demographic characteristic of wheelchair (n=178), tricycle (n=87), crutches (n=94) and KAFO (n=93) users.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Categories</th>
<th>Wheelchair n (%)</th>
<th>Tricycle n (%)</th>
<th>Crutches n (%)</th>
<th>KAFO n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>&lt; 20</td>
<td>23 (12.9)</td>
<td>13 (14.9)</td>
<td>23 (24.5)</td>
<td>35 (37.6)</td>
</tr>
<tr>
<td></td>
<td>20-30</td>
<td>63 (35.4)</td>
<td>36 (41.4)</td>
<td>36 (38.3)</td>
<td>39 (41.9)</td>
</tr>
<tr>
<td></td>
<td>30-40</td>
<td>34 (19.1)</td>
<td>21 (24.1)</td>
<td>27 (28.7)</td>
<td>18 (19.4)</td>
</tr>
<tr>
<td></td>
<td>40-50</td>
<td>15 (8.4)</td>
<td>6 (6.9)</td>
<td>7 (7.4)</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>≥50</td>
<td>43 (24.2)</td>
<td>11 (12.6)</td>
<td>1 (1.1)</td>
<td>1 (1.1)</td>
</tr>
<tr>
<td>Gender</td>
<td>Male</td>
<td>135 (75.8)</td>
<td>65 (74.7)</td>
<td>77 (81.9)</td>
<td>59 (63.4)</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>43 (24.1)</td>
<td>22 (25.3)</td>
<td>17 (18.1)</td>
<td>34 (36.6)</td>
</tr>
<tr>
<td>Type of Organization</td>
<td>Residential</td>
<td>62 (34.8)</td>
<td>24 (27.6)</td>
<td>12 (12.8)</td>
<td>8 (8.6)</td>
</tr>
<tr>
<td></td>
<td>Non-residential</td>
<td>45 (25.3)</td>
<td>28 (32.2)</td>
<td>40 (42.6)</td>
<td>52 (55.9)</td>
</tr>
<tr>
<td></td>
<td>Mixed</td>
<td>71 (39.9)</td>
<td>35 (40.2)</td>
<td>42 (44.7)</td>
<td>33 (35.5)</td>
</tr>
<tr>
<td>Availability of Local Support</td>
<td>Yes</td>
<td>88 (49.4)</td>
<td>39 (44.8)</td>
<td>41 (43.6)</td>
<td>36 (38.7)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>90 (50.6)</td>
<td>48 (55.2)</td>
<td>53 (56.4)</td>
<td>57 (61.3)</td>
</tr>
<tr>
<td>Migration</td>
<td>Yes</td>
<td>51 (28.6)</td>
<td>24 (27.6)</td>
<td>17 (18.1)</td>
<td>22 (24.7)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>127 (71.3)</td>
<td>63 (72.4)</td>
<td>77 (81.9)</td>
<td>71 (76.3)</td>
</tr>
<tr>
<td>Availability of Social Support</td>
<td>Yes</td>
<td>113 (63.5)</td>
<td>66 (75.9)</td>
<td>78 (83.0)</td>
<td>82 (88.2)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>65 (36.5)</td>
<td>21 (24.0)</td>
<td>16 (17.0)</td>
<td>11 (11.8)</td>
</tr>
<tr>
<td>Work status</td>
<td>Student</td>
<td>25 (14.0)</td>
<td>12 (13.8)</td>
<td>25 (26.6)</td>
<td>41 (44.1)</td>
</tr>
<tr>
<td></td>
<td>Job-open market</td>
<td>24 (13.5)</td>
<td>23 (26.4)</td>
<td>31 (33.0)</td>
<td>25 (26.9)</td>
</tr>
<tr>
<td></td>
<td>Job - institution based</td>
<td>93 (52.2)</td>
<td>47 (54.0)</td>
<td>26 (27.7)</td>
<td>21 (22.6)</td>
</tr>
<tr>
<td></td>
<td>Unemployed</td>
<td>36 (20.2)</td>
<td>5 (5.7)</td>
<td>12 (12.8)</td>
<td>6 (6.5)</td>
</tr>
<tr>
<td>Educational status</td>
<td>Primary</td>
<td>51 (28.7)</td>
<td>25 (28.7)</td>
<td>13 (13.8)</td>
<td>12 (12.9)</td>
</tr>
<tr>
<td></td>
<td>7&lt;sup&gt;th&lt;/sup&gt; to 11&lt;sup&gt;th&lt;/sup&gt; Standard</td>
<td>50 (28.1)</td>
<td>24 (27.6)</td>
<td>34 (36.2)</td>
<td>41 (44.1)</td>
</tr>
<tr>
<td></td>
<td>12&lt;sup&gt;th&lt;/sup&gt; Standard and above</td>
<td>77 (43.3)</td>
<td>38 (43.7)</td>
<td>47 (50.0)</td>
<td>40 (43.0)</td>
</tr>
<tr>
<td>Living status</td>
<td>With family</td>
<td>109 (61.2)</td>
<td>58 (66.7)</td>
<td>79 (84.0)</td>
<td>77 (82.8)</td>
</tr>
<tr>
<td></td>
<td>Residential set up</td>
<td>65 (36.5)</td>
<td>26 (29.9)</td>
<td>13 (13.8)</td>
<td>15 (16.1)</td>
</tr>
<tr>
<td></td>
<td>Others (staying alone)</td>
<td>4 (2.2)</td>
<td>3 (3.4)</td>
<td>2 (2.1)</td>
<td>1 (1.1)</td>
</tr>
<tr>
<td>Socioeconomic Status</td>
<td>High</td>
<td>8 (4.5)</td>
<td>0</td>
<td>1 (1.1)</td>
<td>4 (4.3)</td>
</tr>
<tr>
<td></td>
<td>Upper middle</td>
<td>26 (14.6)</td>
<td>4 (4.6)</td>
<td>13 (13.8)</td>
<td>11 (11.8)</td>
</tr>
<tr>
<td></td>
<td>Lower middle</td>
<td>80 (44.9)</td>
<td>51 (58.6)</td>
<td>52 (55.3)</td>
<td>58 (62.4)</td>
</tr>
<tr>
<td></td>
<td>Poor</td>
<td>39 (21.9)</td>
<td>27 (31.0)</td>
<td>22 (23.4)</td>
<td>16 (17.2)</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>25 (14.0)</td>
<td>5 (5.7)</td>
<td>6 (6.4)</td>
<td>4 (4.3)</td>
</tr>
</tbody>
</table>

Note: Data provided as percentages.
From Table 4.4 and Figure 4.2, it is observed that the maximal usage of the device across all device categories was by subjects belonging to the age group of 20-30, although it was interesting to find that wheelchair users group were much older with a maximum age, i.e. even upto 70 years and KAFO users were relatively younger with a maximum age at 38 years. In general, males possessed more devices as compared to females. It was found that 52.2% of wheelchair users and 54% of tricycle users were involved in work within institutional setups, whereas, majority of crutch users and KAFO users were engaged in activities in the open facilities. It is observed that majority of the devices in all categories are been used by people who continue to stay with their families and belonging to lower middle class families.
Table 4.5

*Condition specific characteristic of wheelchair (n=178), tricycle (n=87), crutches (n=94) and KAFO (n=93) users.*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Categories</th>
<th>Wheelchair n (%)</th>
<th>Tricycle n (%)</th>
<th>Crutches n (%)</th>
<th>KAFO n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Diagnosis</strong></td>
<td>Polio</td>
<td>58 (32.6)</td>
<td>56 (64.4)</td>
<td>61 (64.9)</td>
<td>77 (82.8)</td>
</tr>
<tr>
<td></td>
<td>Spinal Cord Injury</td>
<td>79 (44.4)</td>
<td>19 (21.8)</td>
<td>4 (4.3)</td>
<td>7 (7.5)</td>
</tr>
<tr>
<td></td>
<td>Amputation</td>
<td>6 (3.4)</td>
<td>5 (5.7)</td>
<td>19 (20.2)</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>35 (19.7)</td>
<td>7 (8.0)</td>
<td>10 (10.6)</td>
<td>9 (9.7)</td>
</tr>
<tr>
<td><strong>Age of Onset of Locomotor Problem</strong></td>
<td>&lt;5 years</td>
<td>65 (36.5)</td>
<td>56 (64.3)</td>
<td>65 (69.2)</td>
<td>78 (83.9)</td>
</tr>
<tr>
<td></td>
<td>5-10 years</td>
<td>16 (9.0)</td>
<td>8 (9.2)</td>
<td>5 (5.3)</td>
<td>8 (8.6)</td>
</tr>
<tr>
<td></td>
<td>10-20 years</td>
<td>30 (16.9)</td>
<td>5 (5.7)</td>
<td>7 (7.4)</td>
<td>1 (1.1)</td>
</tr>
<tr>
<td></td>
<td>20-30 years</td>
<td>42 (23.6)</td>
<td>11 (12.6)</td>
<td>11 (11.7)</td>
<td>6 (6.5)</td>
</tr>
<tr>
<td></td>
<td>≥30 years</td>
<td>25 (14.0)</td>
<td>7 (8.0)</td>
<td>6 (6.4)</td>
<td>0</td>
</tr>
<tr>
<td><strong>Duration of Locomotor Problem</strong></td>
<td>&lt;10 years</td>
<td>51 (28.7)</td>
<td>10 (11.5)</td>
<td>17 (18.1)</td>
<td>5 (5.4)</td>
</tr>
<tr>
<td></td>
<td>10-20 years</td>
<td>39 (21.9)</td>
<td>25 (28.7)</td>
<td>38 (40.4)</td>
<td>50 (53.8)</td>
</tr>
<tr>
<td></td>
<td>20-30 years</td>
<td>48 (27.0)</td>
<td>34 (39.1)</td>
<td>25 (26.6)</td>
<td>30 (32.3)</td>
</tr>
<tr>
<td></td>
<td>30-40 years</td>
<td>22 (12.4)</td>
<td>12 (13.8)</td>
<td>13 (13.8)</td>
<td>7 (7.5)</td>
</tr>
<tr>
<td></td>
<td>≥40 years</td>
<td>18 (10.1)</td>
<td>6 (6.9)</td>
<td>1 (1.1)</td>
<td>1 (1.1)</td>
</tr>
<tr>
<td><strong>Extent of Involvement- A</strong></td>
<td>BB affected</td>
<td>71 (39.9)</td>
<td>16 (18.4)</td>
<td>1 (1.1)</td>
<td>3 (3.2)</td>
</tr>
<tr>
<td></td>
<td>BB not affected</td>
<td>107 (60.1)</td>
<td>71 (81.6)</td>
<td>93 (98.9)</td>
<td>90 (96.8)</td>
</tr>
<tr>
<td><strong>Extent of Involvement- B</strong></td>
<td>Single LL affected</td>
<td>4 (2.2)</td>
<td>5 (5.7)</td>
<td>32 (33.0)</td>
<td>52 (55.9)</td>
</tr>
<tr>
<td></td>
<td>Bilateral LL affected</td>
<td>76 (42.7)</td>
<td>66 (75.9)</td>
<td>61 (64.9)</td>
<td>38 (40.9)</td>
</tr>
<tr>
<td></td>
<td>Bilateral LL &amp; BB affected</td>
<td>57 (32.0)</td>
<td>16 (18.4)</td>
<td>1 (1.1)</td>
<td>3 (3.2)</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>41 (23.0)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Figure 4.3: Minimum, maximum and median age of onset of locomotor problem and duration of locomotor problem across users of AT devices

From the Table 4.5 & Fig 4.3, it is seen that 44.4% of the wheelchair users were affected with spinal cord injury, whereas majority of the tricycles, crutches & KAFO users were affected with polio. Majority of the AT users, across the group, acquired locomotor problem at < 5 years of age, with relatively higher median age of 14(22) for wheelchair user as compared to the other devices. It was found that majority of the wheelchair and tricycle users had exposure to locomotor problem for 20-30 years with median duration of 19.25(21) and 22.09 (10.88) years for wheelchair and tricycle respectively. Also the majority of devices across all the four categories were possessed by those who did not have bladder and bowel affected and those who had both lower limb affected except for amputation.
Table 4.6

**Descriptive of the Functional Status**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Wheelchair (n=178)</th>
<th>Tricycle (n=87)</th>
<th>Crutches (n=94)</th>
<th>KAFO (n=93)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difference in motor-FIM Score</td>
<td>Min</td>
<td>0</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Max</td>
<td>36</td>
<td>28</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>Med (IQR)</td>
<td>16.30 (8.13)*</td>
<td>15 (14)</td>
<td>16.29 (6.19)*</td>
</tr>
</tbody>
</table>

*Mean (SD)*

Table 4.6, described the difference in motor-FIM Score, which is indicative of extent of improvement in functional status upon using the respective devices. It reported of marginally higher improvement in functional status with wheelchair and crutches as compared to tricycle, and least improvement was observed for KAFO.
Table 4.7

Device specific characteristic of wheelchair (n=178), tricycle (n=87), crutches (n=94) and KAFO (n=93) users.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Categories</th>
<th>Wheelchair n (%)</th>
<th>Tricycle n (%)</th>
<th>Crutches n (%)</th>
<th>KAFO n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Usage duration of devices</td>
<td>&lt;5 years</td>
<td>64 (36.0)</td>
<td>29 (33.3)</td>
<td>27 (28.7)</td>
<td>35 (37.6)</td>
</tr>
<tr>
<td></td>
<td>5-10</td>
<td>39 (21.9)</td>
<td>27 (31.0)</td>
<td>26 (26.6)</td>
<td>30 (32.3)</td>
</tr>
<tr>
<td></td>
<td>10-20</td>
<td>38 (21.3)</td>
<td>21 (24.1)</td>
<td>35 (37.2)</td>
<td>21 (22.6)</td>
</tr>
<tr>
<td></td>
<td>≥20</td>
<td>37 (20.8)</td>
<td>10 (11.4)</td>
<td>6 (6.4)</td>
<td>7 (7.6)</td>
</tr>
<tr>
<td>Availability of AT training facility</td>
<td>Yes</td>
<td>16 (9.0)</td>
<td>2 (2.3)</td>
<td>17 (18.1)</td>
<td>60 (64.5)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>162 (91.0)</td>
<td>85 (97.7)</td>
<td>77 (81.9)</td>
<td>33 (35.5)</td>
</tr>
<tr>
<td>Participation in selection of AT</td>
<td>Yes</td>
<td>46 (25.8)</td>
<td>16 (18.4)</td>
<td>35 (37.2)</td>
<td>40 (43.0)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>132 (74.2)</td>
<td>71 (81.6)</td>
<td>59 (62.8)</td>
<td>53 (57.0)</td>
</tr>
<tr>
<td>Frequency of AT usage</td>
<td>Always</td>
<td>112 (62.9)</td>
<td>9 (10.3)</td>
<td>56 (59.6)</td>
<td>25 (26.9)</td>
</tr>
<tr>
<td></td>
<td>Frequently in a day</td>
<td>47 (26.4)</td>
<td>47 (54.0)</td>
<td>33 (35.1)</td>
<td>50 (53.8)</td>
</tr>
<tr>
<td></td>
<td>Sometimes in a day</td>
<td>13 (7.3)</td>
<td>28 (32.2)</td>
<td>5 (5.3)</td>
<td>18 (19.4)</td>
</tr>
<tr>
<td></td>
<td>Occasionally</td>
<td>6 (3.4)</td>
<td>3 (3.4)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Changing of AT</td>
<td>Not changed</td>
<td>73 (41.0)</td>
<td>31 (35.6)</td>
<td>24 (25.5)</td>
<td>14 (15.1)</td>
</tr>
<tr>
<td></td>
<td>1-2 times</td>
<td>63 (35.4)</td>
<td>34 (39.1)</td>
<td>20 (21.3)</td>
<td>40 (43.0)</td>
</tr>
<tr>
<td></td>
<td>3-4 times</td>
<td>32 (17.9)</td>
<td>17 (19.5)</td>
<td>30 (31.9)</td>
<td>22 (23.7)</td>
</tr>
<tr>
<td></td>
<td>≥ 5 times</td>
<td>10 (5.6)</td>
<td>5 (5.7)</td>
<td>20 (21.3)</td>
<td>17 (18.3)</td>
</tr>
<tr>
<td>Frequency of AT repair</td>
<td>Once a week</td>
<td>4 (2.2)</td>
<td>23 (26.4)</td>
<td>26 (27.7)</td>
<td>8 (8.6)</td>
</tr>
<tr>
<td></td>
<td>Once a month</td>
<td>62 (34.8)</td>
<td>33 (37.9)</td>
<td>29 (30.9)</td>
<td>37 (39.8)</td>
</tr>
<tr>
<td></td>
<td>Once every 2 month</td>
<td>41 (23.0)</td>
<td>26 (29.9)</td>
<td>26 (27.7)</td>
<td>26 (28.0)</td>
</tr>
<tr>
<td></td>
<td>Once every 4 month</td>
<td>32 (18.0)</td>
<td>2 (2.3)</td>
<td>5 (5.3)</td>
<td>10 (10.8)</td>
</tr>
<tr>
<td></td>
<td>Once every 6 month</td>
<td>16 (9.0)</td>
<td>3 (3.4)</td>
<td>4 (4.3)</td>
<td>4 (4.3)</td>
</tr>
<tr>
<td></td>
<td>Not repaired</td>
<td>21 (11.8)</td>
<td>0</td>
<td>4 (4.3)</td>
<td>8 (8.6)</td>
</tr>
<tr>
<td>Funding source of AT</td>
<td>Donated</td>
<td>140 (78.7)</td>
<td>79 (90.8)</td>
<td>66 (70.2)</td>
<td>75 (80.6)</td>
</tr>
<tr>
<td></td>
<td>Self</td>
<td>22 (12.4)</td>
<td>4 (4.6)</td>
<td>15 (16.0)</td>
<td>8 (8.6)</td>
</tr>
<tr>
<td></td>
<td>Partly funded</td>
<td>16 (9.0)</td>
<td>4 (4.6)</td>
<td>13 (13.8)</td>
<td>10 (10.8)</td>
</tr>
<tr>
<td>Prescribing &amp; fitting source of AT</td>
<td>Professionals</td>
<td>46 (25.8)</td>
<td>2 (2.3)</td>
<td>14 (14.9)</td>
<td>75 (80.6)</td>
</tr>
<tr>
<td></td>
<td>Non-professionals</td>
<td>127 (71.3)</td>
<td>83 (95.4)</td>
<td>65 (69.1)</td>
<td>16 (17.2)</td>
</tr>
<tr>
<td></td>
<td>Self</td>
<td>5 (2.8)</td>
<td>2 (2.3)</td>
<td>15 (16.0)</td>
<td>2 (2.2)</td>
</tr>
<tr>
<td>Availability of AT maintenance facility</td>
<td>Yes</td>
<td>106 (59.6)</td>
<td>50 (57.5)</td>
<td>30 (31.9)</td>
<td>47 (50.5)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>72 (40.4)</td>
<td>37 (42.5)</td>
<td>64 (68.1)</td>
<td>46 (49.5)</td>
</tr>
<tr>
<td>Waiting period</td>
<td>Received immediately</td>
<td>63 (35.3)</td>
<td>26 (29.9)</td>
<td>21 (22.3)</td>
<td>8 (8.6)</td>
</tr>
<tr>
<td></td>
<td>Within 7 days</td>
<td>79 (44.4)</td>
<td>8 (9.2)</td>
<td>53 (56.4)</td>
<td>48 (51.6)</td>
</tr>
<tr>
<td></td>
<td>8 to 30 days</td>
<td>28 (15.7)</td>
<td>36 (41.4)</td>
<td>15 (16.0)</td>
<td>34 (36.6)</td>
</tr>
<tr>
<td></td>
<td>31 to 60 days</td>
<td>4 (2.2)</td>
<td>13 (14.9)</td>
<td>1 (1.1)</td>
<td>2 (2.2)</td>
</tr>
<tr>
<td></td>
<td>≥ 60 days</td>
<td>4 (2.2)</td>
<td>4 (4.6)</td>
<td>4 (4.3)</td>
<td>1 (1.1)</td>
</tr>
<tr>
<td>Prior experience with AT</td>
<td>Yes</td>
<td>49 (27.5)</td>
<td>23 (26.4)</td>
<td>32 (34.0)</td>
<td>19 (20.4)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>129 (72.5)</td>
<td>64 (73.6)</td>
<td>61 (64.0)</td>
<td>74 (79.6)</td>
</tr>
</tbody>
</table>
From Table 4.6 & Fig 4.4, it was mainly the wheelchairs (20.8%) that were used over a longer period (≥20) years as compared to any other devices, and with median duration of 8(14) years. The subjects perceived that for majority of the devices across all the categories, they did not receive appropriate training instruction and also were not involved in the decision making process for device acquisition. It was also reported that wheelchairs were used frequently in a day (62.9%), followed by crutches (59.6%), tricycle (54%) and KAFO (53.8%). Also, majority of the device across all the categories were obtained through charitable means (donation) and perceived to be prescribed through non-professional means.

4.4 Tool Translation

In order to administer the scales in the language of the user, the PIADS and Ladder Scale was translated into the following languages - Bengali, Malayalam, Tamil, Marathi, and Hindi. The translation of PIADS and Ladder Scale in the above mentioned languages have followed the standard procedure of translation and piloted on subjects who were bilinguals and wearing spectacles.
Chapter 4

Results and Analysis

The Psychometric evaluation of the translated PIADS tool included test-retest reliability and compared the data gathered from a similar user population using the English version of the scale. To test the translated PIADS tool for Hindi, Marathi, Bengali, Malayalam, and Tamil, 15 subjects in each group and 16 in Hindi were selected conveniently. Test-retest reliability was administered to see whether the scores generated by the translated version were significant. The reliability coefficient normally ranges between 0 and 1. The closer the alpha coefficient is to 1.0 the greater the internal consistency of the items in the scale. The rules of thumb of interpreting alpha (α) coefficient is α ≥ 0.9- excellent, α ≥ 0.8- good, α ≥ 0.7- acceptable, α ≥ 0.6- questionable, α ≥ 0.5- poor, α ≥ 0.4- unacceptable. Ladder Scale been a simple uni-dimensional and single-item scale, the translated versions were not subjected to reliability tests.

