

SATISFACTION LEVEL OF LOWER LIMB PROSTHESIS PATIENTS FOR AMBULATORY FUNCTION AT CRP IN BANGLADESH

Md. Nahidul Islam Nahid

Bachelor of Science in Physiotherapy (B.Sc. PT)

DU Roll: 180

Registration no: 5269

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BHPI, CRP, Savar, Dhaka-1343.



Bangladesh Health Professions Institute (BHPI)

Department of Physiotherapy

CRP, Savar, Dhaka-1343

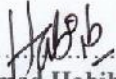
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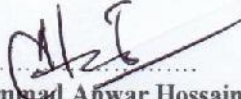
We the undersigned certify that we have carefully read and recommended to the Faculty of Medicine, University of Dhaka, for the acceptance of this dissertation entitled.

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AMBULATORY FUNCTION AT CRP IN BANGLADESH”**

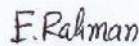
Submitted by **Md. Nahidul Islam Nahid**, for partial fulfilment of the requirements for the degree of Bachelor of Science in Physiotherapy (B.Sc. PT).



.....
Mohammad Habibur Rahman
Assistant Professor
Department of Physiotherapy
BHPI, CRP, Savar, Dhaka
Supervisor




.....
Mohammad Anwar Hossain
Associate Professor, Physiotherapy, BHPI
Head of the Department of Physiotherapy
CRP, Savar, Dhaka



.....
Ehsanur Rahman
Assistant Professor
Department of Physiotherapy
BHPI, CRP, Savar, Dhaka



.....
Md. Shofiqul Islam
Assistant Professor
Department of Physiotherapy
BHPI, CRP, Savar, Dhaka



.....
Md. Obaidul Haque
Associate Professor & Head
Department of Physiotherapy
BHPI, CRP, Savar, Dhaka

Declaration

I declare that the work presented here is my own. All sources used have been cited appropriately. Any mistakes or inaccuracies are my own. I also declare that for any publication, presentation or dissemination of information of the study. I would be bound to take written consent from the Department of Physiotherapy, Bangladesh Health Professions Institute (BHPI).

Signature: Md. Nahidul Islam Nahid Date: 04/10/2017

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Acronyms

&	And
AHA	American Health Association
AKA	Above Knee Amputation
BHPI	Bangladesh Health Professions Institute
BKA	Below Knee Amputation
BMRC	Bangladesh Medical Research Council
CRP	Centre for the Rehabilitation of the Paralysed
LCI	Loco motor Capabilities Index
LLA	Lower Limb Amputation
LLP	Lower Limb Prosthesis
P&O	Prosthetics and Orthotics
PPI	Permanent Physical Impairment
PWD	Persons With Disabilities
QCA	Qualitative Content Analysis
TTA	Trans Tibial Amputation
TFA	Trans Femoral Amputation
WHO	World Health Organization

Abstract

Purpose: To explore the satisfaction level of lower limb prosthesis patients for ambulatory function at CRP in Bangladesh. *Objectives:* To identify the satisfaction level of the lower limb prosthesis patients for ambulatory function at CRP in Bangladesh. *Methodology:* The study design was qualitative. Total 8 samples were selected conveniently for this study from the Prosthetic and Orthotic department of CRP. Data was collected by using self-structured questionnaire. Descriptive statistic was used for data analysis which focused through table, coding, theme and discussion. *Results:* Among the 8 participants 3 participants were in age group between 10-20 years, 2 were in age group between 21-30 years, 2 participants were in age group 31-40 years and 1 participants were in age group 41-50 years. In this study, 5 participants were male and 3 participants were female. Most of the participants were completed vocational training, 2 were student, 1 was job holder. And about 3 patients were lived in town about 5 patients were lived in village. Of all amputations, 7 were unilateral amputees and 1 were bilateral amputees. Further, 7 unilateral amputees, 3 were right sided and 4 were left sided amputees. In overall 6 were below knee amputation and 2 were above knee amputation. Average ambulatory function were for getting up from chair, walk in the home, walk outside on uneven ground, step up a sidewalk curb or footpath, step down a sidewalk curb or footpath, walk outside on inclement weather, get up a few steps (stairs) without a handrail, get down a few steps (stairs) without a handrail. *Conclusion:* From this study it could conclude that the level of satisfaction is defer with the age, sex, side and level of prosthesis limb use. And also defer with how type of ambulatory function and how long the device used for the patients. This study will the researcher for further study and the health professionals those are involve with treat prosthetic users.

Key words: Amputation, prosthetic limb, lower limb prosthesis, satisfaction level, ambulatory function.

1.1 Background

An amputation is the elimination of an organ or other limbs in the body. Amputation is defined as synthesis or spontaneous partial or completely removable portable or part of the processing body, which is covered by skin and is one of the most disabilities. It is a common late stage sequel of peripheral vascular disease and diabetes or a sequel of accidental trauma, civil unrest and landmines (Pooja & Sangeeta, 2013).

The functional impairments affect many facets of life including but not limited to mobility, activities of daily living, body image and sexuality. Classification, measurement and comparison of the consequences of amputations has been impeded by the limited availability of internationally, multicultural standardized instruments in the amputee setting. The incidence and prevalence of amputation is difficult to determine precisely internationally for numerous reasons including multiple pathological etiologies culminating in amputation. Various definitions of clinically significant amputation. Multiple amputations performed in the same individual on the same limb, but at sequentially more proximal levels, and underlying difficulty and incompleteness of retrospective data collection in many of the studies (Kohler et al., 2009).

The most common causes of surgical amputations are the complications caused by diabetes (diabetic foot) including a number of vascular complications in the form of ischemia and peripheral artery disease (Feinglass et al., 2012).

Trauma was the leading cause of amputation in all age groups. The common traumas reported were road traffic accidents, railway accidents, and burns due to fire, electrocution, and chemical injuries (VanWagner et al., 2012).

The next most common cause of amputation was peripheral vascular disease (27.7%). Cases of amputation for peripheral vascular disease tended to increase in parallel with age. In the group aged over 60 years, peripheral vascular disease (34.9%) was a more common cause of amputation than trauma (3.6%). Temporary damage is also manifested

by the consequences of function loss, body mass distribution, coordination disorder and psychosocial disease.

Lower limb amputation (LLA) is an ultimate surgical procedure, which has considerable consequences for function in daily life. Rehabilitation can decrease these consequences (Sharkey et al., 1993).

A lower limb prosthesis comprising in a foot, a pylon, socket, socket and pylon, an adapter in the foot and pylon, and a connector in the socket, is sufficiently rigid and thermal at room temperature around 50 degrees C and about 100 degrees C Temperature. There is also a support for the remaining residual lower limb, residual size sizes and sockets, a socket and a liner in the socket, the line is sufficiently strong room temperature and roughly 50 degree C and thick at a temperature of around 100 degree C (Kholwadwala et al., 2006).

Lower limb amputations were much more common than upper limb amputations, the former accounting for 94.8% of all amputations, and the latter for only 5.2%. Among all lower limb amputation cases, below-knee amputations were the most common, followed by above-knee amputations (Hiwot, 2016).

