## **Pattern Matrix**

|   |   | Component |       |       |      |      |      |      |
|---|---|-----------|-------|-------|------|------|------|------|
| Total duration of walking,870,870,870Climbing of stairs,870,870Total duration of stading,797Duration of continuous standing,780Climbing,719Prolonged activities in a kneeling or squatting posture,685Kneeling or squatting,593-,322,914Handling objects like keys,914Handling objects like pens,888Handling objects like balls,876Frequent bandling of the arm,645Lifting and carrying,410Frequent handling of light objects,410Frequent handling of heavy loads,341Prolonged activities above the shoulder height,518Pushing and pulling,405Ouration of ontinuous sitting,405Changing posture,653Repetitive movements of hands and fingers,45Squeezing and gripping strength,405Total duration of working with keyboard and mouse,334Total duration of working with hand and arm,387Total duration of working with hand and arm,387Total duration of working with hand and arm,387Total duration of working with hand and arm,459Head movements,465Changing noes head in a fixed position for some time,464Lituring,455Lituring,464   |   | 1         | 2     | 3     | 4    | 5    | 6    | 7    |
| Climbing of stairs,870,870,470Total duration of standing,797,780Duration of continuous standing,780,780Climbing,719,885Rheeling or squatting posture,685Kneeling or squatting,370,331Handling objects like keys,914Handling objects like pens,905Handling objects like balls,883Handling objects like balls,876Frequent handling of light objects,883Frequent handling of light objects,410Frequent handling of light objects,518Prolonged activities above the shoulder height,405Pushing and pulling,405Total duration of sitting,405Total duration of sitting,405Total duration of working with keyboard and mouse,334Squeezing and gripping strength,642Total duration of working with keyboard and mouse,334Squeezing and gripping strength,465Operate a keyboard and handle a mouse,465Head movernents of hands and fingers,465Operate a keyboard and handle a mouse,465Head movernents,465Operate a keyboard and handle a mouse,464Head movernents,4   | Duration of continuous walking                          | ,882      |       |       |      |      |      |      |
| Total duration of standing.797  | Total duration of walking                               | ,870      |       |       |      |      |      |      |
| Duration of continuous standing.780   | Climbing of stairs                                      | ,870      |       |       |      |      |      |      |
| Climbing,719,719,719,722,732,732Prolonged activities in a kneeling or squatting posture,685,593,322,,,Kneeling or squatting,593,370,331,,,,Handling objects like keys,914,914,905,,,,,Handling objects like tweezers,888,888,,,,,,,,Handling objects like balls,876,883,,<  | Total duration of standing                              | ,797      |       |       |      |      |      |      |
| Prolonged activities in a kneeling or squatting posture685322IIKneeling or squatting.593322.331IIFrequent bending.370.331.311IIHandling objects like keys.914.905.914IIHandling objects like keys.888.888IIIHandling objects like tweezers.883.883IIIHandling objects like balls.876.552IIIFrequent stretching of the arm.645.569IIILifting and carrying.410.582.569IIIFrequent stretching of heavy loads.341.530.506IIIProlonged activities above the shoulder height.405.506.744IIDuration of sitting.405.506.744IIIDuration of of sitting.405.506.563IIIIPrecision movements of hands and fingers.415.434.575III </td <td>Duration of continuous standing</td> <td>,780</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>   | Duration of continuous standing                         | ,780      |       |       |      |      |      |      |
| Kneeling or squatting5.91322  | Climbing  | ,719      |       |       |      |      |      |      |
| Frequent bending,370,331,331,331Handling objects like keys,914,914,914Handling objects like pens,905,905Handling objects like tweezers,888,888Handling objects like balls,876,410Frequent stretching of the arm,645,410Lifting and carrying,410,582Frequent stretching of the arm,645,410Lifting and carrying,410,582Frequent stretching of heavy loads,341,530Prolonged activities above the shoulder height,518,405Pushing and pulling,405,506Total duration of sitting,405,506Duration of continuous sitting,405,506Repetitive movements of hands and fingers,717Squeezing and gripping strength,633,575Twisting movements with hand and arm,334,575Touch,465,465,465Operate a keyboard and handle a mouse,459,487Head movements,489,483,483TurningTurning   | Prolonged activities in a kneeling or squatting posture | ,685      |       |       |      |      |      |      |