Table 4.8

Reliability testing of translated version of PIADS

<table>
<thead>
<tr>
<th>Translated PIADS scale</th>
<th>n</th>
<th>Reliability Coefficients (α)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marathi-PIADS</td>
<td>15</td>
<td>0.95</td>
</tr>
<tr>
<td>Bengali-PIADS</td>
<td>16</td>
<td>0.92</td>
</tr>
<tr>
<td>Malayalam-PIADS</td>
<td>15</td>
<td>0.92</td>
</tr>
<tr>
<td>Tamil-PIADS</td>
<td>15</td>
<td>0.83</td>
</tr>
<tr>
<td>Hindi-PIADS</td>
<td>15</td>
<td>0.96</td>
</tr>
</tbody>
</table>

From the Table 4.8, it is evident that the reliability coefficients for the translated PIADS total score produced values ranging from 0.83 to 0.96 and is comparable to the original PIADS total score of 0.95.
Table 4.9

*Reliability testing by comparing the total score of translated version of PIADS and the original English version*

<table>
<thead>
<tr>
<th>English PIADS with translated PIADS</th>
<th>n</th>
<th>Reliability Coefficients (α)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marathi-PIADS with English</td>
<td>15</td>
<td>0.88</td>
</tr>
<tr>
<td>Bengali-PIADS with English</td>
<td>16</td>
<td>0.89</td>
</tr>
<tr>
<td>Malayalam-PIADS with English</td>
<td>15</td>
<td>0.85</td>
</tr>
<tr>
<td>Tamil-PIADS with English</td>
<td>15</td>
<td>0.75</td>
</tr>
<tr>
<td>Hindi-PIADS with English</td>
<td>15</td>
<td>0.91</td>
</tr>
</tbody>
</table>

From the Table 4.9, it evident that the reliability coefficients for the translated PIADS total score in comparison with the English version and produced values ranging from 0.75 to 0.91. *Overall*, the translated PIADS scores were not statistically different from data obtained from a similar device user population in the original validation study. All values exceed the 0.70 threshold of acceptability.

4.5 Psychosocial Outcomes of Retained Primary Assistive Technology in Group I

The psychosocial outcomes were measured using PIADS and Ladder Scale. PIADS described the psychosocial impact in terms of Competence, Adaptability and Self-esteem, as experienced by an AT user while using AT device and Ladder Scale describing the life satisfaction and well-being as experienced through AT device usage.

PIADS and Ladder Scale as outcome variables were administered to measure the psychosocial outcomes for four commonly used devices by subjects with locomotor disability in Indian context. The devices are wheelchair, tricycle, crutches and KAFO. The subdomains of PIADS - Competence (PIADS-C), Adaptability (PIADS-A) and Self-esteem (PIADS - S) is described in the context of various independent variable, with mean and standard deviation for scores that were normal and median and interquartile range for scores that did not follow normality. The Ladder Scale score was collected for with and without device for every single observation, and thus generated the Ladder Scale difference (LS - difference) score to demonstrate the change produced by the device - either in a positive or a negative way, the higher the positive score the more the improved life satisfaction.
The descriptive of the outcome variables has been presented. The group means of PIADS subscales and Ladder Scale difference score for various variables were compared using independent t-test or Mann-Whitney U test when two groups were involved, if more than two groups one way ANOVA F-test or Kruskal-Wallis H Test was used. Tukey’s post hoc analysis was done with least significant difference as appropriate for ANOVA F-test. Pearson’s correlation test was used to estimate the magnitude, direction and degree of association between non-categorical variables and the outcome variables. For adjusting the confounders, the multiple linear regression analysis was used for continuous outcome variable and predictor variable. The Stepwise method with entry criteria set at p<.15 and exit criteria with p<.10 was used.

The analysis of psychosocial outcome of devices users are presented sequentially based on each device type-wheelchair, tricycle, crutches and KAFO.

4.5.1 Overall psychosocial outcome of the retained and rejected devices:

In this section, the median scores of PIADS and Ladder Scale for retained and rejected devices were compared using Mann-Whitney U test.

Table 4.10

<table>
<thead>
<tr>
<th>Outcome variable</th>
<th>Retained device (n=270)</th>
<th>Rejected device(n=125)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Median</td>
<td>IQR</td>
<td>Median</td>
</tr>
<tr>
<td>Competence</td>
<td>2.25</td>
<td>.92</td>
<td>.75</td>
</tr>
<tr>
<td>PIADS</td>
<td>2.33</td>
<td>1.00</td>
<td>.83</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>2.12</td>
<td>1.03</td>
<td>.87</td>
</tr>
<tr>
<td>Ladder Scale difference</td>
<td>3.00</td>
<td>3</td>
<td>.00</td>
</tr>
</tbody>
</table>

Table 4.10 indicates that the retained devices have caused significantly high positive impact in all three domains of PIADS as compared to the discarded devices, Competence (p<.001), Adaptability (p<.001) and Self-esteem (p<.001). The improvement in life satisfaction was significantly high for retained devices as compared to rejected devices (p<.001).
4.5.2 Psychosocial outcome for wheelchair users

In the current study a total of 178 subjects in Group I were found to have using wheelchair as their primary AT device and was found to be one of the most prevalent mobility device in Indian society.

Table 4.11

Descriptive of dependent variables for wheelchair users

<table>
<thead>
<tr>
<th>Outcome variable</th>
<th>n</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>PIADS – C</td>
<td>178</td>
<td>-0.75</td>
<td>3.00</td>
<td>2.11</td>
<td>0.73</td>
</tr>
<tr>
<td>PIADS- A</td>
<td>178</td>
<td>-1.16</td>
<td>3.00</td>
<td>2.12</td>
<td>0.84</td>
</tr>
<tr>
<td>PIADS-S</td>
<td>178</td>
<td>-0.62</td>
<td>3.00</td>
<td>1.97</td>
<td>0.79</td>
</tr>
<tr>
<td>LS-Difference</td>
<td>178</td>
<td>-1</td>
<td>8</td>
<td>3.88</td>
<td>2.27</td>
</tr>
</tbody>
</table>

From Table 4.11, it is seen that the mean psychosocial impact for wheelchair users was found to be 2.11(0.73), 2.12(0.84) and 1.97(0.79) respectively for competence, adaptability and self-esteem subscale, with the lowest impact been for self - esteem subscale. The mean improvement in life satisfaction score was found at 3.88(2.27).
Table 4.12

Group comparison for socio-demographic variables of PIADS score for retained wheelchair

(n=178)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Category(n)</th>
<th>PIADS-C Mean (SD)</th>
<th>PIADS-C p value</th>
<th>PIADS-A Mean (SD)</th>
<th>PIADS-A p value</th>
<th>PIADS-S Mean (SD)</th>
<th>PIADS-S p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male (135)</td>
<td>2.19 (0.73)</td>
<td>p=.03</td>
<td>2.23 (0.80)</td>
<td>p=.005</td>
<td>2.02 (0.83)</td>
<td>p=.26</td>
</tr>
<tr>
<td></td>
<td>Female (43)</td>
<td>1.93 (0.63)</td>
<td></td>
<td>1.84 (0.80)</td>
<td></td>
<td>1.89 (0.58)</td>
<td></td>
</tr>
<tr>
<td>Type of Facility</td>
<td>Residential (62)</td>
<td>2.31 (0.76)</td>
<td>p=.01</td>
<td>2.33 (0.80)</td>
<td>p=.009</td>
<td>2.19 (0.67)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Non-residential (116)</td>
<td>2.03 (0.68)</td>
<td></td>
<td>2.03 (0.81)</td>
<td></td>
<td>1.88 (0.81)</td>
<td></td>
</tr>
<tr>
<td>Availability of Local Support</td>
<td>Yes (88)</td>
<td>2.20 (0.62)</td>
<td>p=.27</td>
<td>2.19 (0.80)</td>
<td>p=.44</td>
<td>2.06 (0.67)</td>
<td>p=.28</td>
</tr>
<tr>
<td></td>
<td>No (89)</td>
<td>2.05 (0.80)</td>
<td></td>
<td>2.08 (0.83)</td>
<td></td>
<td>1.91 (0.87)</td>
<td></td>
</tr>
<tr>
<td>Migration Status</td>
<td>Yes (51)</td>
<td>2.54 (0.33)</td>
<td>p&lt;.001</td>
<td>2.52 (0.41)</td>
<td>p&lt;.001</td>
<td>2.36 (0.52)</td>
<td>p&lt;.001</td>
</tr>
<tr>
<td></td>
<td>No (127)</td>
<td>1.94 (0.78)</td>
<td></td>
<td>1.95 (0.91)</td>
<td></td>
<td>1.82 (0.83)</td>
<td></td>
</tr>
<tr>
<td>Availability of Social Support</td>
<td>Yes (113)</td>
<td>2.16 (0.62)</td>
<td>p=.90</td>
<td>2.14 (0.76)</td>
<td>p=.66</td>
<td>2.08 (0.60)</td>
<td>p=.68</td>
</tr>
<tr>
<td></td>
<td>No (65)</td>
<td>2.04 (0.80)</td>
<td></td>
<td>2.08 (0.96)</td>
<td></td>
<td>1.78 (0.85)</td>
<td></td>
</tr>
<tr>
<td>Work Status</td>
<td>Job in open market (49)</td>
<td>2.14 (0.62)</td>
<td></td>
<td>2.13 (0.75)</td>
<td></td>
<td>2.00 (0.79)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Institutional Setup (93)</td>
<td>2.21 (0.80)</td>
<td>p=.04</td>
<td>2.25 (0.79)</td>
<td>p=.01</td>
<td>2.15 (0.70)</td>
<td>p&lt;.001</td>
</tr>
<tr>
<td></td>
<td>Unemployed (36)</td>
<td>1.89 (0.56)</td>
<td></td>
<td>1.83 (0.91)</td>
<td></td>
<td>1.52 (0.79)</td>
<td></td>
</tr>
<tr>
<td>Education Status</td>
<td>1-10 (99)</td>
<td>2.10 (0.78)</td>
<td>p=.71</td>
<td>2.10 (0.87)</td>
<td>p=.54</td>
<td>1.95 (0.80)</td>
<td>p=.49</td>
</tr>
<tr>
<td></td>
<td>11-18 (79)</td>
<td>2.16 (0.63)</td>
<td></td>
<td>2.18 (0.74)</td>
<td></td>
<td>2.04 (0.75)</td>
<td></td>
</tr>
<tr>
<td>Living Status</td>
<td>With family (110)</td>
<td>1.94 (0.66)</td>
<td>p&lt;.001</td>
<td>1.89 (0.88)</td>
<td>p&lt;.001</td>
<td>1.80 (0.78)</td>
<td>p&lt;.001</td>
</tr>
<tr>
<td></td>
<td>Away from family (68)</td>
<td>2.40 (0.76)</td>
<td></td>
<td>2.48 (0.62)</td>
<td></td>
<td>2.25 (0.73)</td>
<td></td>
</tr>
<tr>
<td>Socio-economic Status</td>
<td>Upper middle (34)</td>
<td>2.02 (0.65)</td>
<td>p=.08</td>
<td>2.06 (0.87)</td>
<td>p=.13</td>
<td>1.85 (0.96)</td>
<td>p=.02</td>
</tr>
<tr>
<td></td>
<td>Lower middle (80)</td>
<td>2.30 (0.53)</td>
<td></td>
<td>2.30 (0.67)</td>
<td></td>
<td>2.20 (0.48)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Poor (64)</td>
<td>1.98 (0.89)</td>
<td></td>
<td>1.97 (0.92)</td>
<td></td>
<td>1.80 (0.89)</td>
<td></td>
</tr>
</tbody>
</table>

The Table 4.12 indicated males having higher mean scores across all the subscales, but had significantly higher impact (p=.005) on the Adaptability subscale as compared to females. For the variable on the type of facility where the subjects were availing rehabilitation service from, it was found that the residential facilities produced significantly higher impact across all the subscales as compared to non-residential facilities.
As regards the variable on *local support* and *social support*, although there was no significant difference found, the mean score was marginally higher across all the subscales for those who received the local and social support. When subjects *migrated* to the place of opportunity in the context of rehabilitation service, the psychosocial impact created was significantly higher at p<.001 across all PIADS subscales.

Regarding the *work status*, there was significant effect of wheelchair users working in institutional facilities at p=.04 for Competence subscale; p=.01 for Adaptability subscale and p<.001 for Self-esteem subscale. And the post hoc analysis showed that the mean score of subjects working in institutional facilities was significantly higher than the mean for unemployed subjects for competence subscale (p=.03) and for Adaptability subscale (p=.01). The post hoc analysis for Self-esteem subscale found that the mean score of subjects working in open market facilities and institutional facilities were significantly higher (p=.01), (p<.001) respectively than the mean for unemployed subjects.

Regarding the influence of *education*, although there was no significant difference between the groups, the mean scores were more for subjects with higher qualification across all the subscales of PIADS. The wheelchair users who were *staying away from their families* had significantly higher (p<.001) positive impact across all the subscales as compared to those who were staying with their families.

Regarding the influence of *socioeconomic status*, no significant difference was observed between the groups for Competence subscale (p=.08) and Adaptability subscale (p=.13), although it was found to be significant for Self-esteem subscale at (p=.02) and post hoc analysis showed that wheelchair users belonging to lower middle class had significantly higher (p=.02) impact as compared to those belonging to the poor class.
Table 4.13

*Group comparison for socio-demographic variables of Ladder Scale difference score for retained wheelchair (n=178)*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Category (n)</th>
<th>Ladder Scale Difference</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Median (IQR)</td>
<td>p Value</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>(135)</td>
<td>4(3)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Female</td>
<td>(43)</td>
<td>2(3)</td>
<td></td>
</tr>
<tr>
<td><strong>Type of Facility</strong></td>
<td>Residential (62)</td>
<td>5.5(3)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Non-residential(116)</td>
<td>3(3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Availability of Local Support</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>(88)</td>
<td>4(3)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>No</td>
<td>(89)</td>
<td>3(4)</td>
<td></td>
</tr>
<tr>
<td><strong>Migration Status</strong></td>
<td>Yes (51)</td>
<td>5(3)</td>
<td>.001</td>
</tr>
<tr>
<td>No</td>
<td>(127)</td>
<td>4(3)</td>
<td></td>
</tr>
<tr>
<td><strong>Availability of Social Support</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>(113)</td>
<td>3(3)</td>
<td>.002</td>
</tr>
<tr>
<td>No</td>
<td>(65)</td>
<td>5(3)</td>
<td></td>
</tr>
<tr>
<td><strong>Work Status</strong></td>
<td>Job in open market(49)</td>
<td>3(3)</td>
<td>.02</td>
</tr>
<tr>
<td>Institutional Set-up(93)</td>
<td>4(4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed(36)</td>
<td>3(3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Education Status</strong></td>
<td>1-10(99)</td>
<td>4(4)</td>
<td>.16</td>
</tr>
<tr>
<td>11-18(79)</td>
<td>3(3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Living Status</strong></td>
<td>With family (110)</td>
<td>3(2)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Away from family (68)</td>
<td>6(3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Socio-economic Status</strong></td>
<td>Upper middle(34)</td>
<td>3(3)</td>
<td>.55</td>
</tr>
<tr>
<td>Lower middle(80)</td>
<td>4(4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor(64)</td>
<td>4(5)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From the Table 4.13, it was seen that the improvement in life satisfaction with Ladder Scale difference score was significantly high at p<.001 for *male* wheelchair users, those availing services from *residential facilities*, who received *local support*, and those who were staying *away from family*. Also life satisfaction scores were significantly higher for those who *migrated* to place of opportunity as compared to those who did not (p=.001), availability of
*social support* had significant effect on life satisfaction \((p=.002)\), and also *work status* significantly influenced the life satisfaction \((p=.02)\).

Table 4.14

*Group comparison for condition specific variables of PIADS score for retained wheelchair*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Category (n)</th>
<th>PIADS-C</th>
<th>PIADS-A</th>
<th>PIADS-S</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean (SD)</td>
<td>p value</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>Diagnosis</td>
<td>Polio (58)</td>
<td>2.00 (0.70)</td>
<td></td>
<td>2.16 (1.33)*</td>
</tr>
<tr>
<td></td>
<td>Spinal Cord</td>
<td>2.18 (0.83)</td>
<td><strong>p=.02</strong></td>
<td>2.50 (1.00)*</td>
</tr>
<tr>
<td></td>
<td>Injury (79)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Amputation(6)</td>
<td>1.42 (0.70)</td>
<td></td>
<td>.91 (2.92)*</td>
</tr>
<tr>
<td></td>
<td>Others (35)</td>
<td>2.28 (0.40)</td>
<td></td>
<td>2.50 (0.83)*</td>
</tr>
<tr>
<td>Extent of</td>
<td>BB affected (71)</td>
<td>2.18 (0.84)</td>
<td><strong>p=.58</strong></td>
<td>2.22 (0.80)</td>
</tr>
<tr>
<td>Involvement- A</td>
<td>BB not affected (107)</td>
<td>2.09 (0.63)</td>
<td></td>
<td>2.07 (0.83)</td>
</tr>
</tbody>
</table>

* Median (IQR)

The Table 4.14, described that the *type of diagnosis* of the wheelchair users had a significant effect on all the subscales of PIADS, for Competence subscale at \(p=.02\). Post hoc analysis showed that impact of wheelchair on spinal cord injury (SCI) subjects was significantly more positive \((p=.06)\) as compared to wheelchair users with amputation, for Adaptability subscale SCI subjects had significantly high impact wheelchair users with amputation \((p=.03)\), and for Self-esteem the polio subjects had significantly higher impact \((p=.01)\) as compared to subjects with amputation. Based on bladder-bowel involvement there was no significant difference between the groups.
Table 4.15

*Group comparison for condition specific variables of Ladder Scale difference score for retained wheelchair*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Category (n)</th>
<th>Ladder Scale Difference</th>
<th>Median (IQR)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnosis</td>
<td>Polio (58)</td>
<td>2(2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Spinal Cord Injury (79)</td>
<td>5(3)</td>
<td></td>
<td>p&lt;.001</td>
</tr>
<tr>
<td></td>
<td>Amputation (6)</td>
<td>1(4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Others (35)</td>
<td>4(2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extent of Involvement-A</td>
<td>BB affected (71)</td>
<td>5(3)</td>
<td></td>
<td>p&lt;.001</td>
</tr>
<tr>
<td></td>
<td>BB not affected (107)</td>
<td>3(3)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From Table 4.15, the life satisfaction was found to be significantly influenced by the type of diagnosis that the wheelchair user was having (p<.001) and higher median life satisfaction score 5(3) with spinal cord injury as compared to other diagnosis. And also wheelchair produced significantly more life satisfaction for subjects who had bladder and bowel affectation (p<.001) as compared to those who did not have bladder and bowel involvement.
Table 4.16

Group comparison for device specific variables of PIADS score for retained wheelchair

(\(n=178\))

<table>
<thead>
<tr>
<th>Variables</th>
<th>Category(n)</th>
<th>PIADS-C</th>
<th>PIADS-A</th>
<th>PIADS-S</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>p value</td>
<td>p value</td>
<td>p value</td>
</tr>
<tr>
<td>Availability of AT training facility</td>
<td>Yes (16)</td>
<td>2.27(0.52)</td>
<td>2.28(0.55)</td>
<td>1.83(0.81)</td>
</tr>
<tr>
<td></td>
<td>No (162)</td>
<td>2.11(0.73)</td>
<td>2.12(0.84)</td>
<td>2.00(0.77)</td>
</tr>
<tr>
<td>Participation in Selection of AT</td>
<td>Yes (46)</td>
<td>2.32(0.54)</td>
<td>2.35(0.70)</td>
<td>2.06(0.81)</td>
</tr>
<tr>
<td></td>
<td>No (132)</td>
<td>2.06(0.76)</td>
<td>2.06(0.84)</td>
<td>1.96(0.77)</td>
</tr>
<tr>
<td>Frequency of AT usage</td>
<td>Always (112)</td>
<td>2.30(0.65)</td>
<td>2.36(0.62)</td>
<td>2.16(0.72)</td>
</tr>
<tr>
<td></td>
<td>Not always (66)</td>
<td>1.81(0.73)</td>
<td>1.71(0.96)</td>
<td>1.68(0.79)</td>
</tr>
<tr>
<td>Frequency of changing AT devices</td>
<td>Not changed (73)</td>
<td>1.87(0.86)</td>
<td>1.87(0.86)</td>
<td>1.76(0.75)</td>
</tr>
<tr>
<td></td>
<td>Changed (105)</td>
<td>2.31(0.60)</td>
<td>2.31(0.73)</td>
<td>2.14(0.76)</td>
</tr>
<tr>
<td>Frequency of AT repair</td>
<td>Repair every month (66)</td>
<td>2.26(0.62)</td>
<td>2.25(0.78)</td>
<td>2.08(0.72)</td>
</tr>
<tr>
<td></td>
<td>Repair every two month or less (90)</td>
<td>2.18(0.73)</td>
<td>2.22(0.78)</td>
<td>2.08(0.79)</td>
</tr>
<tr>
<td></td>
<td>Not repaired (22)</td>
<td>1.52(0.67)</td>
<td>1.42(0.77)</td>
<td>1.32(0.56)</td>
</tr>
<tr>
<td>Funding source for AT</td>
<td>Donated (140)</td>
<td>2.14(0.76)</td>
<td>2.14(0.85)</td>
<td>1.99(0.77)</td>
</tr>
<tr>
<td></td>
<td>Self – financed (38)</td>
<td>2.03(0.61)</td>
<td>2.03(0.81)</td>
<td>1.92(0.85)</td>
</tr>
<tr>
<td>AT prescribing &amp; fitting source</td>
<td>Professional (46)</td>
<td>2.28(0.61)</td>
<td>2.26(0.80)</td>
<td>1.88(0.79)</td>
</tr>
<tr>
<td></td>
<td>Non-professionals (132)</td>
<td>2.08(0.75)</td>
<td>2.09(0.82)</td>
<td>2.02(0.77)</td>
</tr>
<tr>
<td>Availability of AT maintenance facility</td>
<td>Yes (106)</td>
<td>2.32(0.58)</td>
<td>2.34(0.67)</td>
<td>2.12(0.68)</td>
</tr>
<tr>
<td></td>
<td>No (72)</td>
<td>1.86(0.80)</td>
<td>1.84(0.92)</td>
<td>1.80(0.86)</td>
</tr>
<tr>
<td>Waiting period for AT</td>
<td>Received immediately (60)</td>
<td>1.86(0.81)</td>
<td>1.86(0.89)</td>
<td>1.74(0.77)</td>
</tr>
<tr>
<td></td>
<td>Later (116)</td>
<td>2.27(0.62)</td>
<td>2.28(0.74)</td>
<td>2.12(0.75)</td>
</tr>
<tr>
<td>Prior experience with AT</td>
<td>Yes (48)</td>
<td>2.41(0.45)</td>
<td>2.56(0.46)</td>
<td>2.31(0.39)</td>
</tr>
<tr>
<td></td>
<td>No (130)</td>
<td>2.05(0.70)</td>
<td>2.01(0.91)</td>
<td>1.92(0.73)</td>
</tr>
</tbody>
</table>
Table 4.16 describes the findings of impact of various device specific dependent variables in reference to wheelchair usage on the psychosocial impact across the three subscales of PIADS. There was no significant differences in group comparison for the variables on availability of training facility and participation in the selection process, although the mean scores across the three subscales were higher for subjects who received training for their wheelchair and also the mean scores were higher for those who acquired their wheelchairs through a process of involvement in device selection.