Amputation of limbs has saved many lives, but it is also a significant inequality source. Especially in countries of conflict history. Lower limb prosthesis occurs most frequently, especially due to the mining and road accidents. Long years after the collision, people have been injured due to the Antipersonal land mine and explosive residues (Zidarov et al., 2009).

The leading causes of amputation in different countries are influenced by the degree of industrialization, the transportation system, and the medical care available.

Traumatic amputations can be used for power and other heavy equipment, as well as electrochemical or burn. Motor vehicle collision (including motorcycles), firing from violence, and animal attack also contribute to the contagious gesture contribution. By age, according to Lento and Ephraim and Duncan, looking at the implied reasons, the paraphilic vascular disease is mainly due to the age of senior age, especially in the age of 60 years or more. These reports are consistent with this research, which shows that due to the accident, the confinement has more than the age group of older people, but in cases of

worldly disease, it is often seen in the age of 60 and older. The issues covered due to unexpected reasons were the most common among the miscreants of the other age group. This may be due to the pattern of osteopenia circumsma, an accident that mainly occurs in small years.

Lower limb amputation accounts for 94.8% of all amputations. This is similar to the figures reported by Obalum and Okeke and Lento, which stated that lower limb amputations were found more commonly than upper limb amputations. Among those lower limbs amputations, the most frequent site of amputation was trans-tibial. This may be because the distal portion of a limb is generally more likely to be injured, and surgeons tend to amputate as distally as possible to enhance functional activity. In amputation cases due to malignancy, however, trans-femoral amputation was most common. Hence, it can be concluded that lower limb amputation not only affects people's ability to walk, but may affect their participation in valued activities, their body image perception, and their quality of life, which is significantly associated with mobility. The reduced ability to walk with a prosthesis is associated with lower activities of daily living scores and a lower level of social activity. The decrease in ability to walk with a prosthesis is associated with the low activity of daily residences and a lower level social activity (Pooja & sangeeta, 2013).

Consumers, primary follow-up and subsequent TAS data are collected using standard questions with client history, initial number of social-demographic variables and a technical post-graduate assessment. After the brachialization, the technical evaluation examines the various aspects of the clinical analysis of the clinic and the quality of the product and the 'fit' of 'Prosthesis'. The latter was a mixture of urine length, comparison of process, socket fit, and tear (tires) of various parts of the process compared to one of the remaining sockets and residual parts. Suspension strap / belt, socket lining, attached, if any, and legs (Van Brakel et al., 2010).

Overall outcome in extreme settings, long-term effective results are not easy to predict accurately after the garbage below. Good functional results are related to a young age, especially the general health of cardiovascular health, less cumulitis, higher pre-communication ambulatory method, and transistible and transitive palpitations, instead of transvestial and wheelchairs and disposable friendly environment

1.2 Rationale

Lower extremity amputation is seen in clinical practice. Most of the cases have injuries caused by various disease or trauma. In recent years, disability caused by amputation has increased every year with the development of our country. Due to the improvement of clinical treatment, the survival rates of the patients will increase. This study describes the impact of lower limb amputation of different levels on patients' lives. The results indicate that level of functional performance of individual lower limb amputee patients after prosthetic rehabilitation.

There is no such relevant research has been conducted in this field yet in Bangladesh. The great majority of individuals with lower limb prosthetic have limitation in physical functioning especially problem in locomotion or mobility. So for their better future and integration in the social activity needs to give appropriate prosthetic training and rehabilitation. Fear of falling and fall during ambulation are one of the most common complain following lower limb prosthesis and may require proper prosthetic training program. Rau et al. (2007) shown that a short and intensive physiotherapy program yields positive results in terms of improving the walking speed, the intervention being the best predictor of the main outcome.

The purpose of this study was to describe the level of functional performance of prosthetic rehabilitation patient. The study helps to find out the locomotion level of lower limb amputation patients by activities measurement with prosthesis such as sit to stand, walk, stair up and down, walk outside in different environmental condition etc. In addition, this study aims at demonstrating the importance of adequate prosthetic training or rehabilitation. Finding of this study will be brought to authority concerned for future study.

1.3 Research question

What is the satisfaction level of lower limb prosthesis patients for their ambulatory function?

1.4 Objectives

1.4.1 General objective

- To identify the satisfaction level of lower limb prosthesis patients for ambulatory function at CRP in Bangladesh.

1.4.2 Specific objectives

- To identify the demographic factors of the participants;
- To identify the patient who are using lower limb prosthesis for their ambulation;
- To discuss about the independency and dependency of the patients for prosthesis using;
- To identify the participants' health satisfaction;
- To identify the mental satisfaction of the participants;
- To find out the quality of life of the participants.

1.5 Operational definition

Amputation

Amputation is the surgical removal of all or part of a limb or extremity such as an arm, leg, foot, hand, toe, or finger. There are many reasons an amputation may be necessary. The most common is poor circulation because of damage or narrowing of the arteries, called peripheral arterial disease. Without adequate blood flow, the body's cells cannot get oxygen and nutrients they need from the bloodstream.

Prosthesis

Prosthesis or prosthetic device, is an artificial device that replaces a missing body part. Prosthesis are typically used to replace parts lost by injury or missing from birth (congenital) or to supplement defective body parts.

Orthosis

Orthosis is a device applied to the body to control or enhance movement or to prevent movement or deformity.

Prosthetics

The branch of medicine or surgery that deals with the production and application of artificial body parts.

Orthotics

The science that deals with the use of specialized mechanical devices to support or supplement weakened or abnormal joints or limbs.

The age of the amputees ranged from below 20 years to above 70 years. The most common age group for amputation was 21-30 years of age, accounting for 32.0% of all amputees. The 31-40 year age group was second, accounting for 23.2% of all amputees, and the 20 years and below age group was third (14.2%) (Pooja & Sangeeta, 2013). Non ambulatory status preoperatively, having and above-knee amputation, being home bound preoperatively, dementia, being over 60 years of age, having end-stage renal failure and having a coronary artery disease may be associated with not wearing a global incidence of amputation is unknown, available data evidence considerable variation both between and within countries. The major amputation rate was 5.1 per 100 000 population and did not change over the 5 years (Moxey et al., 2010). In south-East Asia, the prevalence of disability ranges from 1.5% to 21.3% of the total population, depending on the definitive and severity of disability (Mont, 2007).

Using a standard protocol for data collection, the Global Lower Extremity Amputation Study Group assessed the incidence of lower limb amputation in ten different locations worldwide and reported marked differences among test sites in their annual rates of lower limb amputation (Yari et al., 2008). According to newest statistics in the United State of America, about 1.7 million people live with amputations and the number has increased in recent years (Mousavi et al., 2012). Comparison of all-cause amputation rates during the 1995-1997 period, revealed lowest age-adjusted rates of first major lower limb amputation in Madrid, Spain (0.5 per 100,000 women, 2.8 per 100,000 men) while highest rates were reported in the Navajo region of the United States (22.4 per 100,000 women, 43.9 per 100,000 men) (Moxey et al., 2010). In the United States it is estimated that one out of every 190 persons has lost a limb; the number of persons living with amputation in the U.S. is projected to increase over two-fold to 3.6 million by the year 2050 if current trends continue (Ziegler- Graham et al., 2008).

