Sudan University of Science And Technology
College of Engineering
Biomedical Engineering Department

Lower Limbs Prosthetics Evaluation In Sudan
Submitted in partial fulfillment of the requirement of B.sc (honor) degree in Biomedical engineering

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Contents:

Contents.......................................................................................................................... I
Acknowledgment................................................................................................................ III
List of figures...................................................................................................................... VII
List of tables........................................................................................................................ X
Abbreviations...................................................................................................................... XI
Abstract.............................................................................................................................. XII
........................................................................................................................................ XIII
Chapter one: introduction................................................................................................. 1
1.1 General review............................................................................................................. 2
1.2 Problems statement..................................................................................................... 2
1.3 Solutions....................................................................................................................... 2
1.4 objectives..................................................................................................................... 3
   1.4.1 General objectives............................................................................................... 3
   1.4.2 Specific objectives.............................................................................................. 3
1.5 Thesis layout............................................................................................................... 3
Chapter two: theoretical fundamental............................................................................. 4
   2.1 Anatomy of lower limb......................................................................................... 5
   2.1.1 Femur................................................................................................................. 5
   2.1.2 Tibia.................................................................................................................. 6
   2.1.3 Fibula............................................................................................................... 7
   2.1.4 Foot.................................................................................................................. 8
   2.2 Definition of amputation....................................................................................... 9
2.3 Types of Lower limb Amputation............................................................................ 9
   2.3.1 Toe Amputation............................................................................................... 9
2.3.2 Transphalangeal Amputation ................................................. 9
2.3.3 Transmetatarsal Amputation ............................................. 9
2.3.4 Lisfranc Amputation ....................................................... 9
2.3.5 Chopart Amputation ....................................................... 9
2.3.6 Syme Amputation .......................................................... 9
2.3.7 Transtubial Amputation ................................................... 11
2.3.8 Knee Disarticulation ....................................................... 11
2.3.9 Supracondylar Amputation ............................................. 11
2.3.10 Transfemoral Amputation ............................................. 11
2.3.11 Hip Disarticulation ....................................................... 11
2.3.12 Hemipelvectomy ......................................................... 11
2.4 Types of prosthetic devices ............................................... 13
2.4 Types of prosthetic limbs in term o ..................................... 13
   2.4.1 The injury and its location in the body ......................... 13
   2.4.2 The period of time for use ........................................ 13
   2.4.3 The function .............................................................. 13
CHAPTER THREE: Background study ......................................... 15
CHAPTER FOUR: Methodology ................................................ 18
4.1 Data collection from visiting to specialist centers ............... 18
   4.1.1 Alamal center ......................................................... 18
      4.1.1.1 Administrative building ..................................... 18
      4.1.1.2 Hospital Accident ............................................ 18
      4.1.1.3 The Department of Physical Therapy ...................... 18
4.1.1.4 Prosthetics factory ......................................................... 21
4.1.1.5 The vocational training center ......................................... 25
4.1.1.6 Disabled housing .......................................................... 26
4.1.1.7 Housing administrative ................................................... 26
4.1.1.8 Aljmneziom ................................................................. 26
4.1.1.9 Mosque ..................................................................... 26
4.1.1.10 Club ...................................................................... 32
4.1.1.11 Commercial center and services ..................................... 32
4.1.1.12 Healthy youth sports ..................................................... 32
4.1.2 National Association of Prosthetics and orthotics ............... 38
4.1.3 Aotad prosthetics and orthotics ......................................... 42
4.1.3.1 Unit Affairs patients ..................................................... 42
4.1.3.2 Specialized clinics ........................................................ 42
4.1.3.3 Workshop for the manufacture of artificial limbs .......... 42
4.2 The following questionnaire was distributed to a group of patients..... 47
4.2.1 The questionnaire: .............................................................. 47
4.2.2 Result of questionnaire ....................................................... 48
4.2.2.1 Demographics of patients .............................................. 48
4.2.2.2 Kind of injury by demographics ..................................... 50
4.2.2.3 Amputee Hospitalization ............................................... 51
4.2.2.4 Cause of Injury ............................................................ 52
4.2.2.4.1 War Wounded ......................................................... 52
4.2.2.4.2 Traumatic ............................................................... 54
4.2.2.4.3 Congenital ............................................................... 56
4.2.2.4.4 Diseases of Affection…………………………………… 57
4.2.2.4.5 Amputee Date & State of Injury ……………… 59
4.2.2.4.6 Amputee Lower ……………………………………… 60
4.2.2.4.6 Amputee Services…………………………………… 61
CHAPTER FIVE :Discussion ……………………………………… 62
CHAPTER SIX: Recommendation……………………………… 64
CHAPTER SEVEN :References and Supplement…………………… 66
References…………………………………………………………………………… 67
**List of Figures**