It was found that the variables frequency of device usage, device changing, frequency of device repair significantly influenced all the subscales of PIADS. Subjects who have been using their wheelchairs always had significantly high (p<.001) positive impact as compared to those who did not use them always; subjects who changed their wheelchairs had significantly high positive impact (p=.001) as compared to those who did not change, and subjects who got their wheelchairs repaired at regular intervals had significantly higher positive impact (p=.001) than those who never got them repaired. Post hoc analysis reported that scores for devices that were repaired once or more than once every month and those that were repaired once or less than once every two months had significantly higher scores (p=.001) as compared to those that did not get repaired.

The mean difference between the groups both for funding source and prescribing source was not found to be significant across all the PIADS subscales, but mean scores for all the subscales indicated higher scores for wheelchairs when received through charitable/donated means. And for prescribing source, when wheelchairs were obtained through a professional source, the psychosocial impact was higher across all the subscales.

Availability of wheelchair maintenance facility created significantly higher impact as compared to when the facility was not available across the subscales Competence (p<.001), Adaptability (p<.001) and Self-esteem (p=.009). It was also found that getting a wheelchair immediately led to significantly lesser psychosocial impact as compared to an appropriate gap between prescription and delivery. When received immediately, the impact was significantly lower for Competence (p=.008), Adaptability (p=.008), and Self-esteem (p=.008). Having prior experience to device usage led to higher positive impact on the wheelchair users, but was statistically significant only for Adaptability (p<.001) and Self-esteem (p=.03).
### Table 4.17

*Group comparison for device specific variables of Ladder Scale difference score for retained wheelchair.*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Category(n)</th>
<th>Ladder Scale Difference</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Median (IQR)</td>
<td></td>
</tr>
<tr>
<td>Availability of AT training facility</td>
<td>Yes (16)</td>
<td>4.5(3)</td>
<td>P=.16</td>
</tr>
<tr>
<td></td>
<td>No(162)</td>
<td>4(4)</td>
<td></td>
</tr>
<tr>
<td>Participation in Selection of AT</td>
<td>Yes (46)</td>
<td>4(3)</td>
<td>p=.10</td>
</tr>
<tr>
<td></td>
<td>No (132)</td>
<td>4(3)</td>
<td></td>
</tr>
<tr>
<td>Frequency of AT usage</td>
<td>Always (112)</td>
<td>5(2)</td>
<td>p&lt;.001</td>
</tr>
<tr>
<td></td>
<td>Not always(66)</td>
<td>2(2)</td>
<td></td>
</tr>
<tr>
<td>Changing of AT</td>
<td>Not changed(73)</td>
<td>3(4)</td>
<td>p=.001</td>
</tr>
<tr>
<td></td>
<td>Changed(105)</td>
<td>4.5(3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Repair every month(66)</td>
<td>4(4)</td>
<td></td>
</tr>
<tr>
<td>Frequency of AT repair</td>
<td>Repair every two month or less(90)</td>
<td>4(4)</td>
<td>p=.09</td>
</tr>
<tr>
<td></td>
<td>Not repaired(22)</td>
<td>3(2)</td>
<td></td>
</tr>
<tr>
<td>Funding source for AT</td>
<td>Donated(140)</td>
<td>4(4)</td>
<td>p=.91</td>
</tr>
<tr>
<td></td>
<td>Self – financed(38)</td>
<td>4(2)</td>
<td></td>
</tr>
<tr>
<td>AT prescribing &amp; fitting source</td>
<td>Professional(46)</td>
<td>4(3)</td>
<td>p=.33</td>
</tr>
<tr>
<td></td>
<td>Non-professionals(132)</td>
<td>4(4)</td>
<td></td>
</tr>
<tr>
<td>Availability of AT maintenance facility</td>
<td>Yes (106)</td>
<td>4(3)</td>
<td>p&lt;.001</td>
</tr>
<tr>
<td></td>
<td>No (72)</td>
<td>3(4)</td>
<td></td>
</tr>
<tr>
<td>Waiting period for AT</td>
<td>Received immediately(60)</td>
<td>3(4)</td>
<td>p=.03</td>
</tr>
<tr>
<td></td>
<td>Later(116)</td>
<td>4(4)</td>
<td></td>
</tr>
<tr>
<td>Prior experience with AT</td>
<td>Yes (48)</td>
<td>5(4)</td>
<td>p=.01</td>
</tr>
<tr>
<td></td>
<td>No (130)</td>
<td>4(3)</td>
<td></td>
</tr>
</tbody>
</table>

From Table 4.17, it was noted that the *availability of training facility* (p=.16) and *participation in selection process* (p=.10) did not significantly impact the life satisfaction.
score. The improvement in life satisfaction increased significantly (p<.001) when subjects used their wheelchairs always as compared to when they used less.

When wheelchairs had undergone change, that increased the life satisfaction significantly (p=.001) as compared to those that were never changed. Regarding the frequency of wheelchair repair, it was found that there was no significant (p=.09) effect on life satisfaction. The other variables like funding source and prescription source also did not impact life satisfaction significantly.

Availability of maintenance facility did produce significantly higher life satisfaction (p<.001) as compared to those who did not have wheelchair maintenance facility. Wheelchairs that were received after an appropriate gap led to significantly higher life satisfaction score (p=.03) as compared to those who received immediately. And also those who had prior experience to technological assistance showed to have higher life satisfaction (p=.01) as compared to those who did not have any prior exposure.

Table 4.18
Correlation between continuous independent variables and the outcome variables for retained wheelchair

<table>
<thead>
<tr>
<th>Variables</th>
<th>PIADS-C</th>
<th>PIADS-A</th>
<th>PIADS-S</th>
<th>LS-Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>r=.15, p=.04</td>
<td>r=.14, p=.06</td>
<td>r=.15, p=.05</td>
<td>r=.26, p &lt; .001</td>
</tr>
<tr>
<td>Age of onset</td>
<td>r=-.01, p=.83</td>
<td>r=-.05, p=.46</td>
<td>r=-.16, p=.02</td>
<td>r=.18, p=.01</td>
</tr>
<tr>
<td>Duration of locomotor</td>
<td>r=.17, p=.02</td>
<td>r=.20, p=.007</td>
<td>r=.32, p &lt; .001</td>
<td>r=.09, p = .23</td>
</tr>
<tr>
<td>problem</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>motor - FIM difference</td>
<td>r=.31, p&lt;.001</td>
<td>r=.26, p&lt;.001</td>
<td>r=.20, p=.008</td>
<td>r=.48, p &lt; .001</td>
</tr>
<tr>
<td>Duration of AT use</td>
<td>r=.23, p=.001</td>
<td>r=.26, p=.001</td>
<td>r=.28, p &lt; .001</td>
<td>r=.26, p &lt; .001</td>
</tr>
</tbody>
</table>

Table 4.18 describes age (socio-demographic factor); age of onset, duration of locomotor problem, FIM difference (condition specific factor) and duration of AT use (device specific factor). The age of the wheelchair users was found to have significant positive correlation with psychosocial impact across Competence (p=.04) & Self-esteem (.05), weak
correlation with Adaptability (p=.06); and had significant positive correlation with life satisfaction (p<.001).

The variable age of onset was negatively correlated with all the PIADS subscales, but it was only with Self-esteem that there was a significant correlation (p=.02), there was a significant positive correlation observed with life satisfaction (p=.01). The variable duration of locomotor problem was found to have significant positive correlation across all the subscales of PIADS but the positive correlation for life satisfaction was not found to be significant (p=.23). The variable duration of AT use, was found to have significant positive correlation across all the subscales of PIADS and life satisfaction scores.

The variable motor-FIM difference, depicting improvement in functional status, was found to have significant positive correlation across all the subscales of PIADS and life satisfaction scores.

Table 4.19

Predictors of Competence subscale of PIADS for wheelchair users.

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Regression Coefficient</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unstandardized β</td>
<td>Standardized β</td>
</tr>
<tr>
<td>Constant</td>
<td>2.06</td>
<td>-</td>
</tr>
<tr>
<td>Difference in motor-FIM score</td>
<td>.01</td>
<td>.15</td>
</tr>
<tr>
<td>Availability of AT maintenance</td>
<td>-.31</td>
<td>-.21</td>
</tr>
<tr>
<td>Waiting period for AT</td>
<td>.24</td>
<td>.16</td>
</tr>
<tr>
<td>Socioeconomic status</td>
<td>.30</td>
<td>.20</td>
</tr>
<tr>
<td>Frequency of use of AT</td>
<td>-.24</td>
<td>-.16</td>
</tr>
<tr>
<td>Type of organization</td>
<td>-.22</td>
<td>-.14</td>
</tr>
<tr>
<td>Participation in selection of AT</td>
<td>.27</td>
<td>.16</td>
</tr>
<tr>
<td>Duration of locomotor problem</td>
<td>.00</td>
<td>.11</td>
</tr>
</tbody>
</table>

The overall model was significant with p<.001 and accounted for 33% (R² = 0.33) of the variability in the dependent variable (PIADS-Competence) is explained by the independent variable. The adjusted R² for the above model was 0.29. As seen in Table 4.19, the two socio-demographic variables, two condition specific variables and four device
specific variables added significant variance to the model. The stronger predictors were availability of maintenance facility (p=.002) and socioeconomic status-lower middle class (p=.003), and the weaker were duration of locomotor problem (p=.12) and type of organization (p=.03).

Table 4.20
Predictors of Adaptability subscale of PIADS for wheelchair users.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Regression Coefficient</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unstandardized β</td>
<td>Standardized β</td>
</tr>
<tr>
<td>Constant</td>
<td>2.16</td>
<td>--</td>
</tr>
<tr>
<td>Living status</td>
<td>.36</td>
<td>.21</td>
</tr>
<tr>
<td>Availability of AT maintenance</td>
<td>-.39</td>
<td>-.23</td>
</tr>
<tr>
<td>Age of device user</td>
<td>-.00</td>
<td>-.14</td>
</tr>
<tr>
<td>Socioeconomic status</td>
<td>.30</td>
<td>.18</td>
</tr>
<tr>
<td>Frequency of use of AT</td>
<td>-.49</td>
<td>-.28</td>
</tr>
<tr>
<td>Participation in selection of AT</td>
<td>.42</td>
<td>.22</td>
</tr>
<tr>
<td>Duration of locomotor problem</td>
<td>.01</td>
<td>.24</td>
</tr>
</tbody>
</table>

The overall model was significant with p<.001 and accounted for 34% (R^2 = 0.34) of the variability in the dependent variable (PIADS-Adaptability) explained by the independent variable. The adjusted R^2 for the above model was 0.31. As seen in Table 4.20, the three socio-demographic variables, and four device specific variables added significant variance to the model. The stronger predictors were frequency of AT usage (p<.001), availability of maintenance facility (p=.001) and participation in selection of AT device (p=.001), and the weakest was age of the wheelchair user (p=.07).
Table 4.21

Predictors of Self-esteem subscale of PIADS for wheelchair users.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Regression Coefficient</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unstandardized β</td>
<td>Standardized β</td>
</tr>
<tr>
<td>Constant</td>
<td>2.32</td>
<td>--</td>
</tr>
<tr>
<td>Socioeconomic status</td>
<td>.43</td>
<td>.27</td>
</tr>
<tr>
<td>Frequency of use of AT</td>
<td>-.50</td>
<td>-.30</td>
</tr>
<tr>
<td>Work status</td>
<td>-.41</td>
<td>-.21</td>
</tr>
<tr>
<td>Duration of locomotor problem</td>
<td>.01</td>
<td>.22</td>
</tr>
</tbody>
</table>

The overall model was significant with p<.001 and accounted for 29% ($R^2= 0.29$) of the variability in the dependent variable (PIADS-Self-esteem) is explained by the independent variable. The adjusted $R^2$ for the above model was 0.27. As seen in Table 4.21, the two socio-demographic variables, one condition specific variable and one device specific variable added significant variance to the model. The stronger predictors were frequency of AT usage (p<.001) and socioeconomic status-lower middle class (p<.001), and the weaker were work status – unemployed (p=.006).

Table 4.22

Predictors of improvement in life satisfaction on Ladder Scale for wheelchair users.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Regression Coefficient</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unstandardized β</td>
<td>Standardized β</td>
</tr>
<tr>
<td>Constant</td>
<td>1.04</td>
<td>--</td>
</tr>
<tr>
<td>Living status</td>
<td>.08</td>
<td>.20</td>
</tr>
<tr>
<td>Availability of AT maintenance</td>
<td>-.08</td>
<td>-.21</td>
</tr>
<tr>
<td>Role of local support</td>
<td>-.06</td>
<td>-.15</td>
</tr>
<tr>
<td>Extent of involvement-Bladder &amp; Bowel</td>
<td>-.04</td>
<td>-.11</td>
</tr>
<tr>
<td>Frequency of use of AT</td>
<td>-.16</td>
<td>-.39</td>
</tr>
<tr>
<td>Participation in selection of AT</td>
<td>.06</td>
<td>.13</td>
</tr>
</tbody>
</table>

The overall model was significant with p<.001 and accounted for 47% ($R^2= 0.47$) of the variability in the dependent variable (improvement in life satisfaction – Ladder Scale) is
explained by the independent variables. The adjusted $R^2$ for the above model was 0.45. As seen in Table 4.22, the two socio-demographic variables, one condition specific variable and three device specific variables added significant variance to the model. The stronger predictors were frequency of AT usage ($p<.001$) and availability of maintenance facility ($p<.001$), and the weaker was extent of involvement- bladder & bowel ($p=.06$).

4.5.3 Psychosocial outcomes for tricycle users

In the current study a total of 87 subjects in Group 1 were found to be using arm crank tricycle as their primary AT device and were found to be one of the prevalent type of mobility device for subjects with locomotor disability in Indian society.

Table 4.23

Descriptive of dependent variables for tricycle users.

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>n</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>PIADS - C</td>
<td>87</td>
<td>-0.25</td>
<td>3.00</td>
<td>2.11</td>
<td>0.76</td>
</tr>
<tr>
<td>PIADS- A</td>
<td>87</td>
<td>-0.33</td>
<td>3.00</td>
<td>2.17</td>
<td>0.77</td>
</tr>
<tr>
<td>PIADS-S</td>
<td>87</td>
<td>-0.75</td>
<td>3.00</td>
<td>1.93</td>
<td>0.87</td>
</tr>
<tr>
<td>LS-Difference</td>
<td>87</td>
<td>-3</td>
<td>8</td>
<td>3.43</td>
<td>2.37</td>
</tr>
</tbody>
</table>

Table 4.23 indicates that the mean psychosocial impact for tricycle users was found to be 2.11(0.76), 2.17(0.77) and 1.93(0.87) respectively for competence, Adaptability and Self-esteem subscale, with the lowest impact been for Self-esteem subscale. The mean improvement in life satisfaction score was found at 3.43(2.37).
Table 4.24

*Group comparison for socio-demographic variables of PIADS score for retained tricycle

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category(n)</th>
<th>PIADS-C Mean (SD)</th>
<th>P value</th>
<th>PIADS-A Mean (SD)</th>
<th>P value</th>
<th>PIADS-S Mean (SD)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male (65)</td>
<td>2.11(0.79)</td>
<td>p=.74</td>
<td>2.14(0.82)</td>
<td>p=.86</td>
<td>2.12(1.66)*</td>
<td>p=.79</td>
</tr>
<tr>
<td></td>
<td>Female(22)</td>
<td>2.06(0.75)</td>
<td></td>
<td>2.20(0.63)</td>
<td></td>
<td>2.06(0.66)*</td>
<td></td>
</tr>
<tr>
<td>Type of Facility</td>
<td>Residential (24)</td>
<td>1.66(2)*</td>
<td></td>
<td>1.83(1.83)*</td>
<td></td>
<td>1.56(2.03)*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Non-residential(28)</td>
<td>2.33(0.64)*</td>
<td>p=.009</td>
<td>2.58(1.09)*</td>
<td>p=.04</td>
<td>2.18(0.91)*</td>
<td>p=.08</td>
</tr>
<tr>
<td></td>
<td>Mixed (35)</td>
<td>2.62(0.77)*</td>
<td></td>
<td>2.66(0.83)*</td>
<td></td>
<td>2.18(1)*</td>
<td></td>
</tr>
<tr>
<td>Availability of Local Support</td>
<td>Yes (39)</td>
<td>2.11(0.77)</td>
<td>p=.99</td>
<td>2.08(0.90)</td>
<td>p=.30</td>
<td>2.12(1.63)*</td>
<td>p=.49</td>
</tr>
<tr>
<td></td>
<td>No (48)</td>
<td>2.09(0.78)</td>
<td></td>
<td>2.23(0.65)</td>
<td></td>
<td>2.25(1.19)*</td>
<td></td>
</tr>
<tr>
<td>Migration Status</td>
<td>Yes (24)</td>
<td>2.31(0.67)</td>
<td>p=.10</td>
<td>2.33(0.77)</td>
<td>p=.13</td>
<td>2.62(1.93)*</td>
<td>p=.06</td>
</tr>
<tr>
<td></td>
<td>No (63)</td>
<td>2.02(0.80)</td>
<td></td>
<td>2.10(0.77)</td>
<td></td>
<td>2.12(0.93)*</td>
<td></td>
</tr>
<tr>
<td>Availability of Social Support</td>
<td>Yes(66)</td>
<td>2.18(0.72)</td>
<td>p=.10</td>
<td>2.20(0.75)</td>
<td>p=.36</td>
<td>2.12(1.18)*</td>
<td>p=.79</td>
</tr>
<tr>
<td></td>
<td>No (21)</td>
<td>1.82(0.91)</td>
<td></td>
<td>2.01(0.84)</td>
<td></td>
<td>1.87(2)*</td>
<td></td>
</tr>
<tr>
<td>Work Status</td>
<td>Job in open market(35)</td>
<td>2.32(0.57)</td>
<td>p=.08</td>
<td>2.66(0.83)*</td>
<td>p=.02</td>
<td>2.25(0.88)*</td>
<td>p=.48</td>
</tr>
<tr>
<td></td>
<td>Institutional Set-up(47)</td>
<td>1.95(0.88)</td>
<td></td>
<td>2.33(1.20)*</td>
<td></td>
<td>2.16(1.65)*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unemployed(5)</td>
<td>1.96(0.74)</td>
<td></td>
<td>2.16(2.08)*</td>
<td></td>
<td>2.37(2.31)*</td>
<td></td>
</tr>
<tr>
<td>Education Status</td>
<td>1-10(49)</td>
<td>2.04(0.80)</td>
<td>p=.41</td>
<td>2.05(0.85)</td>
<td>p=.09</td>
<td>2.12(1.47)*</td>
<td>p=.81</td>
</tr>
<tr>
<td></td>
<td>11-18(38)</td>
<td>2.17(0.75)</td>
<td></td>
<td>2.30(0.63)</td>
<td></td>
<td>2.12(1.16)*</td>
<td></td>
</tr>
<tr>
<td>Living Status</td>
<td>With family (58)</td>
<td>2.21(0.68)</td>
<td>p=.10</td>
<td>2.30(0.65)</td>
<td>p=.05</td>
<td>2.12(1.03)*</td>
<td>p=.37</td>
</tr>
<tr>
<td></td>
<td>Away from family (29)</td>
<td>1.88(0.90)</td>
<td></td>
<td>1.88(0.91)</td>
<td></td>
<td>1.81(2.12)*</td>
<td></td>
</tr>
<tr>
<td>Socio-economic Status</td>
<td>Lower middle(55)</td>
<td>1.99(0.85)</td>
<td>p=.06</td>
<td>2.09(0.79)</td>
<td>p=.33</td>
<td>1.86(0.88)</td>
<td>p=.37</td>
</tr>
<tr>
<td></td>
<td>Poor(32)</td>
<td>2.28(0.59)</td>
<td></td>
<td>2.27(0.74)</td>
<td></td>
<td>2.05(0.87)</td>
<td></td>
</tr>
</tbody>
</table>

*Median (IQR)

The Table 4.24 indicated that gender did not have significant influence on any of the subscales of PIADS. For the variable on the type of facility that subject is availing rehabilitation service, it was found that the residential facilities tend to produce significantly
lower impact across all the subscales; Competence \((p=.009)\), Adaptability \((p=.04)\), Self-esteem \((p=.08)\) as compared to non-residential and mixed facilities.

As regards on local support and social support, although there was no significant difference found, the mean scores were marginally higher across all the subscales for those who received the local and social support. The migration status of tricycle users did not significantly influence the psychosocial impact across any of the subscales of PIADS.

In regards to the influence of the kind of facility where a tricycle user was working, it was observed that no significant difference existed for Competence and Self-esteem subscale across any of the work status groups. In Adaptability subscale there was a significant difference \((p=.02)\) with higher median scores for tricycle users working in open job market as compared to those working in institutional set or been unemployed.