Some 82.9% of those with lower limb amputation in Scotland lose a limb due to peripheral vascular disease, with 38.6% of this group having amputation due to diabetes (Desmond, 2007). Another important factor is the average age of the lower limb amputee population; the Scottish amputee population is predominantly elderly with around 80% of

primary amputees over 60 and more than 20% over 80 (Verghese et al., 2008). On those attending a sub-regional English limb center, with trans-tibial amputation accounting for 50.5% and trans-femoral 49.5% of the vascular or diabetic cases (87.5% of the total amputee population) (Deans et al., 2008). These demographics give an indication of the low preoperative activity levels likely in this group, and suggest that post-operative activity levels may also be reduced (Van Eijk et al., 2012). Following on from this, found that physical mobility was the only independent factor which significantly affected quality of life in amputees as measured by the Nottingham Health Profile and when compared with their nondisabled counterparts (Chin & Toda., 2016). Based on this novel research, one can speculate that creation of pre-operative and post-operative personalized activity programs will ultimately reduce the incidence of amputation by the reduction of metabolic disorders such as diabetes (Vrieling et al., 2008).

By comparison, the evidence for superior walking ability after more distal and unilateral amputation levels is strong. This is likely to be related to the increased energy requirements to walk with above knee and bilateral prostheses (Sansam et al., 2009).

The rates of success were similar: 31% and 33% of with trans-tibial amputation (TTA) and trans-femoral amputation (TFA), respectively, achieved mobility success when seen in a comprehensive inpatient rehabilitation unit (Czerniecki et al., 2012). The importance of an intact knee joint for providing the TTA patient with the ability to return to high-level mobility activities following rehabilitation. The majority of studies reported better walking ability and greater ability to achieve ADLs after distal and unilateral amputations compared with more proximal or bilateral amputations (Obalum & Okeke, 2009).

Sujatha also stated in her study at the Government Institute of Rehabilitation Medicine, K.K. Nagar in Chennai, that the majority of patients lose their limbs due to road accidents. Amputation due to complications resulting from diabetes was ranked second. She also compared her study to work from Punjab and Andhra Pradesh and found that the results were consistent. Similar findings were seen in this study in Kolkata, where amputation caused by trauma accounted for 70.3% of all cases, while peripheral vascular disease accounted for 27.7%, making trauma the undoubted primary cause of amputation. According to the National Sample Survey Organization, the rate of second generation in

the state of West Bengal and the rate of disability among the major states of India is third (Pooja & Sangeeta, 2013).

In Calcutta, it seems that due to the rapid development of more industrial and mechanical states since 1947 and due to the increase in traffic volume and the speed of motion, the main cause of the tromodite cycle. It is similar to the discovery of lanato, which concludes that compared to the developed nations, the frequent density of frequent density of frequent frequencies of frequent amputations from diabetic countries, as well as high levels of experience.

According to this classification, 70% of a person having lower organ posture and a PPI above (except through the amputations except for Syme). When compared to the general population in the US, activities can report daily living to one or more other activities in need of assistance for another person. Therefore, it can be perfect that the lower limb body does not affect the walking ability of a walk, but valuable activities affect the quality of their body image and their quality, which are significantly involved in dynamism.

Limitations although this study was conducted in a central government agency of Kolkata, the information of all hospitals in the whole of West Bengal was not taken into consideration. Apart from this, direct analysis of the efficacy of FTIPs cannot be done because it was not beyond the scope of this research. If this is possible, their effective level after artificial training will be clear on the exact condition. Conclusion the results collected in this study, along with other Indian states, as well as similar statistics from other developing countries are found in this study. Trumpa was the main reason for isolation. Most age-aged joint-groups report retirement due to inefficiency, thereby reducing their productivity in the most active years of their lives. Their effective skills among a large proportion of the population (46.2%) are composed of younger age groups between their 20s and 30s, which can be reduced in their daily or social activities, which may increase the economic burden on the state. We hope this study will show the need to implement more stringent road and rail security in FTU in Kolkata. It is important to realize that most of the unrest caused by panic can be avoided.

Major lower extremity amputation is a common procedure that results in a profound change in a patient's life (Chalya et al., 2012). We sought to determine the association

between social support and outcomes after amputation. We hypothesized that patients with greater social support will have better post amputation outcomes (Webster et al., 2012).

Vietnam has a large number of people who have had a lower extremity amputation due to conflict, disease (e.g. leprosy) and, increasingly, road traffic accidents. This number was estimated to be 200,000 in 1996, with an annual increase of 3-4%. A very different estimate was reported in an internal briefing paper of the Special Fund for the Disabled (SFD) project. They estimated the prevalence of amputation in Vietnam to be 1 in 1,000 population, which would put the current figure at around 85,000 Prosthesis. (Van Brakel et al., 2012).

Different prevalence rates for disability are available in India. According to the Census 2001, there were 21 million people with disabilities in India, who constituted 2.13 % of the total population; the total figure includes persons with visual, hearing, speech, loco motor, and mental disabilities. Prevalence rates have shown declining trends during 1991-2002 for all disability types except loco motor disability. One of the major reasons for this might be increasing trends of amputation in India. According to the guidelines and gazette notification Issued by Ministry of Social Justice and Empowerment on June 13, 2001, Permanent Physical Impairment (PPI) for various levels of amputation is as follows: below-knee amputation, 70%; through-knee amputation, 75%; above knee amputation, 85%; below-elbow amputation, 70%; above-elbow amputation, 85%; through-hip amputation, 90%; through-shoulder amputation, 90%; and through-ankle amputation, 55% (Pooja & sangeeta, 2013).

In our current study in Calcutta, 94.8% of the amputee population consists of lower limb amputation, most common age groups are affected by their twentieth-century and 30-year-oldness Therefore, it can be concluded that the productive skills and productivity of Calcutta's most active age-era will be greatly reduced. A collaboration between the researchers of Johns Hopkins University, in collaboration with the Amputee Collation of America, is found in a study of dissociation and a feasibility study. It has been said that the participants had doubled in view of the reasons for diabetes or vascular-factors, because there was a possibility of a retirement report due to their inability to suffer from mental discomfort after the time of their unrest or unhappiness.

Classification of functional level to summarize the information given in this section, the patients were classified into seven categories Class I Ambulating with a prosthesis but without other walking aids. Class II Independent at home, ambulating with a prosthesis but requiring one Class III walking stick or crutch for outdoor activities. Class IV Independent indoors, ambulating with a prosthesis and one crutch, but requiring two crutches outdoors and occasionally a wheelchair. Class V Walking indoors with a prosthesis and two crutches or a walker, but requiring a wheelchair for outdoor activities. Class VI Walking indoors only short distances ambulating mostly with a wheelchair. Class VII Walking with aids but without a prosthesis. The classification of functional level of abbreviations in the information given in this section, the patients are classified into classes in class seven. Class II is free in the home, undergraduate in a prostate, but III sticks are not required for stick or any outside activities. Class IV ambulating with independent internal, a church and a shaft, but two crutches outside and occasionally require a wheelchair. Class V is an extension and walking internally with two crutches or a walkers, but requires a wheelchair for outdoor activities. Frequently frequent accidents with a wheelchair roaming around the class. Walk with class VII Ed but without a prosthesis.