| Handling objects like keys, 914, 914, 914, 1<   | Kneeling or squatting                                   | ,593      |       | -,322 |      |      |      |      |
| Handling objects like pens9.9059.9059.888Handling cylindrical shapes.888.888Handling objects like tweezers.883Handling objects like ballsFrequent stretching of the armLifting and carrying.410Frequent handling of light objectsFrequent handling of heavy loads.341   | Frequent bending  | ,370      |       | ,331  |      |      |      |      |
| Handling cylindrical shapes   | Handling objects like keys                              |           | ,914  |       |      |      |      |      |
| Handling objects like tweezers,883IIIIHandling objects like balls,876,876,645,645Frequent stretching of the arm,645,645,645Lifting and carrying,410,582,645Frequent handling of light objects,569,569Frequent handling of heavy loads,341,530,569Prolonged activities above the shoulder height,405,506,Pushing and pulling,405,506,,Total duration of sitting,405,506,,Duration of continuous sitting,405,653,,Repetitive movements of hands and fingers,405,653,,Precision movements of hands and fingers,334,575,,Squeezing and gripping strength,405,334,575,,Total duration of working with keyboard and mouse,337,522,,Touch,465,465,,465,,Operate a keyboard and handle a mouse,459,465,,883,Head movements,464,465,465,,883,Turning,100,500,465,,,644   | Handling objects like pens                              |           | ,905  |       |      |      |      |      |
| Handling objects like balls,876IIIFrequent stretching of the arm,645,645,645Lifting and carrying,410,582,645Frequent handling of light objects,569,669Frequent handling of heavy loads,341,530,Prolonged activities above the shoulder height,518,Pushing and pulling,405,506,Total duration of sitting,405,506,Duration of continuous sitting,405,563,Repetitive movements of hands and fingers,,747,Squeezing and gripping strength,,334,575Twisting movements with hand and arm,337,522,Touch,465,465,465,Operate a keyboard and handle a mouse,459,459,Head movements,681 in a fixed position for some time,,459,883Turning,,,459,883,644   | Handling cylindrical shapes                             |           | ,888, |       |      |      |      |      |
| Frequent stretching of the arm,410,645IIILifting and carrying,410,582IIIIFrequent handling of light objects,569.569IIIIFrequent handling of heavy loads,341,530IIIIIProlonged activities above the shoulder height.518III   | Handling objects like tweezers                          |           | ,883  |       |      |      |      |      |
| Lifting and carrying,410,582IIIFrequent handling of light objects,569,569Frequent handling of heavy loads,341,530Prolonged activities above the shoulder height,405,506   | Handling objects like balls                             |           | ,876  |       |      |      |      |      |
| Frequent handling of light objects,569,569,569Frequent handling of heavy loads,341,530,506Prolonged activities above the shoulder height,518,518,518Pushing and pulling,405,506,747,518Total duration of sitting,405,506,744,518Duration of continuous sitting,744,553,744,553Changing posture,653,744,653,715Repetitive movements of hands and fingers,334,575,692Total duration of working with keyboard and mouse,334,575,522Touch,465,465,465,459Operate a keyboard and handle a mouse,459,459,883Head movements,692,459,883,883Turning   | Frequent stretching of the arm                          |           |       | ,645  |      |      |      |      |
| Frequent handling of heavy loads,341,530IIIProlonged activities above the shoulder height,518,518IIIIPushing and pulling,405,506II  | Lifting and carrying                                    | ,410      |       | ,582  |      |      |      |      |
| Prolonged activities above the shoulder height,405,518IIIIPushing and pulling,405,506III  | Frequent handling of light objects                      |           |       | ,569  |      |      |      |      |
| Pushing and pulling,405,506IIIITotal duration of sittingII </td <td>Frequent handling of heavy loads</td> <td>,341</td> <td></td> <td>,530</td> <td></td> <td></td> <td></td> <td></td>   | Frequent handling of heavy loads                        | ,341      |       | ,530  |      |      |      |      |
| Total duration of sitting,747,,,Duration of continuous sitting,744,744,,Changing posture,653,653,,,Repetitive movements of hands and fingers,,,813,,Precision movements of hands and fingers,,,,692,,Squeezing and gripping strength,,,,692,,,Total duration of working with keyboard and mouse,334,575,,,,,Touch,387,522,,465,, <td< td=""><td>Prolonged activities above the shoulder height</td><td></td><td></td><td>,518</td><td></td><td></td><td></td><td></td></td<>  | Prolonged activities above the shoulder height          |           |       | ,518  |      |      |      |      |