Regarding the influence of education, although there was no significant difference between the groups, the mean scores were more for subjects with higher qualification across all the subscales of PIADS. There was no significant difference between the groups of living status as a variable for Competence and Self-esteem subscale of PIADS, although higher mean scores were observed for tricycle users who were staying with their families. But significantly higher \((p=.05)\) positive impact was observed in Adaptability subscale for those who were staying with their families. Regarding the influence of socioeconomic status, no significant difference was observed between the groups for across PIADS subscales, although the mean scores were higher for tricycle users belonging to the poor class as compared to those belonging to lower middle class for all subscales.
From the Table 4.25, it was seen that the improvement in life satisfaction with Ladder Scale difference score was not found to be significantly influenced by gender difference amongst the tricycle users. It was also found that the tricycle users availing services from residential facility had significantly low positive impact as compared to those availing from mixed facilities (p=.01). Availability of local support and migration status did not create any significant influence on the life satisfaction. Availability of social support had significant effect on life satisfaction (p=.03). Work status significantly influenced the life satisfaction.
(p=.01), with tricycle users working in the open job market having higher median scores as compared those working in institutional set up or even unemployed. There was no significant difference observed between the groups for education status and socioeconomic status. Staying with family produced significantly higher life satisfaction as compared to those staying away from the family (p=.02).

Table 4.26

Group comparison for condition specific variables of PIADS score for retained tricycle (n=87)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Category(n)</th>
<th>PIADS-C Mean (SD)</th>
<th>p value</th>
<th>PIADS-A Mean (SD)</th>
<th>p value</th>
<th>PIADS-S Mean (SD)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnosis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Polio (56)</td>
<td>2.58(0.75)*</td>
<td></td>
<td>2.66(0.67)*</td>
<td></td>
<td>2.25(1)*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SCI (19)</td>
<td>1.66(1.30)*</td>
<td>&lt;.001</td>
<td>2(1.50)*</td>
<td>&lt;.001</td>
<td>1.75(1.31)*</td>
<td>&lt;.001</td>
</tr>
<tr>
<td></td>
<td>Amputation (5)</td>
<td>2.16 (1.38)*</td>
<td>.02</td>
<td>1.66(0.84)*</td>
<td>&lt;.001</td>
<td>1.87(0.94)*</td>
<td>&lt;.001</td>
</tr>
<tr>
<td></td>
<td>Others (7)</td>
<td>.50(0.67)*</td>
<td></td>
<td>0.83(0.34)*</td>
<td></td>
<td>0.75(0.87)*</td>
<td></td>
</tr>
<tr>
<td>Extent of Involvement-A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>BB affected (16)</td>
<td>1.68(0.77)</td>
<td></td>
<td>1.67(0.75)</td>
<td></td>
<td>1.45(0.70)</td>
<td>.01</td>
</tr>
<tr>
<td></td>
<td>BB not affected (71)</td>
<td>2.19(0.75)</td>
<td>.02</td>
<td>2.26(0.74)</td>
<td>.004</td>
<td>2.03(0.88)</td>
<td></td>
</tr>
</tbody>
</table>

*Median (IQR)*

The Table 4.26, described that the diagnosis of the tricycle user had a significant effect on all the subscales of PIADS, for Competence subscale (p<.001), Adaptability subscale (p<.001) and Self-esteem subscale (p<.001). It was observed that tricycle users with polio affected had the highest positive impact as compared to subjects with other diagnosis. As regards the extent of involvement, it was observed that tricycle users who did not have bladder - bowel affectation had significantly higher positive psychosocial impact as compared to those who had bladder - bowel affected across all subscales; Competence (p=.02), Adaptability (p=.004), Self-esteem (p=.01).
Table 4.27

*Group comparison for condition specific variables of Ladder Scale difference score for retained tricycle*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Category(n)</th>
<th>Ladder Scale Difference</th>
<th>Median (IQR)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnosis</td>
<td>Polio (56)</td>
<td></td>
<td>4 (4)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SCI (19)</td>
<td></td>
<td>2(2)</td>
<td>p=.001</td>
</tr>
<tr>
<td></td>
<td>Amputation(5)</td>
<td></td>
<td>4(2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Others(7)</td>
<td></td>
<td>1(3)</td>
<td></td>
</tr>
<tr>
<td>Extent of Involvement-A</td>
<td>BB affected (16)</td>
<td></td>
<td>2(2)</td>
<td>p=.003</td>
</tr>
<tr>
<td></td>
<td>BB not affected (71)</td>
<td></td>
<td>4(4)</td>
<td></td>
</tr>
</tbody>
</table>

Table 4.27 described that the life satisfaction was found to be significantly influenced by *the type of diagnosis* of the tricycle user (p=.001) and highest median life satisfaction score 4(4) was found for tricycle users with polio as compared to other diagnosis. As regards the extent of involvement, it was observed that tricycle users who did not have bladder - bowel affectation had significantly higher improvement in life satisfaction as compared to those who had bladder - bowel affected (p=.003).
Table 4.28

*Group comparison for device specific variables of PIADS score for retained tricycle*

(n=87)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Category(n)</th>
<th>PIADS-C</th>
<th>p value</th>
<th>PIADS-A</th>
<th>p value</th>
<th>PIADS-S</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability of AT training facility</td>
<td>Yes(2)</td>
<td>1.37(0.41)</td>
<td>p=.16</td>
<td>0.91(0.12)</td>
<td>p=.01</td>
<td>0.93(0.12)</td>
<td>p=.10</td>
</tr>
<tr>
<td></td>
<td>No(85)</td>
<td>2.11(0.77)</td>
<td></td>
<td>2.19(0.76)</td>
<td></td>
<td>1.95(0.87)</td>
<td></td>
</tr>
<tr>
<td>Participation in Selection of AT</td>
<td>Yes (16)</td>
<td>2.06(0.79)</td>
<td>p=.47</td>
<td>2.13(0.80)</td>
<td>p=.56</td>
<td>1.97(0.91)</td>
<td>p=.34</td>
</tr>
<tr>
<td></td>
<td>No (71)</td>
<td>2.23(0.69)</td>
<td></td>
<td>2.27(0.65)</td>
<td></td>
<td>1.74(0.71)</td>
<td></td>
</tr>
<tr>
<td>Frequency of AT usage</td>
<td>Always (58)</td>
<td>2.41(0.73)*</td>
<td>p=.006</td>
<td>2.31(0.63)</td>
<td>p=.01</td>
<td>2.25(1)*</td>
<td>p=.02</td>
</tr>
<tr>
<td></td>
<td>Not always (29)</td>
<td>1.78(1.77)*</td>
<td></td>
<td>1.86(0.93)</td>
<td></td>
<td>1.68(1.81)*</td>
<td>p=.02</td>
</tr>
<tr>
<td>Changing of AT</td>
<td>Not changed(31)</td>
<td>1.84(0.87)</td>
<td>p=.02</td>
<td>1.95(0.92)</td>
<td>p=.07</td>
<td>1.75(1.75)*</td>
<td>p=.02</td>
</tr>
<tr>
<td></td>
<td>Changed(56)</td>
<td>2.25(0.68)</td>
<td></td>
<td>2.28(0.65)</td>
<td></td>
<td>2.12(1)*</td>
<td></td>
</tr>
<tr>
<td>Frequency of AT repair</td>
<td>Repair every month(56)</td>
<td>2.21(0.66)</td>
<td>p=.08</td>
<td>2.22(0.75)</td>
<td>p=.30</td>
<td>1.93(0.85)</td>
<td>p=.90</td>
</tr>
<tr>
<td></td>
<td>Repair every two month or less(31)</td>
<td>1.90(0.92)</td>
<td></td>
<td>2.06(0.81)</td>
<td></td>
<td>1.92(0.94)</td>
<td></td>
</tr>
<tr>
<td>Funding source for AT</td>
<td>Donated(79)</td>
<td>2.09(0.79)</td>
<td>p=.71</td>
<td>2.13(0.78)</td>
<td>p=.35</td>
<td>1.93(0.90)</td>
<td>p=.74</td>
</tr>
<tr>
<td></td>
<td>Self – financed(8)</td>
<td>2.20(0.69)</td>
<td></td>
<td>2.41(0.67)</td>
<td></td>
<td>1.84(0.66)</td>
<td></td>
</tr>
<tr>
<td>AT prescribing &amp; fitting source</td>
<td>Professional(2)</td>
<td>1.95(..)*</td>
<td>p=.96</td>
<td>1.58(..)*</td>
<td>p=.24</td>
<td>1.68(..)*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Non-professionals(85)</td>
<td>2.33(1.09)*</td>
<td></td>
<td>2.50(1)*</td>
<td></td>
<td>2.12(1.25)*</td>
<td>p=.74</td>
</tr>
<tr>
<td>Availability of AT maintenance facility</td>
<td>Yes(50)</td>
<td>2.02(0.84)</td>
<td>p=.27</td>
<td>2.09(0.74)</td>
<td>p=.33</td>
<td>1.90(0.86)</td>
<td>p=.72</td>
</tr>
<tr>
<td></td>
<td>No (37)</td>
<td>2.20(0.68)</td>
<td></td>
<td>2.25(0.81)</td>
<td></td>
<td>1.95(0.91)</td>
<td></td>
</tr>
<tr>
<td>Waiting period for AT</td>
<td>Received within 7 days(34)</td>
<td>1.89(0.95)</td>
<td>p=.06</td>
<td>2.06(0.89)</td>
<td>p=.28</td>
<td>2(1.65)*</td>
<td>p=.05</td>
</tr>
<tr>
<td></td>
<td>After 7 days(53)</td>
<td>2.24(0.58)</td>
<td></td>
<td>2.24(0.68)</td>
<td></td>
<td>2.25(1.12)*</td>
<td></td>
</tr>
<tr>
<td>Prior experience with AT</td>
<td>Yes (23)</td>
<td>2.26(0.55)</td>
<td>p=.13</td>
<td>2.20(0.56)</td>
<td>p=.53</td>
<td>2.04(0.67)</td>
<td>p=.44</td>
</tr>
<tr>
<td></td>
<td>No (64)</td>
<td>2.05(0.83)</td>
<td></td>
<td>2.15(0.83)</td>
<td></td>
<td>1.89(0.94)</td>
<td></td>
</tr>
</tbody>
</table>

*Median (IQR)
The Table 4.28 described the findings of impact of various device specific dependent variables on the psychosocial outcomes of tricycle user across the three subscales of PIADS. Except for a significant difference (p=.01) in Adaptability subscale, there was no significant differences in group comparison for the variables on availability of training facility and participation in the selection process, although the mean scores across the three subscales were higher for subjects who did not receive training for their tricycle usage and also the mean scores were higher for those who acquired their tricycles without proper participation of the user. These findings to be taken with caution as there was a wide difference in number of subjects in the groups

For frequency of device usage, it was observed that positive psychosocial impact was significantly higher when the subjects were using their tricycle always in a day as compared to when not used always, across all subscales of PIADS- Competence (p=.006), Adaptability (p=.01), Self-esteem (p=.02). For change of AT, it was observed that positive psychosocial impact were higher for subjects whose tricycles underwent change during the course of usage as compared to those that were never changed across all subscales of PIADS, but was significantly higher for Competence (p=.02) and Self-esteem (p=.02).

It was found that the variables on frequency of AT repair, funding source of AT, AT prescribing and fitting source, availability of AT maintenance facility were not significantly influenced across the subscales of PIADS. Although higher means were observed when devices underwent repairing once a month as compared to those that were less frequently repaired; higher means were observed for tricycles that were self-financed for Competence and Adaptability, but was lower for Self-esteem; higher means were observed for tricycles that were prescribed and fitted by non-professionals based on the subjectivity of the subjects, although there was a wide difference between sample size between the groups; higher means were observed for tricycles those were not having maintenance facility as compared to those that had access to maintenance facility.

It was also found that receipt of a tricycle beyond seven days of prescription led to higher psychosocial impact as compared to when devices were delivered within seven days, although for Self-esteem it was significantly higher (p=.05). Prior experience to device usage.
did not have significant difference between the groups, but the mean scores were marginally higher across all the subscales for tricycle users who had prior experience.

Table 4.29

*Group comparison for device specific variables of Ladder Scale difference score for retained tricycle*

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Category(n)</th>
<th>Ladder Scale Difference</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability of AT training facility</td>
<td>Yes (2)</td>
<td>0.50(1)</td>
<td>.04</td>
</tr>
<tr>
<td></td>
<td>No (85)</td>
<td>3 (3)</td>
<td></td>
</tr>
<tr>
<td>Participation in Selection of AT</td>
<td>Yes (16)</td>
<td>4(5)</td>
<td>.03</td>
</tr>
<tr>
<td></td>
<td>No (71)</td>
<td>3(3)</td>
<td></td>
</tr>
<tr>
<td>Frequency of AT usage</td>
<td>Always (58)</td>
<td>4 (4)</td>
<td>.002</td>
</tr>
<tr>
<td></td>
<td>Not always (29)</td>
<td>2.50(2)</td>
<td></td>
</tr>
<tr>
<td>changing of AT</td>
<td>Not changed (31)</td>
<td>2(4)</td>
<td>.01</td>
</tr>
<tr>
<td></td>
<td>Changed (56)</td>
<td>3 (3)</td>
<td></td>
</tr>
<tr>
<td>Frequency of AT repair</td>
<td>Repair every month (56)</td>
<td>3 (4)</td>
<td>.48</td>
</tr>
<tr>
<td></td>
<td>Repair every two month or less (31)</td>
<td>3 (4)</td>
<td></td>
</tr>
<tr>
<td>Funding source for AT</td>
<td>Donated (79)</td>
<td>3(3)</td>
<td>.14</td>
</tr>
<tr>
<td></td>
<td>Self – financed (8)</td>
<td>5.50(7)</td>
<td></td>
</tr>
<tr>
<td>AT prescribing &amp; fitting source</td>
<td>Professional (2)</td>
<td>3 (..)</td>
<td>.79</td>
</tr>
<tr>
<td></td>
<td>Non-professionals (85)</td>
<td>3 (3)</td>
<td></td>
</tr>
<tr>
<td>Availability of AT maintenance facility</td>
<td>Yes (50)</td>
<td>3.50(3)</td>
<td>.22</td>
</tr>
<tr>
<td></td>
<td>No (37)</td>
<td>3 (2)</td>
<td></td>
</tr>
<tr>
<td>Waiting period for AT</td>
<td>Received within 7 days (34)</td>
<td>3 (5)</td>
<td>.29</td>
</tr>
<tr>
<td></td>
<td>After 7 days (53)</td>
<td>3 (3)</td>
<td></td>
</tr>
<tr>
<td>Prior experience with AT</td>
<td>Yes (23)</td>
<td>4 (3)</td>
<td>.08</td>
</tr>
<tr>
<td></td>
<td>No (64)</td>
<td>3 (4)</td>
<td></td>
</tr>
</tbody>
</table>

The Table 4.29 described the findings of impact of various device specific dependent variables on the psychosocial outcomes of tricycle user for improvement in life satisfaction through Ladder Scale. Tricycle users who did not receive *training facility* had higher life
satisfaction (p=.04), those who *participated in selection process* had significantly higher life satisfaction (p=.03). The improvement in life satisfaction was significant (p=.002) when subjects tend to use their tricycle *always in a day* as compared to when they did not use it always.

When *tricycle had undergone change*, that increased the life satisfaction significantly (p=.01) as compared to those that were never changed. Regarding the *frequency of tricycle repair*, it was found that there was no significant (p=.48) effect on life satisfaction. The other variables like *funding source* (p=.14) and *prescription source* (p=.79) also did not impact life satisfaction significantly. *Availability of maintenance facility* did not produce significant improvement in life satisfaction (p=.22) as compared to those who did not have tricycle maintenance facility. *Waiting period* for the receipt of tricycle and also *prior experience to device usage* did not have any significant influence on improvement in life satisfaction.

Table 4.30

*Correlation between the continuous independent variables and the outcome variables for retained tricycle*

<table>
<thead>
<tr>
<th>Variables</th>
<th>PIADS-Competence</th>
<th>PIADS-Adaptability</th>
<th>PIADS-Self-esteem</th>
<th>LS-Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>r = -.12,</td>
<td>r = -.09,</td>
<td>r = -.12,</td>
<td>r = .03,</td>
</tr>
<tr>
<td></td>
<td>p=.26</td>
<td>p=.38</td>
<td>p=.26</td>
<td>p=.74</td>
</tr>
<tr>
<td>Age of onset</td>
<td>r = -.06,</td>
<td>r = -.19,</td>
<td>r = -.11,</td>
<td>r = .33,</td>
</tr>
<tr>
<td></td>
<td>p=.52</td>
<td>p=.26</td>
<td>p=.30</td>
<td>p=.002</td>
</tr>
<tr>
<td>Duration of locomotor problem</td>
<td>r = -.06,</td>
<td>r = .06,</td>
<td>r = -.01,</td>
<td>r = .17,</td>
</tr>
<tr>
<td></td>
<td>p=.55</td>
<td>p=.53</td>
<td>p=.86</td>
<td>p=.10</td>
</tr>
<tr>
<td>Duration of AT use</td>
<td>r = -.05,</td>
<td>r = .01,</td>
<td>r = -.09,</td>
<td>r = .13,</td>
</tr>
<tr>
<td></td>
<td>p=.58</td>
<td>p=.90</td>
<td>p=.39</td>
<td>p=.21</td>
</tr>
<tr>
<td>motor-FIM difference</td>
<td>r = -.17,</td>
<td>r = -.31,</td>
<td>r = -.37,</td>
<td>r = .10,</td>
</tr>
<tr>
<td></td>
<td>p=.10</td>
<td>p=.003</td>
<td>p&lt;.001</td>
<td>p=.32</td>
</tr>
</tbody>
</table>

Table 4.30 described age (socio-demographic factor); age of onset, duration of locomotor problem & motor-FIM difference (condition specific factor) and duration of AT use (device specific factor). The *age and age of onset of the locomotor problem* of the tricycle users was found to be negatively correlated although not significant across PIADS subscales.
The duration of locomotor problem and duration of tricycle use was found to be negatively correlated although not significant across PIADS subscales.

The variable motor-FIM difference, depicting improvement in functional status, was found to have negative correlation across all the subscales of PIADS and was significant for Adaptability (p=.003) and Self-esteem (p<.001). The improvement in life satisfaction for tricycle users was not found to be significantly correlated with any of the continuous variables.

Table 4.31
Predictors of Competence subscale of PIADS for tricycle users.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Regression Coefficient</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unstandardized β</td>
<td>Standardized β</td>
</tr>
<tr>
<td>Constant</td>
<td>1.51</td>
<td>--</td>
</tr>
<tr>
<td>Type of organization</td>
<td>.47</td>
<td>.27</td>
</tr>
<tr>
<td>Socioeconomic status</td>
<td>.40</td>
<td>.25</td>
</tr>
<tr>
<td>Frequency of AT repair</td>
<td>-.26</td>
<td>-.16</td>
</tr>
<tr>
<td>Frequency of use of AT</td>
<td>-.31</td>
<td>-.19</td>
</tr>
</tbody>
</table>

The overall model was significant with p<.001 and accounted for 26% (R²= 0.26) of the variability in the dependent variable (PIADS-Competence) is explained by the independent variable. The adjusted R² for the above model was 0.22. As seen in Table 4.31, the two socio-demographic variables, and two device specific variables added significant variance to the model. The stronger predictors were socioeconomic status (p=.009) and type of organization (p=.03), and the weaker were frequency of device repair (.09) and frequency of device usage (p=.12).
Table 4.32
Predictors of Adaptability subscale of PIADS for tricycle users

<table>
<thead>
<tr>
<th>Variables</th>
<th>Unstandardized β</th>
<th>Standardized β</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-0.90</td>
<td>--</td>
<td>p=.37</td>
</tr>
<tr>
<td>Age of onset of locomotor problem</td>
<td>.46</td>
<td>.27</td>
<td>p=.008</td>
</tr>
<tr>
<td>Availability of AT training facility</td>
<td>1.24</td>
<td>.24</td>
<td>p=.14</td>
</tr>
<tr>
<td>Work status</td>
<td>-.86</td>
<td>-.26</td>
<td>p=.01</td>
</tr>
</tbody>
</table>

The overall model was significant with p<.001 and accounted for 23% ($R^2 = 0.23$) of the variability in the dependent variable (PIADS-Adaptability) is explained by the independent variable. The adjusted $R^2$ for the above model was 0.19. As seen from Table 4.32, one socio-demographic variable, one condition specific variable and one device variable added significant variance to the model. The strongest predictor was *age of onset of locomotor problem* (p=.008), and the weaker were *work status: unemployed* (p=.01) and *tricycle training* (p=.01).

Table 4.33
Predictors of Self-esteem subscale of PIADS for tricycle users.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Unstandardized β</th>
<th>Standardized β</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-.05</td>
<td>--</td>
<td>p=.90</td>
</tr>
<tr>
<td>Type of organization</td>
<td>.44</td>
<td>.22</td>
<td>p=.03</td>
</tr>
<tr>
<td>Changing of AT</td>
<td>.36</td>
<td>.20</td>
<td>p=.05</td>
</tr>
<tr>
<td>Extent of involvement-Bladder &amp; Bowel</td>
<td>.34</td>
<td>.15</td>
<td>p=.14</td>
</tr>
</tbody>
</table>

The overall model was significant with p=.001 and accounted for 17% ($R^2 = 0.17$) of the variability in the dependent variable (PIADS-Self-esteem) is explained by the independent variable. The adjusted $R^2$ for the above model was 0.14. As seen in Table 4.33, one socio-demographic variable, and one condition specific variable and one device variable added significant variance to the model. The strongest predictor was *type of organization* (p= .03), and the weaker predictors were *changing of AT* (p=.05) and *involvement of bladder & bowel* (p=.14).
Table 4.34

Predictors of improvement in life satisfaction on Ladder Scale for tricycle users.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Regression Coefficient</th>
<th></th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unstandardized β</td>
<td>Standardized β</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>-0.63</td>
<td>--</td>
<td>p&lt;.001</td>
</tr>
<tr>
<td>Age of onset of locomotor problem</td>
<td>.11</td>
<td>.31</td>
<td>p=.003</td>
</tr>
<tr>
<td>Changing of AT</td>
<td>.07</td>
<td>.22</td>
<td>p=.03</td>
</tr>
<tr>
<td>Prior experience with AT</td>
<td>-.06</td>
<td>-.16</td>
<td>p=.09</td>
</tr>
</tbody>
</table>

The overall model was significant with p<.001 and accounted for 21% ($R^2= 0.21$) of the variability in the dependent variable improvement in life satisfaction (Ladder Scale - difference) is explained by the independent variables. The adjusted $R^2$ for the above model was 0.18. As seen in Table 4.34, one condition specific variable and two device specific variables added significant variance to the model. The strongest predictor was age of onset of locomotor problem (p=.003), and the weaker predictors were changing of AT (p=.03) and past experience with device usage (p=.09).