One of the primary goals of rehabilitation following lower-limb amputation is the successful fitting of a prosthesis and use of the prosthesis to achieve functional mobility (Kahle et al., 2016).

Prostheses are adaptive and enabling entities used by a significant number of individuals worldwide. The word itself has roots in Greek, meaning ‘an addition’, from 9 ‘pros’ meaning towards and ‘tithenai’ to place (Jefferies, 2015).

A prosthesis can therefore take any shape or form in providing something that would not normally be there. In particular, this thesis is concerned with lower limb prostheses. These are used by individuals who have an absence of one or both lower limbs, and so the ‘addition’ that the prosthesis provides is for an absent of above and below knee parts.

Prosthesis is one of the earliest invention of human civilization (Ostler et al., 2014).

The prisoner found and used a wooden limb to assist him in walking. In a later discovery, researchers found a prosthetic device in Egypt which was used to replace a big toe; this prosthesis was made out of leather and carved wood. Researchers believe that it is

approximately 3000 years old. An artificial leg, made of wood and copper, was found in Italy in 1858. In the primitive era of prosthetic limbs, wooden or iron rods were attached to the stump of the leg. Straps were usually used to keep the rod in place. During the middle Ages, peg legs and hook arms were available for amputees to use. During the age of the Renaissance, prosthetic device construction improved, and prostheses were beginning to be made out of materials such as iron, copper, steel, and wood. Ambroise Pare, a surgeon who lived in France during the sixteenth century, was dedicated to treating injured soldiers who had lost limbs in battle. Pare also created new methods of amputation. Instead of cauterizing arteries, which was the common practice at the time, he suggested tying off the arteries. Additionally, he developed the first mechanical hand, as well as the first artificial leg with locking knees. At this time in history, materials such as leather were being used in the construction of prosthetic limbs in order to make them lighter. During the seventeenth century, a Dutch surgeon by the name of Pieter Verduyn invented the first non-locking, below-knee prosthesis (Swinnen et al., 2017).

The rate of success of movements by isolation level has been shown, the average change in speed from preabrad function to negative 12 months since the surgery of each organs was negative, that is, durability decreased over time. Despite a major reduction in the TF Group's mobility, the difference was not statistically significant. This is probably due to the small samples of TF topics. Overall, 28 subjects (37%) have achieved mobility, and the level of success rate of mobility measures (35% TM, 41% TT and 29% TFF (Norvell, 2011).

Along with initial rehabilitation, creating an awareness program for early artificial fittings, the ammunition can prevent people from being burdened by the state.

Physical Effective Results the amount of fitting of the contemporary upper organs is not done in the fitting and the prognostic ability of these expected professional results and the final quality of life is severely limited. An important foundation for optimistic intense and long-term management of 13 amputees is the effectiveness of an underlying understanding of smoker and logic, detailed and detailed analysis of the patient and their environment, and sound measurement of effective results for different places and varnish. Significant changes in body functions and body structure results in limiting division of body parts as well as physical effects of etiological disorders, comorbidities or peer-to-

peer hibernation. These effects can be divided into affected or may be structured as other body. Depending on the introvert condition, the body functions may have considerable effect, but at least partly can compensate for body structure and damaged organs (function) damage; Especially the lower limb. People with an isolation often experience feelings of sensation and inaccurate pain and this may affect their function. In the long-term, local muscular atrophy and solidarity may change related to mechanics. Psychological, social and sexual issues affect significantly on the individual's overall function with an isolation, but presently, generally performed better than the physical or functional problems. Separation can be a wide range of people's activity limitations and limitations of participation.

With a synthesis good walking capacity rehabilitation has been shown to have been associated with the following improvements and artificial rehabilitation has been successfully associated with an extra chance of living in a home after significantly significant low gestation. However, rehabilitation with an artificial limb is difficult to predict the following movements. The ability to assume the probability of a person is important because it affects the type of prostate path that is suitable. This forecast can also be helpful in informing FTs about the possible consequences of rehabilitation and thus can help future environmental needs such as planning for home, work or social activities. The effect of the various factors on the chances of walking will help to understand this well (Sansam et al., 2009).

The limitations of activity and participation are related to the dynamics of the lower limb amputees along with the general spectrum of self-care and enhanced self-care activities. This results in virtually affecting the ability to come back and maintain, to maintain social relationships, participate in leisure activities and become active members of the community. Participative restrictions can be experienced by any separatist person, depending on environmental factors, as well as the age, gender, education level and the ability to adjust. With the lower body posture for people, interrupts. The use of a prosthesis rehabilitation state and generally indicates the advantages of artificial fitting process. Of the 141 follow-up patients, 22 (16%) did not use their preserves, or used less than three hours a day, 85% (60%) could under-premise and underground abroad. Four

patients (3%) roam only with a wheelchair, but 69 (49%) wheelchairs are needed or able to go out of their house with wheelchairs. Many older patients cannot walk safely with walking or walking, especially in abroad (Pohjolainen et al., 1990). The time lag between amputation and prosthetic supply displayed an unfavorable association with prosthetic usage. The patients who were rehabilitated without a prosthesis had a diminished physical condition and duration of clinical rehabilitation was shorter. During the period of limb and artificial supply, artificial proportional parts were displayed. Patients who had rehabilitation without a prosthesis were short of a decreased physical condition and clinical rehabilitation period (Jefferies et al., 2015).

Prostheses components for lower and upper gestation, socket molding and fitting techniques, including progress with suspension systems and energy and electronic control sources, has changed drastically over the last few years. The upper layer of the organs can be fitted with functional prostheses, which allows more patients to achieve independent life style. Special emphasis on this multi-organ failure. Selection of appropriate material for artificial retrieval, variety of available artificial instruments and complexity and the functioning requirements of our patients is a very important and challenging task. After device prescription and fitting, training must be included in the artificial management and functional training to achieve essential and community reconsideration. In community reconsideration, we should go back to the appropriate work or school as part of recreation activities and sports and rehabilitation programs. The essential features of the successful rehabilitation program for individuals with the posture of these organs. A balanced integrated and experienced team can achieve the goal of returning the patient to their most effective level (Esquenazi et al., 2004).