| Duration of continuous sitting,744,653Changing posture,653,813Repetitive movements of hands and fingers,715Precision movements of hands and fingers,715Squeezing and gripping strength,334Total duration of working with keyboard and mouse,334Twisting movements with hand and arm,387Touch,465Operate a keyboard and handle a mouse,459Head movements,883Keeping one's head in a fixed position for some time,883Turning,644  | Pushing and pulling                                     | ,405      |       | ,506  |      |      |      |      |
| Changing posture,653,14Repetitive movements of hands and fingers,813,813Precision movements of hands and fingers,715,692Squeezing and gripping strength,334,675Total duration of working with keyboard and mouse,334,575Twisting movements with hand and arm,387,522Touch,465,465Operate a keyboard and handle a mouse,465,887Head movements,883,883Keeping one's head in a fixed position for some time,883,644  | Total duration of sitting                               |           |       |       | ,747 |      |      |      |
| Repetitive movements of hands and fingers,813,813Precision movements of hands and fingers,715Squeezing and gripping strength,692Total duration of working with keyboard and mouse,334Twisting movements with hand and arm,387Touch,465Operate a keyboard and handle a mouse,459Head movements,883Keeping one's head in a fixed position for some time,883Turning  | Duration of continuous sitting                          |           |       |       | ,744 |      |      |      |
| Precision movements of hands and fingersImage: space of the space of th | Changing posture  |           |       |       | ,653 |      |      |      |
| Squeezing and gripping strength,692,692Total duration of working with keyboard and mouse,334,575Twisting movements with hand and arm,387,522Touch,465,465Operate a keyboard and handle a mouse,459,887Head movements,881,883Keeping one's head in a fixed position for some time,883,644Turning,644,644   | Repetitive movements of hands and fingers               |           |       |       |      | ,813 |      |      |
| Total duration of working with keyboard and mouse,334,575Twisting movements with hand and arm,387,522TouchOperate a keyboard and handle a mouseHead movementsKeeping one's head in a fixed position for some timeTurning  | Precision movements of hands and fingers                |           |       |       |      | ,715 |      |      |
| Twisting movements with hand and arm,387,522.TouchOperate a keyboard and handle a mouseHead movementsKeeping one's head in a fixed position for some timeTurning  | Squeezing and gripping strength                         |           |       |       |      | ,692 |      |      |
| Touch,465Operate a keyboard and handle a mouse,459Head movements,887Keeping one's head in a fixed position for some time,883Turning   | Total duration of working with keyboard and mouse       |           |       | ,334  |      | ,575 |      |      |
| Operate a keyboard and handle a mouse,459Head movements,887Keeping one's head in a fixed position for some time,883Turning,644  | Twisting movements with hand and arm                    |           |       | ,387  |      | ,522 |      |      |
| Head movements ,887   Keeping one's head in a fixed position for some time ,883   Turning ,644  | Touch   |           |       |       |      | ,465 |      |      |
| Keeping one's head in a fixed position for some time ,883   Turning ,644  | Operate a keyboard and handle a mouse                   |           |       |       |      | ,459 |      |      |
| Turning ,644  | Head movements  |           |       |       |      |      | ,887 |      |
|   | Keeping one's head in a fixed position for some time    |           |       |       |      |      | ,883 |      |
|   | Turning   |           |       |       |      |      |      | ,644 |
| Bending ,576  | Bending   |           |       |       |      |      |      | ,576 |
| Stretching of the arm ,513  | Stretching of the arm                                   |           |       |       |      |      |      | ,513 |
| Prolonged activities in a bended or turned posture ,450   | Prolonged activities in a bended or turned posture      |           |       |       |      |      |      | ,450 |

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

KMO: 0.930; MSA > 0.769

Cumulative percentage of variance explained (seven factors): 64.6%