### 4.5.4 Psychosocial outcome of crutch users

In the current study, a total of 94 subjects in Group I were found to have using crutches as their primary AT device and were found to be one of the prevalent type of mobility device for subjects with locomotor disability in Indian society.

Table 4.35

Descriptive of dependent variables for crutch users.

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>n</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>PIADS - C</td>
<td>94</td>
<td>0.16</td>
<td>3.00</td>
<td>2.01</td>
<td>0.80</td>
</tr>
<tr>
<td>PIADS - A</td>
<td>94</td>
<td>-0.66</td>
<td>3.00</td>
<td>1.92</td>
<td>0.89</td>
</tr>
<tr>
<td>PIADS - S</td>
<td>94</td>
<td>-0.12</td>
<td>3.00</td>
<td>1.73</td>
<td>0.86</td>
</tr>
<tr>
<td>LS-Difference</td>
<td>94</td>
<td>0</td>
<td>8</td>
<td>3.57</td>
<td>1.95</td>
</tr>
</tbody>
</table>

Table 4.35, it is noted that the mean psychosocial impact for crutch users was found to be 2.01 (0.80), 1.92 (0.89) and 1.73 (0.86) respectively for competence, adaptability and self-
Before the rehabilitation service, with the lowest impact been for self-esteem subscale. The mean improvement in life satisfaction score was found at 3.57(1.95).

Table 4.36

*Group comparison for socio-demographic variables of PIADS-score for retained crutches*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category (n)</th>
<th>PIADS-C (Mean (SD))</th>
<th>PIADS-A (Mean (SD))</th>
<th>PIADS-S (Mean (SD))</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>p value</td>
<td>p value</td>
<td>p value</td>
</tr>
<tr>
<td>Gender</td>
<td>Male(77) Female(17)</td>
<td>1.97(0.85)</td>
<td>1.89(0.94)</td>
<td>1.62(1.38)*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>p=.12</td>
<td>p=.22</td>
<td>p=.46</td>
</tr>
<tr>
<td></td>
<td>Type of Facility</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Residential(12)</td>
<td>.75(1.50)*</td>
<td>.66(1.50)*</td>
<td>.62(1.25)*</td>
</tr>
<tr>
<td></td>
<td>Non-residential(40)</td>
<td>2(1.66)*</td>
<td>2(1.67)*</td>
<td>1.62(1.25)*</td>
</tr>
<tr>
<td></td>
<td>Mixed(42)</td>
<td>2.33(0.81)*</td>
<td>2(0.84)*</td>
<td>1.81(0.90)*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>p=.68</td>
<td>p=.59</td>
<td>p=.86</td>
</tr>
<tr>
<td></td>
<td>Availability of Local Support</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes (41)</td>
<td>2.05(0.84)</td>
<td>1.74(1.74)*</td>
<td>1.75(1.18)*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>p=.65</td>
<td>p=.63</td>
<td>p=.84</td>
</tr>
<tr>
<td></td>
<td>No (53)</td>
<td>1.98(0.78)</td>
<td>2.08(1.54)*</td>
<td>1.62(1.43)*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Availability of Social Support</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes(78)</td>
<td>1.99(0.83)</td>
<td>1.90(0.93)</td>
<td>1.62(1.31)*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>p=.58</td>
<td>p=.52</td>
<td>p=.73</td>
</tr>
<tr>
<td></td>
<td>No(16)</td>
<td>2.11(0.67)</td>
<td>2.05(0.68)</td>
<td>1.41(0.87)*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Migration Status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes (17)</td>
<td>1.33(1.67)*</td>
<td>1.33(1)*</td>
<td>1.41(1.25)*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>p=.04</td>
<td>p=.01</td>
<td>p=.14</td>
</tr>
<tr>
<td></td>
<td>No(77)</td>
<td>2.16(1.25)*</td>
<td>2(1.67)*</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Work Status</td>
<td>Job in open market(56)</td>
<td>2.09(0.79)</td>
<td>2.08(1.67)*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Institutional Set-up(26)</td>
<td>2.07(0.79)</td>
<td>2.16(1.08)*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unemployed(12)</td>
<td>1.52(0.74)</td>
<td>1.91(1.25)*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>p=.07</td>
<td>p=.23</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>p=.04</td>
</tr>
<tr>
<td></td>
<td>Education Status</td>
<td>1-10(44)</td>
<td>1.95(0.77)</td>
<td>1.87(0.87)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11-18(50)</td>
<td>2.06(0.83)</td>
<td>1.97(0.91)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>p=.50</td>
<td>p=.56</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>p=.10</td>
</tr>
<tr>
<td></td>
<td>Living Status</td>
<td>With family (80)</td>
<td>2.02(0.78)</td>
<td>2(1.50)*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Away from family (14)</td>
<td>1.93(0.95)</td>
<td>.66(1.83)*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>p=.70</td>
<td>p=.23</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>p=.59</td>
</tr>
<tr>
<td></td>
<td>Socio-economic Status</td>
<td>Upper middle (14)</td>
<td>2.41(1.08)*</td>
<td>2.16(1.67)*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lower middle(52)</td>
<td>2.12(1.31)*</td>
<td>2(1.25)*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>p=.95</td>
<td>p=.84</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.62(0.75)*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.81(1.34)*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.37(1.31)*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*pMedian (IQR)*

The Table 4.36 indicated that gender, type of facility that subject was availing rehabilitation service, local support, socioeconomic status, education, living status and social support did not have significant influence on any of the subscales of PIADS for the crutch
users, although the mean scores for females were higher than the males. Crutch users who were staying with their families, mean scores were more for subjects with higher qualification. Although not significant, mean scores were higher for crutch users staying with family and having higher educational level.

The crutch users who did not migrate had higher positive impact across all the subscales, but was significant for Competence (p=.04) and Adaptability (p=.01). In regards to influence of work status of the crutch users, it was observed that there was weak significance for Competence (p=.07), no significance for Adaptability and significance for Self-esteem (p=.04). It was observed that crutch users working in institutional set-up had higher positive impact as compared to others working in open market or those unemployed.
Table 4.37

*Group comparison for socio-demographic variables of Ladder Scale difference score for retained crutches*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category (n)</th>
<th>Ladder Scale Difference Median (IQR)</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male(77)</td>
<td>3(2)</td>
<td></td>
<td>p=.04</td>
</tr>
<tr>
<td>Female(17)</td>
<td>5(2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Type of Facility</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential(12)</td>
<td>2(6)</td>
<td></td>
<td>p=.56</td>
</tr>
<tr>
<td>Non-residential(40)</td>
<td>3(2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mixed(42)</td>
<td>4(3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Availability of Local Support</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes (41)</td>
<td>4(3)</td>
<td></td>
<td>p=.31</td>
</tr>
<tr>
<td>No (53)</td>
<td>3(3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Availability of Social Support</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes (78)</td>
<td>3(3)</td>
<td></td>
<td>p=.15</td>
</tr>
<tr>
<td>No (16)</td>
<td>4(3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Migration Status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes (17)</td>
<td>2(4)</td>
<td></td>
<td>p=.42</td>
</tr>
<tr>
<td>No (77)</td>
<td>4(3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Work Status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job in open market (56)</td>
<td>4(3)</td>
<td></td>
<td>p=.96</td>
</tr>
<tr>
<td>Institutional Set-up (26)</td>
<td>3.50(4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed (12)</td>
<td>3(2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Education Status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-10 (44)</td>
<td>3(3)</td>
<td></td>
<td>p=.57</td>
</tr>
<tr>
<td>11-18 (50)</td>
<td>3.50(3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Living Status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With family (80)</td>
<td>3(3)</td>
<td></td>
<td>p=.52</td>
</tr>
<tr>
<td>Away from family (14)</td>
<td>2(6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Socio-economic Status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper middle (14)</td>
<td>3(3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower middle (52)</td>
<td>3.50(3)</td>
<td></td>
<td>p=.16</td>
</tr>
<tr>
<td>Poor (28)</td>
<td>3(3)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Table 4.37 described that the improvement in life satisfaction with Ladder Scale difference score was found to be significantly influenced by *gender* (p=.04), with females having higher improvement in life satisfaction as compared to males amongst the crutch users. There was no significant influence in the improvement in life satisfaction across the rest
of the socio-demographic variables although the median scores showed certain pattern. Higher median scores were observed for crutch users availing services from mixed facility, those who received local support, those who did not migrate, those who did not receive social support, those working in open market, those with higher education, those living with family and belonging to lower socio-economic status.

Table 4.38

Group comparison for condition specific variables of PIADS score and for retained crutches. (n=94)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Category</th>
<th>PIADS-C</th>
<th></th>
<th>PIADS-A</th>
<th></th>
<th>PIADS-S</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnosis</td>
<td>Polio (61)</td>
<td>2.33(1)</td>
<td>p value</td>
<td>2.33(1.17)</td>
<td>p value</td>
<td>2(1.23)</td>
<td>p value</td>
</tr>
<tr>
<td></td>
<td>Spinal Cord Injury (4)</td>
<td>2.87(1.08)</td>
<td>p=.001</td>
<td>2.83(0.50)</td>
<td>p&lt;.001</td>
<td>2.75(1.03)</td>
<td>p&lt;.001</td>
</tr>
<tr>
<td></td>
<td>Amputation (19)</td>
<td>1.25(1.41)</td>
<td></td>
<td>1.16(0.83)</td>
<td></td>
<td>1.12(1.12)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Others (10)</td>
<td>2.37(2.16)</td>
<td></td>
<td>1.33(2.84)</td>
<td></td>
<td>2.31(2.09)</td>
<td></td>
</tr>
<tr>
<td>Extent of Involvement-B</td>
<td>Single L/L (32)</td>
<td>1.87(1.52)</td>
<td>p=.003</td>
<td>1.83(1.29)</td>
<td>p=.02</td>
<td>1.50(1.22)</td>
<td>p=.003</td>
</tr>
<tr>
<td></td>
<td>Both L/L (62)</td>
<td>2.33(1.10)</td>
<td></td>
<td>2.33(1.17)</td>
<td></td>
<td>2.12(1.41)</td>
<td></td>
</tr>
</tbody>
</table>

The Table 4.38 described that the diagnosis of the crutch user had a significant effect on all the subscales of PIADS, for Competence subscale (p<.001), Adaptability subscale (p<.001) and Self-esteem subscale (p<.001). Although the psychosocial impact was high for crutch users with spinal cord injury but the number of users were very small, other than that the crutch users with polio had relatively high positive impact. As regards the extent of involvement, it was observed that crutch users having both lower limb affected had significantly higher positive psychosocial impact as compared to those having single lower limb affected across all subscales; Competence (p=.003), Adaptability (p=.02), Self-esteem (p=.003).
Table 4.39

Group comparison for condition specific variables of Ladder Scale difference score for retained crutches

<table>
<thead>
<tr>
<th>Variables</th>
<th>Category</th>
<th>Ladder Scale Difference</th>
<th>(n=94)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Median (IQR)</td>
<td>p value</td>
</tr>
<tr>
<td>Diagnosis</td>
<td>Polio (61)</td>
<td>4(3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Spinal Cord Injury (4)</td>
<td>6(4)</td>
<td>p=.001</td>
</tr>
<tr>
<td></td>
<td>Amputation (19)</td>
<td>2(2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Others (10)</td>
<td>3.50(3)</td>
<td></td>
</tr>
<tr>
<td>Extent of Involvement-B</td>
<td>Single L/L (32)</td>
<td>2(2)</td>
<td>p=.004</td>
</tr>
<tr>
<td></td>
<td>Both L/L (62)</td>
<td>4(3)</td>
<td></td>
</tr>
</tbody>
</table>

From the Table 4.39 it was observed that the crutch users with spinal cord injury and polio had significantly high improvement in life satisfaction (p=.001) as compared to subjects with amputation; similarly crutch users having both lower limb affected had significantly higher improvement in life satisfaction as compared to those having single lower limb affected (p=.004).
Table 4.40

Group comparison for device specific variables of PIADS score for retained crutches

<table>
<thead>
<tr>
<th>Variables</th>
<th>Category</th>
<th>PIADS-C</th>
<th>P value</th>
<th>PIADS-A</th>
<th>P value</th>
<th>PIADS-S</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability of AT training facility</td>
<td>Yes (17)</td>
<td>2.08(1.83)*</td>
<td>p=.55</td>
<td>1.71(0.82)</td>
<td>p=.28</td>
<td>1.41(1.82)*</td>
<td>p=.15</td>
</tr>
<tr>
<td></td>
<td>No (77)</td>
<td>2.25(1.33)*</td>
<td></td>
<td>1.97(0.90)</td>
<td></td>
<td>1.75(1.37)*</td>
<td></td>
</tr>
<tr>
<td>Participation in Selection of AT</td>
<td>Yes (35)</td>
<td>1.94(0.72)</td>
<td>p=.52</td>
<td>1.83(1.17)*</td>
<td>p=.03</td>
<td>1.75(1.12)*</td>
<td>p=.21</td>
</tr>
<tr>
<td></td>
<td>No (59)</td>
<td>2.05(0.85)</td>
<td></td>
<td>2.33(1.67)*</td>
<td></td>
<td>1.87(1.63)*</td>
<td></td>
</tr>
<tr>
<td>Frequency of AT usage</td>
<td>Always (56)</td>
<td>2.20(0.78)</td>
<td>p=.006</td>
<td>2(1.17)*</td>
<td>p=.09</td>
<td>1.87(0.96)*</td>
<td>p=.07</td>
</tr>
<tr>
<td></td>
<td>Not always (38)</td>
<td>1.73(0.77)</td>
<td></td>
<td>2(1.58)*</td>
<td></td>
<td>1.50(1.63)*</td>
<td></td>
</tr>
<tr>
<td>Changing of AT</td>
<td>Not changed (24)</td>
<td>1.08(1.71)*</td>
<td>p=.004</td>
<td>1.08(1.21)*</td>
<td>p=.008</td>
<td>.87(1.37)*</td>
<td>p=.006</td>
</tr>
<tr>
<td></td>
<td>Changed (70)</td>
<td>2.33(1.10)*</td>
<td></td>
<td>2.08(1.17)*</td>
<td></td>
<td>1.87(1.12)*</td>
<td></td>
</tr>
<tr>
<td>Frequency of AT repair</td>
<td>Repair every month (55)</td>
<td>1.89(0.85)</td>
<td>p=.24</td>
<td>1.83(1.83)*</td>
<td>p=.15</td>
<td>1.62(1.50)*</td>
<td>p=.09</td>
</tr>
<tr>
<td></td>
<td>Repair every two month or less (35)</td>
<td>2.16(0.75)</td>
<td></td>
<td>2.33(1)*</td>
<td></td>
<td>2.25(1.12)*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not repaired (4)</td>
<td>2.29(0.14)</td>
<td></td>
<td>2.16(0.71)*</td>
<td></td>
<td>1.87(0.69)*</td>
<td></td>
</tr>
<tr>
<td>Funding source for AT</td>
<td>Donated (66)</td>
<td>2.12(1.54)*</td>
<td>p=.25</td>
<td>2(1.50)*</td>
<td>p=.03</td>
<td>1.81(1.18)*</td>
<td>p=.49</td>
</tr>
<tr>
<td></td>
<td>Self–financed (28)</td>
<td>2.08(1.58)*</td>
<td></td>
<td>1.74(1.61)*</td>
<td></td>
<td>1.62(1.28)*</td>
<td></td>
</tr>
<tr>
<td>AT prescribing &amp; fitting source</td>
<td>Professional (14)</td>
<td>2.31(0.62)</td>
<td>p=.08</td>
<td>2.16(0.74)</td>
<td>p=.29</td>
<td>1.93(0.93)*</td>
<td>p=.72</td>
</tr>
<tr>
<td></td>
<td>Non-professionals (80)</td>
<td>1.96(0.82)</td>
<td></td>
<td>1.88(0.91)</td>
<td></td>
<td>1.75(1.59)*</td>
<td></td>
</tr>
<tr>
<td>Availability of AT maintenance facility</td>
<td>Yes (30)</td>
<td>2.37(0.63)</td>
<td>p=.003</td>
<td>2.83(1.17)*</td>
<td>p=.03</td>
<td>1.87(1.13)*</td>
<td>p=.13</td>
</tr>
<tr>
<td></td>
<td>No (64)</td>
<td>1.84(0.82)</td>
<td></td>
<td>1.83(1.50)*</td>
<td></td>
<td>1.50(1.56)*</td>
<td></td>
</tr>
<tr>
<td>Waiting period for AT</td>
<td>Received immediately (21)</td>
<td>1.66(1.84)*</td>
<td>p=.06</td>
<td>1.16(1.67)*</td>
<td>p=.14</td>
<td>1.25(1.88)*</td>
<td>p=.19</td>
</tr>
<tr>
<td></td>
<td>Later (73)</td>
<td>2.25(1.29)*</td>
<td></td>
<td>2(1.34)*</td>
<td></td>
<td>1.75(1.06)*</td>
<td></td>
</tr>
<tr>
<td>Prior experience with AT</td>
<td>Yes (33)</td>
<td>2.46(0.41)</td>
<td>p&lt;.001</td>
<td>2.50(1)*</td>
<td>p&lt;.001</td>
<td>2.25(0.98)*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No (61)</td>
<td>1.77(0.86)</td>
<td></td>
<td>1.83(1.50)*</td>
<td>p&lt;.001</td>
<td>1.50(1.50)*</td>
<td>p&lt;.001</td>
</tr>
</tbody>
</table>

*Median (IQR)
Chapter 4

Results and Analysis

The Table 4.40 described the findings of impact of various device specific dependent variables on the psychosocial outcomes of crutch user across the three subscales of PIADS. There was no significant difference in group comparison for availability of training facility, although mean scores were higher for those who did not receive any training. In regards to participation in the selection process, the mean scores across the three subscales were higher for subjects who did not have an informed choice, with significant difference for Adaptability subscale (p=.03).

For frequency of device usage, it was observed that positive psychosocial impact was higher when the subjects were using their crutches always as compared to when not used always, the difference was significant for Competence (p=.006), weak significance for Adaptability (p=.09), and Self-esteem (p=.07). For change of AT, it was observed that positive psychosocial impact was significantly high for subjects whose crutches underwent change during the course of usage as compared to those that were never changed, across all subscales of PIADS, Competence (p=.004), Adaptability (p=.008) and Self-esteem (p=.006).

The frequency of AT repair did not influence the psychosocial impact across the subscales of PIADS. Regarding the funding source of AT, the crutches received through donations (charitable means) had higher positive impact, and was significantly higher for Adaptability subscale (p=.03). The AT prescribing and fitting source, did not significantly influence the psychosocial impact across the subscales of PIADS, although the mean scores were higher for crutches that handed over by professionals.

Availability of AT maintenance facility significantly influenced Competence subscale (p=.003), Adaptability subscale (p=.03), and although it was not significant for Self-esteem but the median was higher for crutches that had access to maintenance facility. Waiting period for AT did not significantly influence the psychosocial impact across the PIADS subscales, although the median scores were higher for crutches that were received by the subjects after seven days. Prior experience to device usage created significant difference between the groups, Competence (p<.001), Adaptability (p<.001) and Self-esteem (p<.001).
Table 4.41

Group comparison for device specific variables of Ladder Scale difference score for retained crutches

<table>
<thead>
<tr>
<th>Variables</th>
<th>Category</th>
<th>Ladder Scale Difference</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability of AT training facility</td>
<td>Yes (17)</td>
<td>3(4)</td>
<td>p=.54</td>
</tr>
<tr>
<td></td>
<td>No (77)</td>
<td>4(3)</td>
<td></td>
</tr>
<tr>
<td>Participation in Selection of AT</td>
<td>Yes (35)</td>
<td>4(3)</td>
<td>p=.75</td>
</tr>
<tr>
<td></td>
<td>No (59)</td>
<td>4(3)</td>
<td></td>
</tr>
<tr>
<td>Frequency of AT usage</td>
<td>Always (56)</td>
<td>4(3)</td>
<td>p=.001</td>
</tr>
<tr>
<td></td>
<td>Not always (38)</td>
<td>2(3)</td>
<td></td>
</tr>
<tr>
<td>Changing of AT</td>
<td>Not changed (24)</td>
<td>2(2)</td>
<td>p=.03</td>
</tr>
<tr>
<td></td>
<td>Changed (70)</td>
<td>4(3)</td>
<td></td>
</tr>
<tr>
<td>Frequency of AT repair</td>
<td>Repair every month (55)</td>
<td>3(3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Repair every two month or less (35)</td>
<td>4(3)</td>
<td>p=.12</td>
</tr>
<tr>
<td></td>
<td>Not repaired (4)</td>
<td>2.50(2)</td>
<td></td>
</tr>
<tr>
<td>Funding source for AT</td>
<td>Donated (66)</td>
<td>4(3)</td>
<td>p=.009</td>
</tr>
<tr>
<td></td>
<td>Self - financed (28)</td>
<td>2.50(2)</td>
<td></td>
</tr>
<tr>
<td>AT prescribing &amp; fitting source</td>
<td>Professional (14)</td>
<td>4(2)</td>
<td>p=.53</td>
</tr>
<tr>
<td></td>
<td>Non-professionals (80)</td>
<td>3.50(3)</td>
<td></td>
</tr>
<tr>
<td>Availability of AT maintenance facility</td>
<td>Yes (30)</td>
<td>4(4)</td>
<td>p=.79</td>
</tr>
<tr>
<td></td>
<td>No (64)</td>
<td>3(3)</td>
<td></td>
</tr>
<tr>
<td>Waiting period for AT</td>
<td>Received immediately (21)</td>
<td>3(2)</td>
<td>p=.17</td>
</tr>
<tr>
<td></td>
<td>Later (73)</td>
<td>4(3)</td>
<td></td>
</tr>
<tr>
<td>Prior experience with AT</td>
<td>Yes (33)</td>
<td>4(4)</td>
<td>p=.01</td>
</tr>
<tr>
<td></td>
<td>No (61)</td>
<td>3(3)</td>
<td></td>
</tr>
</tbody>
</table>

The Table 4.41, described the impact of various device specific dependent variables on the psychosocial outcomes of crutch user for improvement in life satisfaction through Ladder Scale. AT training facility, participation in selection process, AT prescribing & fitting source, availability of maintenance facility and waiting period for AT did not produce significant impact on improvement in life satisfaction. Having prior experience to device usage led to significantly higher median scores (p=.01) as compared to those who did not have.
The improvement in life satisfaction increased significantly \((p=.001)\) when subjects used their crutches *always*. When crutches had *undergone change*, it increased the life satisfaction significantly \((p=.03)\) as compared to those that were never changed. As regards the *funding source*, crutches obtained through donated source created significantly higher impact on life satisfaction \((p=.009)\).