Falling is a health risk that has received considerable attention in literature. Waterfall can result in a death or serious injury, or effective limitations and inability. Balance and / or fear of lower score have been reported; however, there are some people who have not fallen and / or have been less afraid to panic. Also, those people who do not report in the fear of prostitution. Balanced trust has been conducted with and balanced people, for instance, it is argued that low-margin separators face similar risks which tend to cause them to fall as adults; In fact, most of the amputee patients are 55 years old. Also, we

found that the marginal threshold among the people living in the community was 52% lower in the last 12 months, 49% had the fear of falling and the score of 65% less confidence. As shown 52.4% of issues have been published in at least 1 brothel in the past few years and 49.2% reported that they were afraid of falling. The average ABC scale score was 62.8, 27.1 and the average score was 67.5. Sixty-five percent of samples have been reported to be on the ABC Scale score below 80, which indicates those who may benefit from the treatment for their self-improvement (Miller et al., 2001).

In the previous work, we have shown that the falling, falling fear, and decreasing balance of trust are common among socialist people with fewer equality divisions. In this study, we have evaluated the results of these factors related to mobility (power, performance) and social activity. We assume that last year has a significant impact on the decline; however, even in the bivariable stage, falling was not associated with any dependent variables. It may be because some people are terrible or lack of confidence even though they are not falling. The crack may also be related to some activities that require high level biopadal function, so some cracks operate at a very high level. Alternatively, it is expected that respiratory patients may get reduced, but there is no hope of the fall of people without ammunition. It may also be that there is a negative or positive relationship between the number of fall and function numbers. Another relation is not available because we do not evaluate the impact of the fall number. The fall of fear was a strong bivariable relationship with all 3 results variables; however, with interest and other causes of taxation, there was no independent contribution to the function of mobility or social activity. In this study we focused on performance of more complex balance between amputees by moving a platform, maintaining perspective and adding dual work.

The first goal is to establish balance control techniques in artificial and non-infected appearance in amputees compared to the time of nigger standing in an ongoing platform.

The first goal of this study was to set up balance control strategies on the platforms of the Epitias. In our study amputees their artificial rocks load 37-38% of their body weight, since the transtibial amputees reported to be standing in the study of transtibial amputees. Therefore, the load of casual limbs seems to be slightly increased when the balance is bound, compared to the quiet place. Variations for inequality weight bearing have been

proposed Warrior tactics; Rigid artificial sockets or artificial alignment, poor hip thong muscle strength, insufficient sensory information, lack of confidence, poor balance, or habitual posture due to ankle dynamism, small and chronic pain, discomfort decreased. Increased weight gain on non-damaged organs results in better control, greater overloading of the disadvantages and arthrosis of incomplete organs (Vrieling et al., 2008).

The speed of smoking can be explained when the time spent using Prosthesis, the cause of gestation, the age of our generation and the use of walking aids. Our patients have been using only prosthesis for a brief period (average, 2 months) compared to other research, where at least 6 months were used. Elements in previous studies were not helpful to knit, when most of our issues were there. All our patients had confinement for peripheral vascular disease and their average age was their upper limit. It can affect physical fitness, walking speed. It is meaningful of patients' normal walking conditions and, while adult ancillary users, their helper, when appropriate. In the 5-year follow-up study by Gauthier Gagnon et al, 85% of TFs use outdoor solid ad sense. It supports our point of view that assessments with AIDS are important. For all the above reasons, it may not be appropriate to spread our results to a small and reputable population (Traballesi et al., 2008).

A lower posture prosthesis form the initial point of formation of the prescription. Prescription of certain components of the state depends on age, co-illness, mental state, etc. In our calculations, we used to treat pain, age, coarseness and co-disease (vascular causes for diabetes mellitas). There was a limitation of our research as explanatory variables that we do not actually measure the distance of walking. However, in the process of determining a prosthesis, the patient is always asked to estimate their walk distance. Only a physiotherapist suggested during the prescription of the first famous thesis. To verify the claimed walking distance, we send a subscale 'physical effectiveness' with RAN D-36. RAND-36 is a short version of Ron De's Health Insurance Study questionnaire and is similar to MO S SF 36. The correlation between the two was 0.73, this correlation supported the validity of the walking distance claimed (Geertzen et al., 2005).

The community is especially related to physical / structural environments. For the people bound in the upper 25, the limitations are more diverse, which reflects different types of activities, so that we need the manual dicer, depending on the partially covered layer.

A primary goal of rehabilitation is to improve the quality of a patient (QOL) by decreasing effective limitations and reduction of disability. For people with lower limb, an artificial limb compensates for mobility losses and allows them to rearrange their environment for daily and social activities. Amputee studies are equally with the ability to repeat QOL; however, some research investigates the achievement of independent activities in daily social activities. QOL has different meanings for different populations, who get rehabilitation. There is considerable discussion on the subject of literature and generic QOL. The QOL of the lower gesture is seen in many ways. Crude is a successful prescription of a synthetic organ. More sophisticated methods include the ability to evaluate the use of prospectus, actual performance of the body organs, or the participation of people in social activities. QOL: The researchers wanted to determine whether the endocrine patients related to mobility, fear of drop, and the balance were related to the participation of social activities. The hypothesis for the research was that three components would be an independent determinant of three QOL indices. In addition, according to the first work of Tinatie et al, estimates were made that balanced beliefs will show a strong relation with each result without fear of falling.

The first written record of an artificial leg was made by the Greek historian Herodotus; this record was a documented story of a prisoner who escaped by amputating his foot. Greater prosthesis use has been associated with higher levels of function and independence via improved self-care and mobility as well as improved perceived quality of life and employment success (Sansam et al., 2009).

Satisfaction with both the functional utility and cosmetic appearance of the prosthesis is also an important outcome of prosthetic restoration (Highsmith et al., 2016).

In order to maximize outcomes following lower-limb amputation, it is essential to better appreciate the factors that affect both prosthesis use and satisfaction, particularly any modifiable factors that might be targeted in rehabilitation interventions (Webster et al., 2012).

3.1. Study design

The researcher selected qualitative methodology for this study, because it was helpful to find out the perceptions of people in particular settings and to understand their perspective. Qualitative research is exploratory in nature by which the researcher can gain insights into another person's view's, opinion, feeling and beliefs within their own natural setting (DiCicco-Bloom & Crabtree, 2006).

The study was conducted by Qualitative Content Analysis (QCA) approach of qualitative method. The QCA facilitates contextual meaning in text through the development of emergent themes derived from textual data. It also facilitates the production of core constructs from textual data through a systematic method of reduction and analysis.

3.2. Study area

The study was conducted in Prosthetics and Orthotics Department at CRP, which is situated in Savar, about 25 km away from the capital city of Dhaka. CRP is a Non-Government Organization (NGO) that treats and rehabilitates persons with disabilities (PWD) regardless of their socio-economic means and aims to improve the quality of life of PWD in Bangladesh. It is specialized in the management of person with prosthesis. In CRP, there is a Prosthetics and Orthotics Department. Management is based on a multi-disciplinary treatment (MDT) approach. In inpatient unit, there run some vocational training for person with prosthesis. The purpose of the program is to improve patients' skills, self-confidence and to help pass their time meaningfully. This setting was selected for data collection because vocational training are conducted effectively in this setting at CRP, which is easily accessible for the researcher.

3.3 Study population

Amputee patients currently use lower limb prosthesis for ambulation.