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Anatomy of femur</td>
<td>5</td>
</tr>
<tr>
<td>2.2</td>
<td>Anatomy of tibia</td>
<td>6</td>
</tr>
<tr>
<td>2.3</td>
<td>Anatomy of fibula</td>
<td>7</td>
</tr>
<tr>
<td>2.4</td>
<td>Anatomy of foot</td>
<td>8</td>
</tr>
<tr>
<td>2.5</td>
<td>Foot amputation</td>
<td>10</td>
</tr>
<tr>
<td>2.6</td>
<td>Leg amputation</td>
<td>12</td>
</tr>
<tr>
<td>4.1</td>
<td>This device is used to heat the paraffin used in the thermal treatment</td>
<td>19</td>
</tr>
<tr>
<td>4.2</td>
<td>Used to treat with heat</td>
<td>19</td>
</tr>
<tr>
<td>4.3</td>
<td>Used for radiotherapy</td>
<td>20</td>
</tr>
<tr>
<td>4.4</td>
<td>a, b: this device uses the microwave for the rehabilitation of muscle</td>
<td>20</td>
</tr>
<tr>
<td>4.5</td>
<td>Room to take the sizes of the patient for prosthesis</td>
<td>21</td>
</tr>
<tr>
<td>4.7</td>
<td>The second step fill the size of plaster</td>
<td>21</td>
</tr>
<tr>
<td>4.8</td>
<td>Slabs of propylene</td>
<td>22</td>
</tr>
<tr>
<td>4.9</td>
<td>PP small piece for formation</td>
<td>22</td>
</tr>
<tr>
<td>4.10</td>
<td>Board of propylene after the formation</td>
<td>23</td>
</tr>
<tr>
<td>4.11</td>
<td>Machine to remove the appendages</td>
<td>23</td>
</tr>
<tr>
<td>4.12</td>
<td>Prosthesis in final form</td>
<td>24</td>
</tr>
<tr>
<td>4.13</td>
<td>Hall of training after wearing the prosthesis</td>
<td>25</td>
</tr>
<tr>
<td>4.14</td>
<td>Swimming Pool</td>
<td>26</td>
</tr>
<tr>
<td>4.15</td>
<td>Machine training the patient after wearing the prosthesis with a certain weights</td>
<td>27</td>
</tr>
<tr>
<td>4.16</td>
<td>Training the patient with artificial limb to climb the ladder</td>
<td>28</td>
</tr>
<tr>
<td>4.17</td>
<td>Wheel to train the patient to move the artificial limb</td>
<td>29</td>
</tr>
</tbody>
</table>
Figure 4.18: Device to train the patient to balance the pressure
Figure 4.19: Machine to train patients to move quickly with artificial limb
Figure 4.20: Hall to train disabled children
Figure 4.21: Machine to train handicapped children to climb and descend
Figure 4.22: Machine to train disabled children to stand
Figure 4.23: Machine to train handicapped children at certain weights
Figure 4.24: Patient wearing an artificial limb and trained to walk
Figure 4.25: Oven for melting propylene
Figure 4.26: Stage of the formation of artificial limb
Figure 4.27: Collection phase full artificial limb
Figure 4.28: Patient wearing a artificial limb
Figure 4.29 - a, b: artificial limb in final form in different colors
Figure 4.30: Machine integrated sports
Figure 4.31: Parts Store
Figure 4.32: Store of raw materials
Figure 4.33: The demographics of the patients in terms of gender
Figure 4.34: demographics of the patient in Sudan state
Figure 4.35: Average age of patients
Figure 4.36: Date and type of injury demographics
Figure 4.37: The demographics of the patients in terms of gender & type of injury
Figure 4.38: Amputee Hospitalization demographics
Figure 4.39: Amputee Hospitalization in/out Sudan
Figure 4.40: Cause of Injury demographics
Figure 4.41: War Wounded demographics
Figure 4.42: War Wounded in terms of gender ........................................ 53
Figure 4.43: War Wounded in terms of Hospitalization .......................... 54
Figure 4.44: Traumatic demographics .................................................. 54
Figure 4.45: Traumatic in terms of gender .......................................... 55
Figure 4.46: Traumatic in terms of Hospitalization ............................... 55
Figure 4.47: Congenital demographics ............................................... 56
Figure 4.48: Congenital in terms of gender ......................................... 56
Figure 4.49: Diseases of Affection demographics ................................. 57
Figure 4.50: Diseases of Affection in terms of gender ......................... 57
Figure 4.51: Diseases of Affection in terms of Hospitalization ............. 58
Figure 4.52: Amputee Date demographics ........................................... 59
Figure 4.53: State of Injury demographics ........................................... 59
Figure 4.54: Amputee Lower demographics ....................................... 60
Figure 4.55: Amputee Services demographics .................................... 61
List of Tables