**Table 4.42**

*Correlation between the continuous independent variables and the outcome variables for retained crutches*

<table>
<thead>
<tr>
<th>Variables</th>
<th>PIADS-C</th>
<th>PIADS-A</th>
<th>PIADS-S</th>
<th>LS-Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>(r= -.12, p=.23)</td>
<td>(r= -.18, p=.07)</td>
<td>(r= -.06, p=.56)</td>
<td>(r= -.15, p=.14)</td>
</tr>
<tr>
<td>Age of onset</td>
<td>(r= -.37, p&lt;.001)</td>
<td>(r= -.38, p&lt;.001)</td>
<td>(r= -.38, p&lt;.001)</td>
<td>(r= -.27, p=.007)</td>
</tr>
<tr>
<td>Duration of locomotor problem</td>
<td>(r= .34, p=.001)</td>
<td>(r= .29, p=.004)</td>
<td>(r= .39, p&lt;.001)</td>
<td>(r= .19, p=.05)</td>
</tr>
<tr>
<td>Duration of AT use</td>
<td>(r= .34, p=.001)</td>
<td>(r= .29, p=.004)</td>
<td>(r= .35, p&lt;.001)</td>
<td>(r= .27, p=.006)</td>
</tr>
<tr>
<td>motor-FIM difference</td>
<td>(r= .06, p=.52)</td>
<td>(r= .03, p=.76)</td>
<td>(r= .09, p=.34)</td>
<td>(r= .26, p=.009)</td>
</tr>
</tbody>
</table>

Table 4.42 described age (socio-demographic factor); age of onset, duration of locomotor problem & motor-FIM difference (condition specific factor) and duration of AT use (device specific factor). It was observed that the age of the crutch users was found to be negatively correlated although not significant across PIADS subscales. The *age of onset of the locomotor problem* of the crutch users was found to be significantly and negatively correlated across PIADS subscales, Competence \((p<.001)\), Adaptability \((p<.001)\), and Self-esteem \((p<.001)\). The *duration of locomotor problem* of crutch users was found to be significantly correlated across PIADS subscales Competence \((p=.001)\), Adaptability \((p=.004)\), and Self-esteem \((p<.001)\). The *duration of crutch usage* was found to be significantly correlated across PIADS subscales Competence \((p=.001)\), Adaptability \((p=.004)\), and Self-esteem \((p<.001)\).

The variable *motor-FIM difference*, depicting improvement in functional status, did not significantly correlate with the subscales of PIADS. The improvement in life satisfaction for crutch users was found to be significantly correlated with *age of onset of locomotor problem* \((p=.007)\), *duration of locomotor problem* \((p=.05)\), *duration of AT use* \((p=.006)\), and *motor-FIM difference* \((p=.009)\).
### Table 4.43

**Predictors of Competence subscale of PIADS for crutch users.**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Regression Coefficient</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unstandardized $\beta$</td>
<td>Standardized $\beta$</td>
</tr>
<tr>
<td>Constant</td>
<td>1.04</td>
<td>--</td>
</tr>
<tr>
<td>Past experience of AT</td>
<td>-.54</td>
<td>-.32</td>
</tr>
<tr>
<td>Availability of AT maintenance</td>
<td>-.40</td>
<td>-.23</td>
</tr>
<tr>
<td>Age of onset of locomotor problem</td>
<td>-.02</td>
<td>-.35</td>
</tr>
<tr>
<td>AT prescribing &amp; fitting source</td>
<td>-.57</td>
<td>-.25</td>
</tr>
<tr>
<td>Frequency of use of AT</td>
<td>-.55</td>
<td>-.33</td>
</tr>
</tbody>
</table>

The overall model was significant with p<.001 and accounted for 47% ($R^2 = 0.47$) of the variability in the dependent variable (PIADS-Competence) is explained by the independent variable. The adjusted $R^2$ for the above model was 0.44. As seen in Table 4.43, one condition specific variable and four device specific variables added significant variance to the model. The strongest predictors were *past experience of AT usage* (p<.001), *frequency of AT usage* (p<.001), *age of onset of locomotor problems* (p<.001); relatively weaker predictors were *availability of maintenance facility* (p=.003) and *prescribing and fitting agents* (p=.002).
Table 4.44

_Predictors of Adaptability subscale of PIADS for crutch users._

<table>
<thead>
<tr>
<th>Variables</th>
<th>Regression Coefficient</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unstandardized β</td>
<td>Standardized β</td>
</tr>
<tr>
<td>Constant</td>
<td>3.17</td>
<td>--</td>
</tr>
<tr>
<td>Past experience of AT</td>
<td>-.24</td>
<td>-.12</td>
</tr>
<tr>
<td>Availability of AT maintenance</td>
<td>-.44</td>
<td>-.23</td>
</tr>
<tr>
<td>Age of onset of locomotor problem</td>
<td>-.02</td>
<td>-.33</td>
</tr>
<tr>
<td>Frequency of AT repair</td>
<td>.45</td>
<td>.24</td>
</tr>
<tr>
<td>Frequency of use of AT</td>
<td>-.50</td>
<td>-.28</td>
</tr>
<tr>
<td>Participation in selection of AT</td>
<td>-.62</td>
<td>-.34</td>
</tr>
<tr>
<td>Changing of AT</td>
<td>.46</td>
<td>.23</td>
</tr>
<tr>
<td>Migration status</td>
<td>.34</td>
<td>.15</td>
</tr>
</tbody>
</table>

The overall model was significant with p<.001 and accounted for 50% (R² = 0.50) of the variability in the dependent variable (PIADS-Adaptability) is explained by the independent variables. The adjusted R² for the above model was 0.45. As seen from Table 4.44, one socio-demographic variable, one condition specific variable and six device specific variables added significant variance to the model. The strongest predictors were _participation in selection of AT_ (p<.001), _age of onset of locomotor problem_ (p=.001), _availability of AT maintenance_ (p=.006), _frequency of AT use_ (p=.001), _frequency of AT repair-once every two month_ (p=.004); and the weaker predictors were _changing of AT_ (p=.03) and _migration_ (p=.05).
Table 4.45

Predictors of Self-esteem subscale of PIADS for crutch users.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Regression Coefficient</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unstandardized β</td>
<td>Standardized β</td>
</tr>
<tr>
<td>Constant</td>
<td>1.24</td>
<td>--</td>
</tr>
<tr>
<td>Past experience of AT</td>
<td>-0.49</td>
<td>-0.27</td>
</tr>
<tr>
<td>Availability of AT maintenance</td>
<td>-0.34</td>
<td>-0.18</td>
</tr>
<tr>
<td>Extent of involvement – limb affected</td>
<td>0.47</td>
<td>0.25</td>
</tr>
<tr>
<td>Frequency of AT repair</td>
<td>0.43</td>
<td>0.24</td>
</tr>
<tr>
<td>Frequency of use of AT</td>
<td>-0.35</td>
<td>-0.20</td>
</tr>
<tr>
<td>Availability of AT training facility</td>
<td>0.58</td>
<td>0.25</td>
</tr>
</tbody>
</table>

The overall model was significant with p<.001 and accounted for 48% (R² = 0.48) of the variability in the dependent variable (PIADS-Self-esteem) is explained by the independent variables. The adjusted R² for the above model was 0.43. As seen in Table 4.45, one condition specific variable and five device specific variables added significant variance to the model. The strongest predictors were past experience of AT usage (p = 0.002), availability of AT training (p = 0.003), frequency of AT repair - once every two month (p = 0.005), extent of involvement - limb affectation (p = 0.004) and the weaker predictors were frequency of AT usage (p = 0.01), availability of AT maintenance (p = 0.02).

Table 4.46

Predictors of improvement in life satisfaction on Ladder Scale for crutch users.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Regression Coefficient</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unstandardized β</td>
<td>Standardized β</td>
</tr>
<tr>
<td>Constant</td>
<td>2.23</td>
<td>--</td>
</tr>
<tr>
<td>Past experience of AT</td>
<td>-0.21</td>
<td>-0.17</td>
</tr>
<tr>
<td>Funding source for AT</td>
<td>-0.19</td>
<td>-0.15</td>
</tr>
<tr>
<td>Extent of involvement - limb affected</td>
<td>0.29</td>
<td>0.23</td>
</tr>
<tr>
<td>Frequency of AT repair</td>
<td>0.26</td>
<td>0.21</td>
</tr>
<tr>
<td>Frequency of use of AT</td>
<td>-0.48</td>
<td>-0.40</td>
</tr>
<tr>
<td>Gender</td>
<td>0.22</td>
<td>0.14</td>
</tr>
</tbody>
</table>
The overall model was significant with \( p<.001 \) and accounted for 36\% (\( R^2 = 0.36 \)) of the variability in the dependent variable (improvement in life satisfaction - Ladder Scale) is explained by the independent variables. The adjusted \( R^2 \) for the above model was 0.32. As seen from Table 4.46, one socio-demographic variable, one condition specific variable and four device specific variable added significant variance to the model. The strongest predictors were frequency of AT usage (\( p<.001 \)), extent of involvement - limb affected (\( p=.008 \)); and the weaker predictors were repair once every two month (\( p=.01 \)), past experience with device usage (\( p=.05 \)) and funding source (\( p=.08 \)).

4.5.5 Psychosocial outcome for KAFO users

In the current study a total of 93 subjects in Group I were found to have using knee ankle foot orthosis as their primary AT device and were found to be one of the prevalent type of mobility device for subjects with locomotor disability in Indian society.

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>n</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>PIADS - C</td>
<td>93</td>
<td>0.16</td>
<td>3.00</td>
<td>1.94</td>
<td>0.70</td>
</tr>
<tr>
<td>PIADS - A</td>
<td>93</td>
<td>0</td>
<td>3.00</td>
<td>2.04</td>
<td>0.72</td>
</tr>
<tr>
<td>PIADS - S</td>
<td>93</td>
<td>-0.12</td>
<td>3.00</td>
<td>1.86</td>
<td>0.72</td>
</tr>
<tr>
<td>LS-Difference</td>
<td>93</td>
<td>-1</td>
<td>8</td>
<td>2.98</td>
<td>1.91</td>
</tr>
</tbody>
</table>

Table 4.47 reported that the mean psychosocial impact for KAFO users was found to be 1.94(0.70), 2.04(0.72) and 1.86(0.72) respectively for competence, adaptability and self-esteem subscale, the lowest impact been for self-esteem subscale. The mean improvement in life satisfaction score was found at 2.98(1.91).
### Table 4.48

*Group comparison for socio-demographic variables of PIADS score for retained KAFO (n=93)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category (n)</th>
<th>PIADS-C</th>
<th>PIADS-A</th>
<th>PIADS-S</th>
<th>P value</th>
<th>PIADS-C</th>
<th>PIADS-A</th>
<th>PIADS-S</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male (59)</td>
<td>1.89(0.70)</td>
<td>p = .38</td>
<td>1.97(0.75)</td>
<td>p = .17</td>
<td>1.82(0.75)</td>
<td>p = .44</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Female (34)</td>
<td>2.02(0.71)</td>
<td></td>
<td>2.18(0.66)</td>
<td></td>
<td>1.94(0.67)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type of Facility</td>
<td>Residential (8)</td>
<td>1.68(0.72)</td>
<td></td>
<td>1.66(1.13)*</td>
<td></td>
<td>1.68(0.85)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Non-residential (52)</td>
<td>1.97(0.63)</td>
<td>p = .55</td>
<td>2.33(1)*</td>
<td>p = .21</td>
<td>1.89(0.68)</td>
<td>p = .75</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mixed (33)</td>
<td>1.94(0.80)</td>
<td></td>
<td>2(1.08)*</td>
<td></td>
<td>1.86(0.77)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Availability of Local Support</td>
<td>Yes (36)</td>
<td>2.08(0.72)</td>
<td>p = .13</td>
<td>2.12(0.80)</td>
<td>p = .41</td>
<td>1.99(0.71)</td>
<td>p = .19</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No (57)</td>
<td>1.85(0.68)</td>
<td></td>
<td>2.00(0.68)</td>
<td></td>
<td>1.78(0.72)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Migration Status</td>
<td>Yes (22)</td>
<td>2.04(0.74)</td>
<td>p = .43</td>
<td>2.08(0.69)</td>
<td>p = .77</td>
<td>2.04(0.64)</td>
<td>p = .19</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No (71)</td>
<td>1.91(0.69)</td>
<td></td>
<td>2.03(0.74)</td>
<td></td>
<td>1.81(0.74)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Availability of Social Support</td>
<td>Yes (82)</td>
<td>2(1.04)*</td>
<td>p = .07</td>
<td>2.09(0.70)</td>
<td>p = .08</td>
<td>2.06(1.13)*</td>
<td>p = .18</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No (11)</td>
<td>1.50(1.66)*</td>
<td></td>
<td>1.69(0.80)</td>
<td></td>
<td>1.37(1.50)*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work Status</td>
<td>Job in open market (66)</td>
<td>1.95(1.27)*</td>
<td></td>
<td>2.33(1.04)*</td>
<td></td>
<td>1.87(1.12)*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Institutional Set-up (21)</td>
<td>2.16(0.96)*</td>
<td>p = .21</td>
<td>2.16(0.92)*</td>
<td>p = .06</td>
<td>2.12(1)*</td>
<td>p = .26</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unemployed (6)</td>
<td>1.49(1.38)*</td>
<td></td>
<td>.91(1.33)*</td>
<td></td>
<td>1.75(1.40)*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education Status</td>
<td>1-10 (51)</td>
<td>1.75(0.69)</td>
<td>p = .004</td>
<td>1.90(0.67)</td>
<td>p = .03</td>
<td>1.72(0.82)</td>
<td>p = .03</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>11-18 (42)</td>
<td>2.17(0.65)</td>
<td></td>
<td>2.22(0.75)</td>
<td></td>
<td>2.04(0.55)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Living Status</td>
<td>With family (77)</td>
<td>2.01(0.69)</td>
<td></td>
<td>2.13(0.72)</td>
<td></td>
<td>1.89(0.72)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Away from family (16)</td>
<td>1.59(0.68)</td>
<td>p = .02</td>
<td>1.65(0.62)</td>
<td>p = .01</td>
<td>1.73(0.71)</td>
<td>p = .44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Socio-economic Status</td>
<td>Upper middle (15)</td>
<td>2.13(0.81)</td>
<td></td>
<td>2.07(1.03)</td>
<td></td>
<td>2.25(1.75)*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lower middle (58)</td>
<td>2.02(0.62)</td>
<td>p = .02</td>
<td>2.16(0.64)</td>
<td>p = .03</td>
<td>2(1)*</td>
<td>p = .18</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Poor (20)</td>
<td>1.56(0.74)</td>
<td></td>
<td>1.68(0.59)</td>
<td></td>
<td>1.50(1.35)*</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Median (IQR)
The Table 4.48 indicated that gender did not have significant influence on any of the subscales of PIADS for the KAFO users, although the mean scores for females were higher than the males. There was no significant difference between the groups across the subscales of PIADS for the variable on the type of facility that subject is availing rehabilitation service, local support, migration status, social support and work status. Although positive impact was relatively higher across subscales of PIADS for KAFO users availing services from non-residential facilities, those who received local and social support, and those who migrated to places of availability of services. In regards to work status, the positive impact was relatively higher for KAFO users working in institutional set up for Competence and Self-esteem subscale and for Adaptability subscale those working in open market.

Regarding the influence of education, there was significant difference between the groups, the mean scores were significantly higher for subjects with higher qualification across all the subscales of PIADS, Competence (p=.004), Adaptability (p=.03), Self-esteem (p=.03). There was higher positive impact for KAFO users staying with family as compared to those staying away from family, and was significantly higher for Competence (p=.02) and Adaptability subscale (p=.01).

Regarding the influence of socioeconomic status, difference was observed in the mean scores between the groups across PIADS subscales, but the group difference was significant for Competence (p=.02) and Adaptability (p=.03). Post hoc analysis of Competence subscale reported that mean scores of upper middle class (p=.04) and lower middle class (p=.03) were significantly higher than KAFO user belonging to poor socioeconomic status. Post hoc analysis of Adaptability subscale reported that mean scores of lower middle class (p=.02) was significantly higher than KAFO user belonging to poor socioeconomic status.
Table 4.49

*Group comparison for socio-demographic variables of Ladder Scale difference score for retained KAFO* (n=93)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category (n)</th>
<th>Ladder Scale Difference</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Median (IQR)</td>
<td></td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>(59)</td>
<td>3(2)</td>
<td>p=.34</td>
</tr>
<tr>
<td>Female</td>
<td>(34)</td>
<td>3(2)</td>
<td></td>
</tr>
<tr>
<td><strong>Type of Facility</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential</td>
<td>(8)</td>
<td>3(4)</td>
<td>p=.75</td>
</tr>
<tr>
<td>Non-residential</td>
<td>(52)</td>
<td>3(2)</td>
<td></td>
</tr>
<tr>
<td>Mixed</td>
<td>(33)</td>
<td>3(2)</td>
<td></td>
</tr>
<tr>
<td><strong>Availability of Local Support</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>(36)</td>
<td>3(3)</td>
<td>p=.16</td>
</tr>
<tr>
<td>No</td>
<td>(57)</td>
<td>3(2)</td>
<td></td>
</tr>
<tr>
<td><strong>Migration Status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>(22)</td>
<td>2(2)</td>
<td>p=.55</td>
</tr>
<tr>
<td>No</td>
<td>(71)</td>
<td>3(2)</td>
<td></td>
</tr>
<tr>
<td><strong>Availability of Social Support</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>(82)</td>
<td>3(2)</td>
<td>p=.35</td>
</tr>
<tr>
<td>No</td>
<td>(11)</td>
<td>3(3)</td>
<td></td>
</tr>
<tr>
<td><strong>Work Status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job in open market</td>
<td>(66)</td>
<td>3(2)</td>
<td>p=.47</td>
</tr>
<tr>
<td>Institutional Set-up</td>
<td>(21)</td>
<td>3(4)</td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>(6)</td>
<td>2(2)</td>
<td></td>
</tr>
<tr>
<td><strong>Education Status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-10</td>
<td>(51)</td>
<td>2(3)</td>
<td>p=.09</td>
</tr>
<tr>
<td>11-18</td>
<td>(42)</td>
<td>3(2)</td>
<td></td>
</tr>
<tr>
<td><strong>Living Status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With family</td>
<td>(77)</td>
<td>3(2)</td>
<td>p=.43</td>
</tr>
<tr>
<td>Away from family</td>
<td>(16)</td>
<td>2.50(1)</td>
<td></td>
</tr>
<tr>
<td><strong>Socio-economic Status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper middle</td>
<td>(15)</td>
<td>3(2)</td>
<td>p=.21</td>
</tr>
<tr>
<td>Lower middle</td>
<td>(58)</td>
<td>3(2)</td>
<td></td>
</tr>
<tr>
<td>Poor</td>
<td>(20)</td>
<td>2(3)</td>
<td></td>
</tr>
</tbody>
</table>

The Table 4.49, reported that the improvement in life satisfaction with Ladder Scale difference score was not-significantly influenced by any of the socio-demographic variable. Although the median scores showed certain pattern, higher median scores were observed for KAFO users *availing services from residential facility*, those who received *local support*, for those who *did not migrate*, those who *did not receive social support*, those working in *institutional setup*, those with *higher education*, those living with *family* and those belonging to *upper & lower middle socio-economic status*. 
Table 4.50

*Group comparison for condition specific variables of PIADS score for retained KAFO*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Category (n)</th>
<th>PIADS-C Mean (SD)</th>
<th>PIADS-A Mean (SD)</th>
<th>PIADS-S Mean (SD)</th>
<th>p value</th>
<th>p value</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnosis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Polio(77)</td>
<td>2.04(0.65)</td>
<td>2.20(0.59)</td>
<td>2(1.13)*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SCI (7)</td>
<td>1.05(0.61)</td>
<td>0.75(0.55)</td>
<td>1.25(2)*</td>
<td>.001</td>
<td>&lt;.001</td>
<td>.02</td>
</tr>
<tr>
<td></td>
<td>Others(9)</td>
<td>1.72(0.74)</td>
<td>1.73(0.83)</td>
<td>1.62(1.68)*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extent of</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Involvement</td>
<td>Single LL(52)</td>
<td>1.99(0.69)</td>
<td>2.15(0.62)</td>
<td>1.88(0.69)</td>
<td>.41</td>
<td>.10</td>
<td>.79</td>
</tr>
<tr>
<td></td>
<td>Both LL(41)</td>
<td>1.87(0.71)</td>
<td>1.91(0.82)</td>
<td>1.84(0.77)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Median (IQR*)

The Table 4.50, described that the *diagnosis* of the KAFO user had a significant effect on all the subscales of PIADS, for Competence subscale (p=.001), Adaptability subscale (p<.001) and Self-esteem subscale (p=.02). Post hoc analysis of Competence subscale reported that mean scores of KAFO user with polio was significantly high (p=.001) as compared to spinal cord injured. Post hoc analysis of Adaptability subscale reported that mean scores of KAFO user with polio was significantly high (p<.001) as compared to spinal cord injured. As regards the *extent of involvement*, it was observed that KAFO users having single lower limb affected had higher positive psychosocial impact as compared to those having both lower limb affected across all subscales of PIADS, although the difference was not significant.

Table 4.51

*Group comparison for condition specific factors of Ladder Scale difference score for retained KAFO*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Category (n)</th>
<th>Ladder Scale Difference Median (IQR)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnosis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polio (77)</td>
<td></td>
<td>3(2)</td>
<td>.50</td>
</tr>
<tr>
<td>SCI (7)</td>
<td></td>
<td>2(1)</td>
<td></td>
</tr>
<tr>
<td>Others(9)</td>
<td></td>
<td>4(4)</td>
<td></td>
</tr>
<tr>
<td>Extent of Involvement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single LL (52)</td>
<td></td>
<td>3(2)</td>
<td>.26</td>
</tr>
<tr>
<td>Both LL(41)</td>
<td></td>
<td>3(3)</td>
<td></td>
</tr>
</tbody>
</table>
From Table 4.51, it was noted that the life satisfaction was not found to be significantly influenced by the *type of diagnosis* and the *extent of involvement*.