3.4 Sample selection

The inclusion criteria for participation in this study were the persons with lower limb prosthesis in Prosthetics and Orthotics Department, who participated in vocational training during their rehabilitation at CRP, Savar, Dhaka. The researcher selected the participant by purposive sampling because researcher had specific requirements and chose those who met the selection criteria. At first permission was sought from the in-charge of P&O Department and a discussion about the study was held with the responsible physiotherapist. The investigator observed the program for two days to select the study participants. The investigator made a list of persons with lower limb prosthesis for the data collection period on April to May who fulfilled the inclusion criteria. At that time, 4 persons with P&O Department participated in the vocational training during the period of data collection. The investigator invited them to become a participant in the study. For fulfil researcher criteria researcher managed others participants from the Savar community. Then eight participants were finally selected for this study.

3.5 Inclusion criteria

- Both male and female was selected.
- Age between 12 to 50 years.
- Only lower limb prosthesis user.
- At least 6 month continuously prosthesis user person.
- Any diagnostic conditional patient.
- Subject who are willing to participate.
- Easy to communicate with subject.

3.6 Exclusion criteria

- Subject who are not willing to participate.
- Subject who had psychological problem.
- Age less than 12 and more than 50 years.
- Less than 6 month prosthesis user.

- Only upper limb user.

3.7 Sample size

8 participants were selected for this study.

3.8 Method of data collection

Face to face interviewing method was selected for data collection with self-structured questionnaire.

3.9.1 Data collection tools

A phone recorder was used to record the interview of the participants. Pen, paper and clip board was used to write down observation notes. An information sheet and consent form was used for taking permission from the participants. An open ended question sheet was used to conduct the interview.

3.9.2 Data collection procedure

Data collector conducted face to face interview with an open ended question for data collection. With open ended question, participants get more freedom to explain their opinions. That face to face interview helps the data collector to observe the participants facial expression and nonverbal expression during interview period. Before starting the formal interview, data collector ensured a quiet place by contacting with the regarding authority and built connection with the participants and made them comfortable for interview. The data collector explained the research question and aim of the study. Then the data collector used information sheet and consent form to take the permission of the participants. Next data collector asked questions. All question and information sheet was developed into Bangla. Interview was conducted in Bangla and recorded by recorder of mobile phone. The interview conducted during daytime and the duration was approximately 20-25 minutes for each participant. Venue of interview was Prosthetics and Orthotics Department of CRP and Savar community, but the place of interview depended on situation and permission of regarding authority.

3.10 Duration of data collection

Duration of data collection for my research was 8th April to 8th May.

3.11 Data Analysis

At first in data analysis, the researcher listened to the interviews several times from the phone recorder and then the interviewed data was transcript in Bangla. The researcher checked the transcript to make sure that all the data was available in the transcript. Then three copies were made from the transcript and were given to eight people for translation from Bangla to English. Then the data was analyzed by QCA. Data was analyzed by 3 stages: coding, categorizing and generating theme.

After that, the investigator read all data repeatedly to find out the actual meaning of the participants' expressions of what they wanted to say and organized them. Then major categories were found from the interview questions. The researcher was arranging all the information according to the categorization. Under these categories, the researcher coded all the information from the interviewed transcript. After finishing the tabulation of coding, the researcher detected some important codes that made the themes of the study. At last, themes were identified and emerged as a process of interpretation.

3.12 Field test

After getting approval for conducting the research and before starting the final data collection, researcher accomplished the field test with two participants. Field test was necessary as it helped the investigator to develop a final question and to collect data from participants easily. This test was performed to find out the difficulties that exist in the question. By this test, the researcher re-arranged and modified the question as required for the participants, so they can understand the question clearly.

3.13 Ethical Consideration

The researcher maintained ethical consideration in all aspect of the study. Before starting the study a formal project proposal was submitted to the department of physiotherapy and after verifying the proposal, permission was taken from Institutional Review Board (IRB) of BHPI to continue the study. For maintaining confidentiality and guideline, this study

followed BMRC. This study also followed the World Health Organization (WHO) guideline. The researcher took permission to conduct the research project from the supervisor and Head of the Department, the academic institute of CRP for data collection. Informed consent was used to take permission from all participants. Participants' rights and privileges were ensured. All the participants were aware about the aim and objectives of the study. Findings of the study were disseminated with the approval of regarding authority.

3.14 Rigor

The rigorous manner was maintained to demeanor the study. This study was conducted in a systemic way by next the steps of research under supervision of an experienced supervisor. During the interview session and analyzing data, never tried to influence the process by own value, perception and biases. Be accepted the answer of the questions whether they were of positive or negative impression. The participants' information was coded accurately and checked by the supervisor to eliminate any possible errors. Try to keep all the participants' related information and documents confidential.

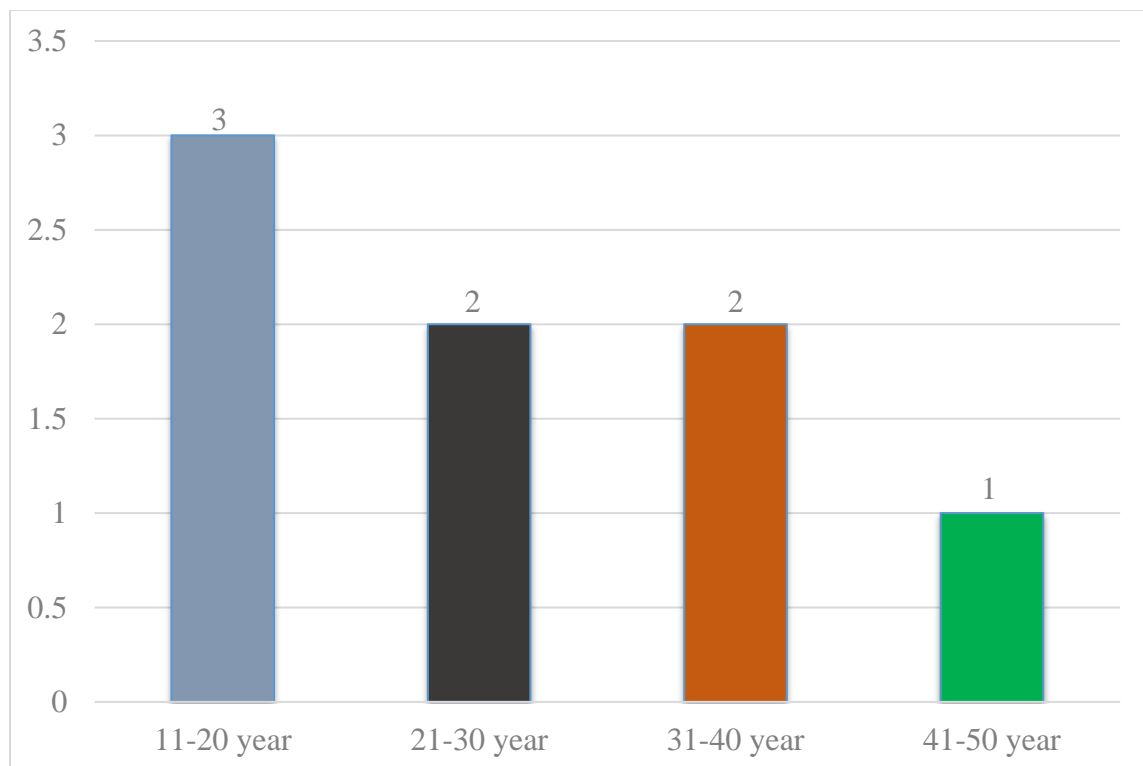
A qualitative study results were analyzed by content analysis. By using this analysis process, the researcher organized collected data according to categories, coding and themes. The aim of the study is to identify the satisfaction level of lower limb prosthesis patients for ambulatory function. Participants respond according to their perception. In this section coding is used to understand the participants' statement and to generate the themes.