Table 4.1: number of patient & Cause of disability on 2009 .................. 33
Table 4.2: Admittance to department of prosthetics ............................ 34
Table 4.3: number of patient & Cause of disability on 2010 ................. 34
Table 4.4: Admittance to department of prosthetics ............................ 35
Table 4.5: number of patient & Cause of disability on 2011 ................. 35
Table 4.6: number of patient & Cause of disability on 2012 ................. 36
Table 4.7: number of patient & Cause of disability on 2013 ................. 37
Table 4.8: number of patients & type of amputation .......................... 39
Table 4.9: number of patients & Admittance years ............................ 40
Table 4.10: number of patients & Cause of disability ......................... 40
## Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AKA</td>
<td>Above knee Amputation</td>
</tr>
<tr>
<td>BKA</td>
<td>Blow knee Amputation</td>
</tr>
<tr>
<td>TMA</td>
<td>Tran metatarsal Amputation</td>
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<tr>
<td>NAPO</td>
<td>National Association of Prosthetics and orthotics</td>
</tr>
</tbody>
</table>
Abstract

Despite the progress and technological development and technical progress and the means of modern science, but the complications of diseases and conditions of the war and traffic accidents left disabilities stretched and affected families and the surrounding community for the disabled, prompting a scientific project of integrated services to provide medical services to the Sudanese people.
المستخلص:

رغم التقدم والتطور التكنولوجي والتقني وتقدم وسائل العلم الحديث إلا أن مضاعفات الأمراض وظروف الحرب وجودات المرور خلفت اعاقات امتدت وطالت الأسر والمجتمع المجاكر المشترك مما استدعى قيام مشروع علمي متكامل لتطوير الخدمات الطبية لتقديم خدمات للشعب السوداني.
CHAPTER One
Introduction

1.1 General review

Sources mention that the actual design of the prosthetic began in 1529 when he designed one of the surgeons forward industrial to help veterans who have lost some of their limbs during the wars, but the idea of using prostheses date back to the fifth century BC, when one prisoners of war to cut off his leg in order to escape from the chains prison, and then he saw people walking, was amazed and so when considering checked and found that he used a wooden party. Industrial parties began in Sudan after the Second World War and was manufacturing workshops are competent in the mechanical maintenance of existing industrial zone of Khartoum. The manufacturing is of local materials such as wood, iron, leather etc....

These were the parties limited movement - somewhat - compared with the parties that are currently available, but it was that enables users of movement. Seem to be competent institution industry prosthetic limbs, a National Authority for the parties to engage in industrial action and so in 1964 and has been tracking the transfer of mechanical.

1.2 Problems statement:

The deterioration in the Sudan in the field of prosthetics and many individuals with disabilities do not have artificial limbs and even the disabled who have prostheses are facing problem in use and maintenance. International used high-quality materials in the manufacture of artificial limbs such as propylene, In Sudan used plastic which is not the quality of the materials used globally.

1.3 Solutions:

Must provide artificial limbs for the disabled and trained to use and provide maintenance centers.
Provide high quality materials as possible.
1.4 objectives:

1.4.1 General objectives:

1- General evaluation of Lower limbs prosthics.
2- Improve and develop the industry of artificial limbs to reach the international standards.
3- Helping the Disabled.

1.4.2 Specific objectives:

1- Link between biomedical engineering department and working in the field of prosthetics.
2- Applied science in the prosthetics.

1.5 Thesis layout:-

Chapter ONE: determine the problems that facing the individuals with disabilities in Sudan.

Chapter two: view background of anatomy, amputation levels and types of prosthics.

Chapter three: view Background study.

Chapter four: view the methods Followed in this research (visiting centers, questionnaire).

Chapter five: show the Discussion and Recommendation.

Chapter six: shown the References and Supplement.