Table 4.52

**Group comparison for device specific variables of PIADS score for retained KAFO**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Category (n)</th>
<th>PIADS-C (Mean (SD))</th>
<th>p value</th>
<th>PIADS-A (Mean (SD))</th>
<th>p value</th>
<th>PIADS-S (Mean (SD))</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability of AT training facility</td>
<td>Yes (60)</td>
<td>1.83(0.74)</td>
<td>.04</td>
<td>1.89(0.75)</td>
<td>.006</td>
<td>1.75(0.77)</td>
<td>.03</td>
</tr>
<tr>
<td></td>
<td>No (33)</td>
<td>2.14(0.58)</td>
<td></td>
<td>2.32(0.59)</td>
<td></td>
<td>2.06(0.58)</td>
<td></td>
</tr>
<tr>
<td>Participation in Selection of AT</td>
<td>Yes (40)</td>
<td>1.98(0.76)</td>
<td>.60</td>
<td>2.08(0.79)</td>
<td>.65</td>
<td>1.89(0.73)</td>
<td>.74</td>
</tr>
<tr>
<td></td>
<td>No (53)</td>
<td>1.90(0.66)</td>
<td></td>
<td>2.01(0.67)</td>
<td></td>
<td>1.84(0.72)</td>
<td></td>
</tr>
<tr>
<td>Frequency of AT usage</td>
<td>Always (25)</td>
<td>2.44(0.53)</td>
<td>&lt;.001</td>
<td>2.49(0.54)</td>
<td>&lt;.001</td>
<td>2.16(0.63)</td>
<td>.01</td>
</tr>
<tr>
<td></td>
<td>Not always (68)</td>
<td>1.75(0.67)</td>
<td></td>
<td>1.88(0.72)</td>
<td></td>
<td>1.75(0.73)</td>
<td></td>
</tr>
<tr>
<td>Changing of AT</td>
<td>Not changed (14)</td>
<td>1.50(0.74)</td>
<td>.01</td>
<td>1.55(0.76)</td>
<td>.005</td>
<td>1.43(1.59)*</td>
<td>.13</td>
</tr>
<tr>
<td></td>
<td>Changed (79)</td>
<td>2.02(0.67)</td>
<td></td>
<td>2.13(0.69)</td>
<td></td>
<td>2.14(1.13)*</td>
<td></td>
</tr>
<tr>
<td>Frequency of AT repair</td>
<td>Repair every month (45)</td>
<td>1.94(0.66)</td>
<td></td>
<td>2.16(0.64)</td>
<td></td>
<td>1.87(1.06)*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Repair every two month or less (40)</td>
<td>2.03(0.76)</td>
<td>.10</td>
<td>2.06(0.80)</td>
<td>.01</td>
<td>2.25(1.25)*</td>
<td>.05</td>
</tr>
<tr>
<td></td>
<td>Not repaired (8)</td>
<td>1.45(0.41)</td>
<td></td>
<td>1.35(0.42)</td>
<td></td>
<td>1.56(1.53)*</td>
<td></td>
</tr>
<tr>
<td>Funding source for AT</td>
<td>Donated (75)</td>
<td>1.93(0.68)</td>
<td>.80</td>
<td>2.06(0.66)</td>
<td>.75</td>
<td>2.08(0.74)</td>
<td>.16</td>
</tr>
<tr>
<td></td>
<td>Self–financed (18)</td>
<td>1.97(0.82)</td>
<td></td>
<td>1.98(0.97)</td>
<td></td>
<td>1.81(0.71)</td>
<td></td>
</tr>
<tr>
<td>AT prescribing &amp; fitting source</td>
<td>Professional (75)</td>
<td>2.02(0.68)</td>
<td>.01</td>
<td>2.15(0.67)</td>
<td>.002</td>
<td>1.92(0.71)</td>
<td>.09</td>
</tr>
<tr>
<td></td>
<td>Non-professionals (18)</td>
<td>1.58(0.67)</td>
<td></td>
<td>1.58(0.76)</td>
<td></td>
<td>1.60(0.72)</td>
<td></td>
</tr>
<tr>
<td>Availability of AT maintenance facility</td>
<td>Yes (47)</td>
<td>2.03(0.66)</td>
<td>.18</td>
<td>2.20(0.69)</td>
<td>.03</td>
<td>1.86(0.67)</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>No (46)</td>
<td>1.84(0.73)</td>
<td></td>
<td>1.88(0.72)</td>
<td></td>
<td>1.86(0.78)</td>
<td></td>
</tr>
<tr>
<td>Waiting period for AT</td>
<td>Within 7 days (56)</td>
<td>1.84(0.67)</td>
<td>.10</td>
<td>1.96(0.70)</td>
<td>.15</td>
<td>1.84(0.70)</td>
<td>.67</td>
</tr>
<tr>
<td></td>
<td>After 7 days (37)</td>
<td>2.08(0.72)</td>
<td></td>
<td>2.18(0.75)</td>
<td></td>
<td>1.90(0.76)</td>
<td></td>
</tr>
<tr>
<td>Prior experience with AT</td>
<td>Yes (19)</td>
<td>2.17(0.72)</td>
<td>.10</td>
<td>2.35(0.55)</td>
<td>.01</td>
<td>2.26(0.60)</td>
<td>.007</td>
</tr>
<tr>
<td></td>
<td>No (74)</td>
<td>1.88(0.69)</td>
<td></td>
<td>1.96(0.74)</td>
<td></td>
<td>1.76(0.72)</td>
<td></td>
</tr>
</tbody>
</table>

*p* Median (IQR)
The Table 4.52, described the findings of impact of various device specific dependent variables on the psychosocial outcomes of KAFO user across the three subscales of PIADS.

There was significant difference in group comparison for availability of training facility across the subscales of PIADS; Competence (p=.04), Adaptability (p=.006) and Self-esteem (p=.03). In regards to participation in the selection process, although the group difference was not found to be significant, but the mean scores across the three subscales were higher for subjects who had an informed choice.

For frequency of device usage, it was observed that positive psychosocial impact was significantly higher when the subjects were using their KAFO always as compared to when not always used, Competence (p<.001), Adaptability (p<.001), and Self-esteem (p=.01). For change of AT, it was observed that positive psychosocial impact was significantly high for subjects whose KAFO underwent change during the course of usage as compared to those that were never changed, across the subscales of Competence (p=.01), and Adaptability (p=.005).

The group differences for frequency of AT repair was found to influence the psychosocial impact across the subscales of PIADS, with devices having undergone repair had higher positive impact as compared to those that were not repaired. But significant difference was observed for Adaptability (p=.01), with post hoc analysis reported that mean scores of KAFO repair every month (p=.009) and every two month (p=.02) was significantly high as compared to those not repaired. Significant group difference was observed even for Self-esteem (p=.05). Regarding the funding source of AT, the group difference did not show significant difference in positive impact.

The AT prescribing and fitting source, it was observed that the mean scores were higher for KAFO’s that were prescribed by professionals as compared to those prescribed by non-professionals. The group differences were significant for Competence (p=.01), and Adaptability (p=.002).Regarding availability of AT maintenance facility, group difference was significant for Adaptability subscale (p=.03). Waiting period for AT did not significantly influence the psychosocial impact across the PIADS subscales, although the mean scores were higher for KAFO’s that were received by the subjects after seven days. Prior experience to
higher positive impact was created for KAFO users who had prior experience, although the impact was significantly higher for Adaptability \((p=.01)\), and Self-esteem \((p=.007)\).

Table 4.53
Group comparison for device specific variables of Ladder Scale difference score for retained KAFO

<table>
<thead>
<tr>
<th>Variables</th>
<th>Category (n)</th>
<th>Ladder Scale Difference (n=93)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Median (IQR)</td>
<td>(p) value</td>
</tr>
<tr>
<td>Availability of AT training facility</td>
<td>Yes (60)</td>
<td>2(3)</td>
<td>.006</td>
</tr>
<tr>
<td></td>
<td>No (33)</td>
<td>3(2)</td>
<td></td>
</tr>
<tr>
<td>Participation in Selection of AT</td>
<td>Yes (40)</td>
<td>3(2)</td>
<td>.07</td>
</tr>
<tr>
<td></td>
<td>No (53)</td>
<td>2(3)</td>
<td></td>
</tr>
<tr>
<td>Frequency of AT usage</td>
<td>Always (25)</td>
<td>4(2)</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Not always (68)</td>
<td>2(2)</td>
<td></td>
</tr>
<tr>
<td>Changing of AT devices</td>
<td>Not changed (14)</td>
<td>2(3)</td>
<td>.02</td>
</tr>
<tr>
<td></td>
<td>Changed (79)</td>
<td>3(2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Repair every month (45)</td>
<td>3(2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Repair every two month or less (40)</td>
<td>3(3)</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Not repaired (8)</td>
<td>0(2)</td>
<td></td>
</tr>
<tr>
<td>Frequency of AT repair</td>
<td>Donated (75)</td>
<td>3(2)</td>
<td>.38</td>
</tr>
<tr>
<td></td>
<td>Self – financed (18)</td>
<td>3(2)</td>
<td></td>
</tr>
<tr>
<td>Funding source for AT</td>
<td>Professional (75)</td>
<td>3(2)</td>
<td>.62</td>
</tr>
<tr>
<td></td>
<td>Non-professionals (18)</td>
<td>3(1)</td>
<td></td>
</tr>
<tr>
<td>AT prescribing &amp; fitting source</td>
<td>Yes (47)</td>
<td>3(2)</td>
<td>.49</td>
</tr>
<tr>
<td></td>
<td>No (46)</td>
<td>3(2)</td>
<td></td>
</tr>
<tr>
<td>Availability of AT maintenance facility</td>
<td>Yes (47)</td>
<td>3(2)</td>
<td>.49</td>
</tr>
<tr>
<td></td>
<td>No (46)</td>
<td>3(2)</td>
<td></td>
</tr>
<tr>
<td>Waiting period for AT</td>
<td>Within 7 days (56)</td>
<td>3(2)</td>
<td>.19</td>
</tr>
<tr>
<td></td>
<td>After 7 days (37)</td>
<td>3(2)</td>
<td></td>
</tr>
<tr>
<td>Prior experience with AT</td>
<td>Yes (19)</td>
<td>4(2)</td>
<td>.01</td>
</tr>
<tr>
<td></td>
<td>No (74)</td>
<td>3(2)</td>
<td></td>
</tr>
</tbody>
</table>

The Table 4.53, described the findings of impact of various device specific dependent variables on the psychosocial outcomes of KAFO user for improvement in life satisfaction through Ladder Scale.

The improvement in life satisfaction was significantly influenced by non- availability of \textit{AT training facility} \((p=.006)\). \textit{Participation in selection process} did not create a significant
impact on the life satisfaction. AT funding source, AT prescribing & fitting source, availability of maintenance facility and waiting period for AT did not produce significant impact on improvement in life satisfaction.

Having prior experience to device usage led to significantly higher median scores (p=.01) as compared to those who did not have. The improvement in life satisfaction increased significantly (p<.001) when subjects tend to use their KAFO always. When KAFO had undergone change, that increased the life satisfaction significantly (p=.02) as compared to those that were never changed. Regarding the frequency of KAFO repair, it was found that there was significant effect on life satisfaction (p<.001).

Table 4.54
Correlation between the continuous independent variables and the outcome variables for retained KAFO

<table>
<thead>
<tr>
<th>Variables</th>
<th>PIADS-C</th>
<th>PIADS-A</th>
<th>PIADS-S</th>
<th>LS-Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>r=.21, p=.04</td>
<td>r=.06, p=.53</td>
<td>r=.19, p=.06</td>
<td>r=.35, p=.001</td>
</tr>
<tr>
<td>Age of onset</td>
<td>r=.28, p=.01</td>
<td>r=.45, p&lt;.001</td>
<td>r=.21, p=.05</td>
<td>r=.04, p=.66</td>
</tr>
<tr>
<td>Duration of locomotor problem</td>
<td>r=.39, p&lt;.001</td>
<td>r=.36, p&lt;.001</td>
<td>r=.28, p=.005</td>
<td>r=.35, p&lt;.001</td>
</tr>
<tr>
<td>Duration of AT use</td>
<td>r=.28, p=.006</td>
<td>r=.20, p=.05</td>
<td>r=.20, p=.03</td>
<td>r=.33, p=.001</td>
</tr>
<tr>
<td>motor-FIM difference</td>
<td>r=.03, p=.77</td>
<td>r=.11, p=.26</td>
<td>r=.03, p=.74</td>
<td>r=.10, p=.34</td>
</tr>
</tbody>
</table>

Table 4.54, described age (socio-demographic factor); age of onset, duration of locomotor problem & motor-FIM difference (condition specific factor) and duration of AT use (device specific factor).

The age of the KAFO users was found to be positively correlated although not significant across PIADS subscales. The age of onset of the locomotor problem of the KAFO users was found to be significantly and negatively correlated across PIADS subscales, Competence (p=.01), Adaptability (p<.001), and Self-esteem (p=.05). The duration of locomotor problem of KAFO users was found to be significantly correlated across PIADS subscales Competence (p<.001), Adaptability (p<.001), and Self-esteem (p=.005). The
duration of KAFO usage was also found to be significantly and positively correlated across PIADS subscales Competence (p=.006), Adaptability (p=.05), and Self-esteem (p=.03).

The variable motor-FIM difference, depicting improvement in functional status, did not significantly correlate with the subscales of PIADS. The improvement in life satisfaction for KAFO users was found to be significantly correlated with age (p=.001), duration of locomotor problem (p<.001), and duration of AT use (p=.001).

Table 4.55

Predictors of Competence subscale of PIADS for KAFO users.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Regression Coefficient</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unstandardized β</td>
<td>Standardized β</td>
</tr>
<tr>
<td>Constant</td>
<td>1.75</td>
<td>--</td>
</tr>
<tr>
<td>Duration of locomotor problem</td>
<td>.03</td>
<td>.29</td>
</tr>
<tr>
<td>Past experience of AT</td>
<td>-.41</td>
<td>-.23</td>
</tr>
<tr>
<td>Education status</td>
<td>.32</td>
<td>.23</td>
</tr>
<tr>
<td>AT prescribing &amp; fitting source</td>
<td>-.37</td>
<td>-.21</td>
</tr>
<tr>
<td>Changing of AT</td>
<td>.42</td>
<td>.21</td>
</tr>
<tr>
<td>Availability of social support</td>
<td>-.37</td>
<td>-.15</td>
</tr>
</tbody>
</table>

The overall model was significant with p<.001 and accounted for 41% (R² = 0.41) of the variability in the dependent variable (PIADS-Competence) is explained by the independent variable. The adjusted R² for the above model was 0.37. As seen in Table 4.55, two socio-demographic variables, one condition specific variable and three device specific variables added significant variance to the model. The stronger predictors were duration of locomotor problem (p=.007), past experience of AT usage (p=.01), education status (p=.01). Relatively weaker predictors were prescribing and fitting agents (p=.02) and frequency of AT change (p=.04).
Table 4.56

Predictors of Adaptability subscale of PIADS for KAFO users.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Regression Coefficient</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unstandardized β</td>
<td>Standardized β</td>
</tr>
<tr>
<td>Constant</td>
<td>2.75</td>
<td>--</td>
</tr>
<tr>
<td>Duration of locomotor problem</td>
<td>.02</td>
<td>.19</td>
</tr>
<tr>
<td>Past experience of AT</td>
<td>-.29</td>
<td>-.16</td>
</tr>
<tr>
<td>Education status</td>
<td>.25</td>
<td>.17</td>
</tr>
<tr>
<td>AT prescribing &amp; fitting source</td>
<td>-.54</td>
<td>-.30</td>
</tr>
<tr>
<td>Frequency of AT repair</td>
<td>-.33</td>
<td>-.14</td>
</tr>
<tr>
<td>Age of onset of locomotor problem</td>
<td>-.03</td>
<td>-.27</td>
</tr>
<tr>
<td>Availability of AT training facility</td>
<td>.24</td>
<td>.16</td>
</tr>
</tbody>
</table>

The overall model was significant with p<.001 and accounted for 51% ($R^2 = 0.51$) of the variability in the dependent variable (PIADS-Adaptability) was explained by the independent variable. The adjusted $R^2$ for the above model was 0.46. As seen in Table 4.56 the two socio-demographic variables, two condition specific variable and four device specific variables added significant variance to the model. The strongest predictors were age of onset of locomotor problem (p=.006) and prescribing agent (p=.001), and the weaker predictors were duration of locomotor problem (p=.06), past experience of AT (p=.07), living status (p=.04) and education status (p=.06).
Table 4.57

Predictors of Self-esteem subscale of PIADS for KAFO users.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Regression Coefficient</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unstandardized β</td>
<td>Standardized β</td>
</tr>
<tr>
<td>Constant</td>
<td>2.49</td>
<td>--</td>
</tr>
<tr>
<td>Duration of locomotor problem</td>
<td>.03</td>
<td>.34</td>
</tr>
<tr>
<td>Past experience of AT</td>
<td>-.69</td>
<td>-.37</td>
</tr>
</tbody>
</table>

The overall model was significant with p<.001 and accounted for 25% ($R^2 = 0.25$) of the variability in the dependent variable (PIADS-Self-esteem) is explained by the independent variable. The adjusted $R^2$ for the above model was 0.23. As seen in Table 4.57, one condition specific variable and one device specific variable added significant variance to the model. The strongest predictors were past experience of AT usage (p<.001), and duration of locomotor problem (p=.001).

Table 4.58

Predictors of improvement in life satisfaction on Ladder Scale for KAFO users.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Regression Coefficient</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unstandardized β</td>
<td>Standardized β</td>
</tr>
<tr>
<td>Constant</td>
<td>.37</td>
<td>--</td>
</tr>
<tr>
<td>Frequency of AT usage</td>
<td>-.09</td>
<td>-.21</td>
</tr>
<tr>
<td>Past experience of AT</td>
<td>-.07</td>
<td>-.15</td>
</tr>
<tr>
<td>Age of device user</td>
<td>.00</td>
<td>.23</td>
</tr>
<tr>
<td>Changing of AT</td>
<td>.07</td>
<td>.13</td>
</tr>
<tr>
<td>Frequency of AT repair</td>
<td>.08</td>
<td>.22</td>
</tr>
<tr>
<td>Availability of AT training facility</td>
<td>.08</td>
<td>.19</td>
</tr>
<tr>
<td>Participation in the selection of AT</td>
<td>.12</td>
<td>.30</td>
</tr>
</tbody>
</table>

The overall model was significant with p<.001 and accounted for 51% ($R^2 = 0.51$) of the variability in the dependent variable (improvement in life satisfaction - Ladder Scale) is explained by the independent variables. The adjusted $R^2$ for the above model was 0.46. As
seen in Table 4.58, one socio-demographic variable, and six device specific variables added significant variance to the model. The strongest predictors were age of KAFO user (p=.006) and participation of the selection of AT (p<.001). The weaker predictors were frequency of AT usage (p=.01), availability of AT training (p=.01), repair once every two month (p=.01), and past experience with device usage (p=.04).

4.6 Psychosocial Outcomes for Retained and Rejected Primary Devices in Group-II:

In Group-II, there were 58 subjects with locomotor disability who were interviewed on the day one of the receipt of their device and then followed up for three month and then the second interview after three months of the device usage. This was to assess the influence of temporal aspect on the psychosocial outcomes in Indian social context. The analysis was done using the repeated measures method.

Table 4.59

Pre-post comparison of PIADS and Ladder Scale difference score for retained and rejected devices.

<table>
<thead>
<tr>
<th>Outcome variable</th>
<th>Retained device (n=52)</th>
<th></th>
<th></th>
<th>Rejected device (n=6)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre Mean Score (SD)</td>
<td>Post Mean Score (SD)</td>
<td>p value</td>
<td>Pre Median Score (IQR)</td>
<td>Post Median Score (IQR)</td>
<td>p value</td>
</tr>
<tr>
<td>PIADS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Competence</td>
<td>1.96(.51)</td>
<td>1.96(.59)</td>
<td>p=.93</td>
<td>1.20(1.16)</td>
<td>0.45(0.58)</td>
<td>p=.08</td>
</tr>
<tr>
<td>Adaptability</td>
<td>2.01(.57)</td>
<td>1.97(.59)</td>
<td>p=.54</td>
<td>1.33(0.75)</td>
<td>0.33(1.29)</td>
<td>p=.04</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>1.82(.59)</td>
<td>1.77(.73)</td>
<td>p=.55</td>
<td>1.68(1.53)</td>
<td>0.49(0.54)</td>
<td>p=.04</td>
</tr>
<tr>
<td>Ladder Scale difference</td>
<td>3.00(2)*</td>
<td>3.00(2)*</td>
<td>p=.36</td>
<td>3.00(2)</td>
<td>1.00(0)</td>
<td>p=.02</td>
</tr>
</tbody>
</table>

*Median (IQR)

Table 4.59, presented the overall comparison of psychosocial outcome, it was found that there was no significant difference between pre and post scores for retained devices across PIADS subscales and Ladder Scale difference scale. This was indicative of the fact that the psychosocial responses for retained devices were stable over the first three months of device usage. But for the rejected devices, there was significant drop of psychosocial impact across PIADS subscales; Competence (p=.08), Adaptability (p=.04) and Self-esteem (p=.04); and also in Ladder Scale difference score (p=.02).
4.7 Association Between the Primary Retained and Rejected Assistive Technology

To study the association between the various predictor variables and device possession status (retained or rejected) using the chi-squared test analysis. For the purpose of this analysis the various category of devices were grouped as either retained or discarded. The subjects who did not have history of device rejection, the primary device thus used was considered under retained device category and subjects with a history of primary device rejection were grouped under rejected device category. A total of 270 primary retained devices possessed by 270 subjects were considered under retained device category and 125 primary devices rejected by 125 subjects were considered under rejected device category.