Participants' socio-demographic information

Among 8 participant, the mean age of the participants was 24.75 year.

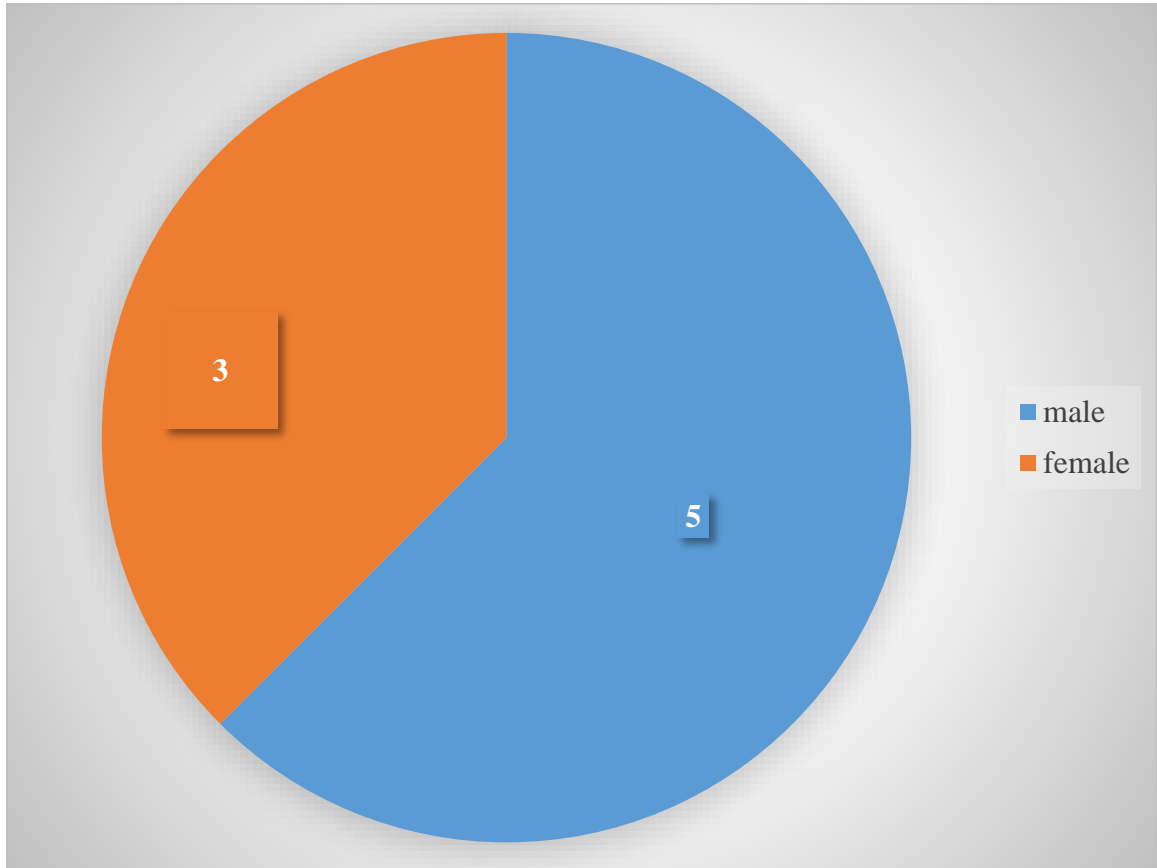
3 participant's age were 11-20 years and two were 21-30 years and two were 31-40 years and one participant was 41-50 years old.

Figure: age range of the participants



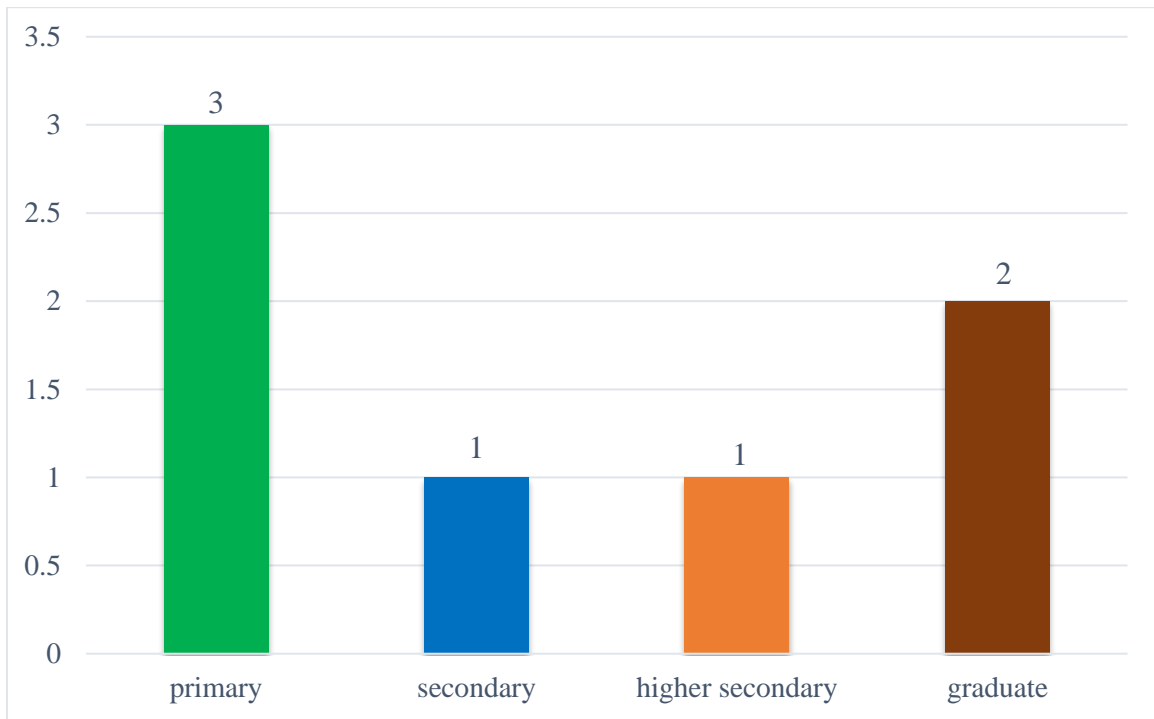
5 participants were male and 3 were female.