Table 4.60

Chi-square analysis of socio-demographic variables of retained and rejected devices.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Categories</th>
<th>Retained Devices (%)</th>
<th>Rejected Devices (%)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>&lt;20</td>
<td>57 (21.11)</td>
<td>25 (20.00)</td>
<td>p=.09</td>
</tr>
<tr>
<td></td>
<td>20-50</td>
<td>183(67.77)</td>
<td>76(60.80)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>≥ 50</td>
<td>30(11.11)</td>
<td>24(19.20)</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>Male</td>
<td>189(70.00)</td>
<td>93(74.40)</td>
<td>p=.36</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>81(30.00)</td>
<td>32(25.60)</td>
<td></td>
</tr>
<tr>
<td>Type of Facility</td>
<td>Residential</td>
<td>44(16.29)</td>
<td>30(24.00)</td>
<td>p=.06</td>
</tr>
<tr>
<td></td>
<td>Non-residential</td>
<td>226(83.70)</td>
<td>95(76.00)</td>
<td></td>
</tr>
<tr>
<td>Availability of Local Support</td>
<td>Yes</td>
<td>127(47.03)</td>
<td>52(41.60)</td>
<td>p=.34</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>143(52.96)</td>
<td>72(58.30)</td>
<td></td>
</tr>
<tr>
<td>Migration Status</td>
<td>Yes</td>
<td>68(25.18)</td>
<td>39(31.20)</td>
<td>p=.21</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>202(74.81)</td>
<td>86(68.80)</td>
<td></td>
</tr>
<tr>
<td>Availability of Social Support</td>
<td>Yes</td>
<td>215(79.62)</td>
<td>69(55.20)</td>
<td>p&lt;.001</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>55(20.38)</td>
<td>56(44.80)</td>
<td></td>
</tr>
<tr>
<td>Work Status</td>
<td>Job in open market</td>
<td>127(47.03)</td>
<td>52(44.80)</td>
<td>p&lt;.001</td>
</tr>
<tr>
<td></td>
<td>Institutional Set-up</td>
<td>94(34.81)</td>
<td>64(51.20)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unemployed</td>
<td>49(18.14)</td>
<td>5(4.00)</td>
<td></td>
</tr>
<tr>
<td>Education Status</td>
<td>1-10</td>
<td>144(53.33)</td>
<td>65(52.00)</td>
<td>p=.80</td>
</tr>
<tr>
<td></td>
<td>10-18</td>
<td>126(46.66)</td>
<td>60(48.00)</td>
<td></td>
</tr>
<tr>
<td>Living Status</td>
<td>With family</td>
<td>213(78.88)</td>
<td>81(64.80)</td>
<td>p=.003</td>
</tr>
<tr>
<td></td>
<td>Away from family</td>
<td>57(21.11)</td>
<td>44(35.20)</td>
<td></td>
</tr>
<tr>
<td>Socio-economic status</td>
<td>Upper middle</td>
<td>49(18.14)</td>
<td>15(12.00)</td>
<td>p=.16</td>
</tr>
<tr>
<td></td>
<td>Lower middle</td>
<td>142(52.59)</td>
<td>64(51.20)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Poor</td>
<td>79(29.25)</td>
<td>46(36.80)</td>
<td></td>
</tr>
</tbody>
</table>
Table 4.60 indicated that the device retention and rejection was significantly associated with *availability of social support* (*p*<.001), *work status* (*p*<.001), *living status* (*p*=.003). However, weak association was with *type of facility* (*p*=.06).

Table 4.61

*Chi-square analysis of Condition specific variables of retained and rejected devices.*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Categories</th>
<th>Retained Devices (%)</th>
<th>Rejected Devices (%)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnosis</td>
<td>Polio</td>
<td>123 (45.55)</td>
<td>79 (63.20)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td></td>
<td>SCI</td>
<td>59 (21.85)</td>
<td>25 (20.00)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Amputation</td>
<td>50 (18.51)</td>
<td>5 (4.00)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>38 (14.07)</td>
<td>16 (12.80)</td>
<td></td>
</tr>
<tr>
<td>Age of onset of locomotor problem (years)</td>
<td>By birth</td>
<td>17 (6.29)</td>
<td>9 (7.20)</td>
<td>=.51</td>
</tr>
<tr>
<td></td>
<td>&lt; 5</td>
<td>119 (44.07)</td>
<td>64 (51.20)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 – 30</td>
<td>103 (38.14)</td>
<td>41 (32.80)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>≥ 30</td>
<td>31 (11.48)</td>
<td>11 (8.80)</td>
<td></td>
</tr>
<tr>
<td>Duration of Locomotor Problem (years)</td>
<td>≤25</td>
<td>212 (78.51)</td>
<td>73 (58.40)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td></td>
<td>26- 35</td>
<td>47 (17.40)</td>
<td>28 (22.40)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>≥ 35</td>
<td>11 (4.07)</td>
<td>23 (18.40)</td>
<td></td>
</tr>
<tr>
<td>Extent of Involvement-A</td>
<td>BB affected</td>
<td>50 (18.51)</td>
<td>25 (20.00)</td>
<td>=.72</td>
</tr>
<tr>
<td></td>
<td>BB not affected</td>
<td>220 (81.48)</td>
<td>100 (80.00)</td>
<td></td>
</tr>
<tr>
<td>Extent of Involvement-B</td>
<td>Single LL affected</td>
<td>90 (33.33)</td>
<td>35 (28.00)</td>
<td>=.34</td>
</tr>
<tr>
<td></td>
<td>Bilateral LL affected</td>
<td>100 (37.03)</td>
<td>43 (34.40)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bilateral. LL &amp; BB affected</td>
<td>35 (12.96)</td>
<td>22 (17.60)</td>
<td></td>
</tr>
</tbody>
</table>

Table 4.61 indicated that the device retention and rejection was significantly associated with *diagnosis* (*p*<.001), and *duration of locomotor problem* (*p*<.001).
Table 4.62

Chi-square analysis of device specific variables of retained and rejected devices.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Categories</th>
<th>Retained Devices (%)</th>
<th>Rejected Devices (%)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration of AT usage (years)</td>
<td>&lt; 5 years</td>
<td>103(38.14)</td>
<td>81(64.80)</td>
<td>p&lt;.001</td>
</tr>
<tr>
<td></td>
<td>≥ 5 years</td>
<td>167(61.85)</td>
<td>44(35.20)</td>
<td></td>
</tr>
<tr>
<td>Availability of AT training facility</td>
<td>Yes</td>
<td>86(31.85)</td>
<td>44(35.20)</td>
<td>p=.51</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>184 (68.14)</td>
<td>81(64.80)</td>
<td></td>
</tr>
<tr>
<td>Participation in Selection of AT</td>
<td>Yes</td>
<td>113(41.85)</td>
<td>31(24.80)</td>
<td>p=.84</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>157(58.14)</td>
<td>74(59.20)</td>
<td></td>
</tr>
<tr>
<td>Frequency of AT usage</td>
<td>Always</td>
<td>243(90.00)</td>
<td>66(52.80)</td>
<td>p&lt;.001</td>
</tr>
<tr>
<td></td>
<td>Not always</td>
<td>27(10.00)</td>
<td>59(47.20)</td>
<td></td>
</tr>
<tr>
<td>Changing of AT</td>
<td>Not changed</td>
<td>90 (33.33)</td>
<td>68 (54.40)</td>
<td>p&lt;.001</td>
</tr>
<tr>
<td></td>
<td>Changed</td>
<td>180(66.66)</td>
<td>54(43.20)</td>
<td></td>
</tr>
<tr>
<td>Frequency of AT repair</td>
<td>Once every month</td>
<td>106(39.25)</td>
<td>53(42.40)</td>
<td>p&lt;.001</td>
</tr>
<tr>
<td></td>
<td>Once every two month</td>
<td>125(46.29)</td>
<td>35(28.00)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not repaired</td>
<td>39(14.44)</td>
<td>34(27.20)</td>
<td></td>
</tr>
<tr>
<td>Funding source for AT</td>
<td>Donated</td>
<td>203(75.18)</td>
<td>103(82.40)</td>
<td>p=.1</td>
</tr>
<tr>
<td></td>
<td>Self – financed</td>
<td>67(24.81)</td>
<td>22(17.60)</td>
<td></td>
</tr>
<tr>
<td>AT prescribing &amp; fitting source</td>
<td>Professionals</td>
<td>124(45.92)</td>
<td>88(70.40)</td>
<td>p&lt;.001</td>
</tr>
<tr>
<td></td>
<td>Non-professionals</td>
<td>146(54.07)</td>
<td>37(29.60)</td>
<td></td>
</tr>
<tr>
<td>Availability of AT maintenance facility</td>
<td>Yes</td>
<td>126(46.66)</td>
<td>20(16.00)</td>
<td>p&lt;.001</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>144(53.33)</td>
<td>105(84.00)</td>
<td></td>
</tr>
<tr>
<td>Waiting period for AT</td>
<td>Received immediately</td>
<td>76(28.14)</td>
<td>57(45.60)</td>
<td>p&lt;.001</td>
</tr>
<tr>
<td></td>
<td>Received later</td>
<td>192(71.11)</td>
<td>67(53.60)</td>
<td></td>
</tr>
<tr>
<td>Prior experience with AT</td>
<td>Yes</td>
<td>2(0.74)</td>
<td>3(2.40)</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>266(98.51)</td>
<td>122(97.60)</td>
<td></td>
</tr>
</tbody>
</table>

Table 4.62 indicated that the device retention and rejection was significantly associated with duration of AT usage (p<.001), frequency of AT usage (p<.001), frequency of changing AT device (p<.001), frequency of AT repair (p<.001), AT prescribing & fitting source (p<.001), availability of AT maintenance facility (p<.001) and waiting period for AT (p<.001).
4.8 Predicting Device Rejection for AT Users in Group-I.

Multiple Logistic regression analysis was performed to determine the factors that predicted device rejection. The dependent variable was a binary variable with rejection coded as 1 and retained coded as 0 in the regression analysis. The predictor variables included in the model were those with univariate at p<0.1. Odds Ratio (ORs) and their 95% confidence intervals (95% CI) were calculated.

The predictor variables included in the model were age of subject, type of facility, availability of social support, work status, living status, diagnosis, duration of locomotor problem, frequency of AT repair, funding source for AT, frequency of AT changing, AT prescribing & fitting source, availability of AT maintenance, duration of AT use, frequency of AT use and waiting period. The level of significance was set at p<0.05.
Table 4.63

Multiple logistic regression coefficients for prediction of AT rejection.

<table>
<thead>
<tr>
<th>Predictor Variable</th>
<th>Adjusted Odds Ratio (OR)</th>
<th>95% Confidence Interval for ORs</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of subject</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;20 (reference)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-50</td>
<td>.90</td>
<td>.40</td>
<td>2.04</td>
</tr>
<tr>
<td>≥ 50</td>
<td>.53</td>
<td>.11</td>
<td>2.54</td>
</tr>
<tr>
<td>Type of Facility</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential (reference)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-residential</td>
<td>1.62</td>
<td>.66</td>
<td>3.96</td>
</tr>
<tr>
<td>Availability of Social Support</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes (reference)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>2.82</td>
<td>1.24</td>
<td>6.42</td>
</tr>
<tr>
<td>Work Status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job in open market (reference)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Institutional Set-up</td>
<td>1.69</td>
<td>.78</td>
<td>3.63</td>
</tr>
<tr>
<td>Unemployed</td>
<td>.15</td>
<td>.03</td>
<td>.63</td>
</tr>
<tr>
<td>Living Status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With family (reference)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential facility</td>
<td>.74</td>
<td>.30</td>
<td>1.81</td>
</tr>
<tr>
<td>Diagnosis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polio (reference)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spinal Cord Injury</td>
<td>.55</td>
<td>.19</td>
<td>1.58</td>
</tr>
<tr>
<td>Amputation</td>
<td>.16</td>
<td>.04</td>
<td>.54</td>
</tr>
<tr>
<td>Others</td>
<td>.27</td>
<td>.09</td>
<td>.78</td>
</tr>
<tr>
<td>Duration of Locomotor Problem</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less or equal to 25 years (Reference)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26–35</td>
<td>2.16</td>
<td>.97</td>
<td>4.79</td>
</tr>
<tr>
<td>&gt;35</td>
<td>27.15</td>
<td>5.06</td>
<td>145.73</td>
</tr>
<tr>
<td>Frequency of AT repair</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>repair every month (Reference)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>repair every two months or less</td>
<td>.34</td>
<td>.16</td>
<td>.72</td>
</tr>
<tr>
<td>Not repaired</td>
<td>.46</td>
<td>.16</td>
<td>1.27</td>
</tr>
<tr>
<td>Funding source for AT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Donated (Reference)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self – financed</td>
<td>2.26</td>
<td>.93</td>
<td>5.51</td>
</tr>
<tr>
<td>Changing of AT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not changed (reference)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Changed</td>
<td>.77</td>
<td>.25</td>
<td>2.36</td>
</tr>
<tr>
<td>AT prescribing &amp; fitting source</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professionals (Reference)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-professionals</td>
<td>.28</td>
<td>.14</td>
<td>.55</td>
</tr>
<tr>
<td>Availability of AT maintenance facility</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes (Reference)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>3.62</td>
<td>1.81</td>
<td>7.20</td>
</tr>
<tr>
<td>Duration of AT use</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;5 years (reference)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;5 years or equal</td>
<td>.28</td>
<td>.13</td>
<td>.58</td>
</tr>
<tr>
<td>Frequency of AT use</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Always (Reference)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not always</td>
<td>4.76</td>
<td>2.19</td>
<td>10.35</td>
</tr>
<tr>
<td>Waiting period</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Received immediately (Reference)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Later</td>
<td>.84</td>
<td>.29</td>
<td>2.41</td>
</tr>
</tbody>
</table>
From the Table 4.63, it was seen that the non-availability of social support was found to be a significant predictor for the rejection of AT devices, the adjusted OR of device rejection was 2.82 (95% CI 1.24- 6.42; p=.01) relative to reference of those who received social support.

The unemployment category of job status was found to be a significant predictor for the rejection of AT devices, although the adjusted OR of device rejection was lower at 0.15 (95% CI 0.03- 0.63; p=.01) relative to those engaged in the open market. Subjects with amputation as the diagnosis was found to be a significant predictor for the rejection of AT devices, although the adjusted OR of device rejection was lower at 0.16 (95% CI 0.04- 0.54; p=.003) relative to those diagnosed with polio.

The duration of locomotor disability was found to be a significant predictor for the rejection of AT devices, the adjusted OR of device rejection for subjects with locomotor disability for a duration of 26-35 years was 2.16 (95% CI 0.97- 4.79; p=.05) and for those with locomotor disability for a duration of > 35 years was 27.15 (95% CI 5.06- 145.73; p<.001) in reference to those who had duration of <25 years.

The frequency of AT repair with repairing once every two months or even less was found to be a significant predictor for the rejection of AT devices, although the adjusted OR of device rejection was lower at 0.34 (95% CI 0.16- 0.72; p=.005) in reference to those that were repaired once every month or even more.

The funding source for AT with self-financed devices was found to be a weak significant predictor for the rejection of AT devices, the adjusted OR of device rejection was 2.26 (95% CI 0.93- 5.51; p=.07) in reference to devices that were procured through charitable means.

The AT prescribing and fitting source with device those were presumably prescribed by non-professionals was found to be a significant predictor for the rejection of AT devices, although the adjusted OR of device rejection was lower at 0.28 (95% CI 0.14- 0.55; p<.001) in reference to those that were presumably prescribed by professionals.
The non-availability of AT maintenance facility was found to be a significant predictor for the rejection of AT devices, the adjusted OR of device rejection was at 3.62 (95% CI 1.81-7.20; p<.001) in reference to those devices that had access to maintenance facility.

The duration of AT use with devices been used for ≥ 5 years was found to be a significant predictor for the rejection of AT devices, the adjusted OR of device rejection was lower at 0.28 (95% CI 0.13-0.58; p=.001) in reference to those devices that have been used for <5 years.

The frequency of AT usage with devices not been used in a day was found to be a significant predictor for the rejection of AT devices, the adjusted OR of device rejection was at 4.76 (95% CI 2.19-10.35; p<.001) in reference to those devices that were used always.

However, the other variables - age of subject, type of organization, living status, changing of AT devices, waiting period were not significant predictor for device retention.

4.9 Summary

The analysis of the data thus collected would give us lead into the complex physical and psychosocial interaction with the prevalent assistive devices and the population of locomotor disability in Indian society.

Overall rejection rate: The overall rejection rate for primary devices, those were surveyed once, was found to be 19.05% and those who were surveyed twice the rejection rate was at 10.34%.

Overall psychosocial outcomes of primary retained assistive technology
Wheelchair: On the PIADS scale, the mean Competence score was 2.11(0.73), the Adaptability score was 2.12(0.84), and for Self- esteem it was 1.97(0.79) and Ladder Scale difference score was 3.88(2.27).

Tricycle: On the PIADS scale, the mean Competence score was 2.11(0.76), the Adaptability score was 2.17(0.77), the Self- esteem score was 1.93(0.87) and Ladder Scale difference score was at 3.43(2.37).
Crutch: On the PIADS scale, the mean Competence score was 2.01 (0.80), the Adaptability score was 1.92 (0.89), Self-esteem score was 1.73 (0.86) and Ladder Scale difference score was at 3.57 (1.95).

KAFO: On the PIADS scale, the mean Competence score was 1.94 (0.70), the Adaptability score was 2.04 (0.72), the Self-esteem score was 1.86 (0.72) and Ladder Scale difference score was at 2.98 (1.91).

**Group comparison and correlation of various factors for the psychosocial outcomes of various primary assistive device:**

**Wheelchair:** Age of wheelchair users, duration of locomotor problem, age of onset of locomotor problem, improvement in functional status and duration of AT usage was significantly correlated with all the PIADS subscales and life satisfaction scores.

Significantly high positive impact on the PIADS subscales and significant improvement in life satisfaction was observed for male wheelchair users, wheelchair users using services within residential facility, those who reported of relocating themselves for availing better rehabilitative facility, those reporting of actively engaged in some kind of meaningful job, and those who reported of staying by themselves and away from their family.

Significantly high positive impact on the PIADS subscales and improvement in life satisfaction on Ladder scale was observed for wheelchair users with spinal cord injury, and wheelchair users who had bladder and bowel affected, those using their wheelchairs always, those wheelchairs that underwent change at least once, devices that have undergone regular repairs, wheelchairs those had access to adequate maintenance facility, wheelchairs that had a window period between the prescription and receipt of the device.

**Tricycle:** Improvement in functional status significantly correlated with Adaptability and Self-esteem subscales and age of onset of locomotor problem was significantly correlated with life satisfaction scores. Significantly high positive impact on the PIADS subscales and improvement in life satisfaction on Ladder scale was observed for tricycle users using services within mixed type of facility, those diagnosed with polio, those who had no bladder
bowel affection, those using their tricycle frequently, and those tricycles that underwent change at least once.

**Crutches:** Age of onset of locomotor problem for crutch users, and duration of locomotor problem was significantly correlated with all the PIADS subscales and life satisfaction scores. And the improvement in functional status was significantly correlated with life satisfaction scores. Significantly high positive impact on the PIADS subscales and improvement in life satisfaction on Ladder scale was also observed for crutch users with spinal cord injury, and those with both lower limb affected, crutches that underwent change at least once, and for crutches where users had prior experience to device usage.

**KAFO:** Age of onset of locomotor problem, duration of locomotor problem and duration of AT usage for KAFO users was positive and significantly correlated with all the PIADS subscales and life satisfaction scores. Significantly high positive impact on the PIADS subscales and improvement in life satisfaction on Ladder scale was also observed for those using KAFO always as compared to those who were not using it always, KAFO that underwent change at least once as compared to those that never underwent a change, KAFO’s that have undergone repairs as compared to those that had no repairs, and for KAFO’s where users had prior experience to device usage.

**Predicting factors for psychosocial outcomes:** Multiple linear regression analysis was used to establish the predictors on the higher influence on psychosocial outcomes.

**Wheelchair:** The stronger predictors for higher positive impact on Competence subscale of PIADS by wheelchair users were availability of maintenance facility and socioeconomic status-lower middle class; on Adaptability subscale were frequency of AT usage, availability of maintenance facility and participation in selection of AT device; and on Self-esteem were frequency of AT usage and socioeconomic status-lower middle class. The stronger predictors for life satisfaction were frequency of AT usage and availability of maintenance facility.

**Tricycle:** The stronger predictors for higher positive impact on Competence subscale by tricycle users were socioeconomic status and type of organization; on Adaptability subscale
was age of onset of locomotor problem; and on Self-esteem was type of organization. The strong predictor for life satisfaction by tricycle users was age of onset of locomotor problem.

**Crutches:** The stronger predictors for higher positive impact on Competence subscale by crutch users were past experience of AT usage, frequency of AT usage and age of onset of locomotor problems; and on Adaptability subscale were participation of selection of AT, age of onset of locomotor problem, availability of AT maintenance, frequency of AT use, frequency of AT repair - once every two month; and on Self-esteem subscale were past experience of AT usage, availability of AT training, frequency of AT repair - once every two month, extent of involvement - limb affectation. The stronger predictors for life satisfaction by crutch users were frequency of AT usage and extent of involvement - limb affected.

**KAFO:** The stronger predictors for higher positive impact on Competence subscale by KAFO users were duration of locomotor problem, past experience of AT usage, education status; on Adaptability subscale were age of onset of locomotor problem and prescribing agent; and on Self-esteem were past experience of AT usage, and duration of locomotor problem. The stronger predictors for life satisfaction by crutch users were age of KAFO user and participation of the selection of AT.

**Comparison of psychosocial outcomes for the overall retained and rejected devices:** Retained devices created significantly high positive impact in all three domains of PIADS as compared to the discarded devices, as well as the life satisfaction score with retained devices on Ladder Scale as compared to the rejected devices.

**Comparison of pre and post psychosocial outcomes:** There was no significant difference observed between the pre and post PIADS score of retained primary devices and life satisfaction score on Ladder Scale. But for the rejected devices, there was statistically significant difference observed between the pre and post PIADS score and life satisfaction score on Ladder Scale.

**Factors predicting device rejection:** Multiple logistic regression analysis demonstrated that an odd of rejection of device was higher for users with non-availability of social support, the non-availability of AT maintenance facility, and devices not used always.