Figure: sex of the participants



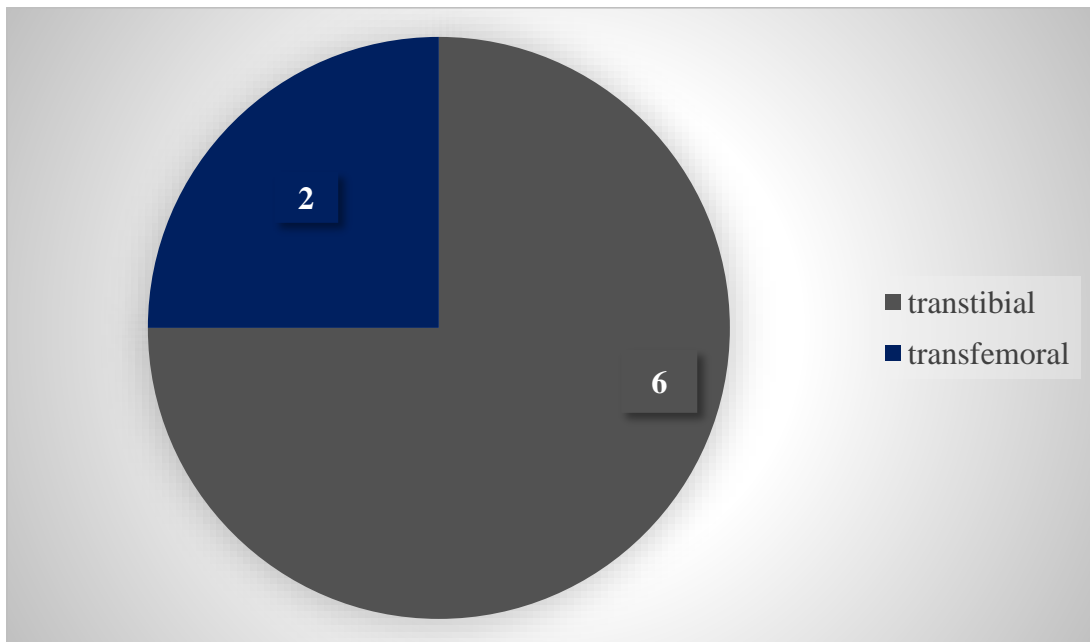
All the participants were not literate. In this study 3 of them were primary, one was secondary one was higher secondary and 2 were Graduation completed person.

Figure: educational status



Among all the patients 6 were transtibial amputee and 2 were transfemoral amputee.

Figure: parts of the amputation



Most of the participants were completed vocational training, 2 were student, 1 was job holder. And about 3 patients were lived in town about 5 patients were lived in village. Of all amputations, 7 were unilateral amputees and 1 were bilateral amputees. Further, 7 unilateral amputees, 3 were right sided and 4 were left sided amputees. In overall 6 were below knee amputation and 2 were above knee amputation.

Table-1: Participants socio-demographic information

Socio-demographic information	Number of the participant
Age	
11-20	3
21-30	2
31-40	2
41-50	1
Sex	
Male	5
Female	3
Educational status	
Illiterate	1
Primary	3
Secondary School Certificate	1
Higher secondary school certificate	1
Graduate	2
Occupation	
Vocational training ⁴	
Others	2
Nothing done	2

Theme

Theme -1

Most of the participants have satisfactory feelings to get up from a chair by using lower limb prosthesis. (Emerged from category 1).

Category -1: Participants' abilities for get up from chair.

Table-2: Participants' abilities for get up from chair.

Coding	P1	P2	P3	P4	P5	P6	P7	P8
Maintain balance	✓	✓	✓	✓	✓	✓	✓	✓
Pain								
Independency	✓	✓	✓	✓	✓	✓	✓	✓

All the participants were able to maintain balance and stand up from the chair independently and they were not feel any pain during get up from a chair by using there lower limb prosthesis.

Theme-2

Most of the participants have satisfactory feeling for walk in the home by using lower limb prosthesis. (Emerged from category 2).

Category- 2: Able to walk in the home.

Table-3:Able to walk in the home.

Coding	P1	P2	P3	P4	P5	P6	P7	P8
Maintain posture	✓	✓	✓	✓	✓	✓	✓	✓
Independent	✓	✓	✓	✓	✓	✓	✓	✓

All of the participants able to walk in the home with their lower limb prosthesis and successfully they were maintain their posture and they were fully independent for walking in the home.

Theme-3

Most of the participants have satisfactory feeling for walk outside on uneven ground by using lower limb prosthesis. (Emerged from category 3).

Category-3: Walk outside on uneven ground.

Table -4: Walk outside on uneven ground.

Coding	P1	P2	P3	P4	P5	P6	P7	P8
Self-dependent	✓	✓	✓	✓	✓	✓	✓	✓
Fall down								
Comfortable	✓	✓	✓	✓	✓	✓	✓	✓
To avoid negligence	✓	✓	✓	✓	✓		✓	✓

Most of the participants were able to walk outside on uneven ground. They were self-dependent. They also felt comfortable. But only a one patient falling down when she walk outside with prosthesis and a one patient who was unable to neglectence.

Theme-4

Most of the participants have satisfactory feeling for step up a sidewalk curb or footpath by using lower limb prosthesis. (Emerged from category 4).

Category-4: Step down a sidewalk curb or footpath.

Table-5: Step down a sidewalk curb or footpath.

Coding	P1	P2	P3	P4	P5	P6	P7	P8
Increase self Dependency	✓	✓	✓	✓	✓	✓	✓	✓
Need support	✓					✓		
Increase Confident		✓	✓	✓	✓		✓	✓
Limitation of movement	✓					✓		

Most of the participants no need any support and no limitation of movement and self-dependency. Less number of participants need support and limitation of movement during step down on a sidewalk curb or footpath.

Theme-5

Most of the participants have satisfactory feeling for step down a sidewalk curb or footpath by using lower limb prosthesis. (Emerged from category 5).

Category-5: Step up a sidewalk curb or footpath.

Table-6: Step up a sidewalk curb or footpath.

Coding	P1	P2	P3	P4	P5	P6	P7	P8
Pain								
Balance	✓	✓		✓	✓	✓	✓	✓
No Pressure	✓	✓	✓	✓		✓	✓	✓
Fear					✓			

All of the participants maintain their balance and most of the participants felt no more pressure and there were no participants who felt any pain. But one participant felt fear and imbalance during walking on the footpath.

Theme-6

Most of the participants have satisfactory feeling for walk outside on inclement weather by using lower limb prosthesis. (Emerged from category 6).

Category -6: Walk outside on inclement weather.

Table-7: Walk outside on inclement weather.

Coding	P1	P2	P3	P4	P5	P6	P7	P8
No Slipped	✓		✓	✓		✓		✓
Maintain Balance		✓			✓		✓	
No Movement loss	✓		✓	✓		✓		✓
Dependent			✓			✓		

Most of the participants had no movement loss and no balance problem and no slipped. But some were slipped during this functioning.

Theme-7

Most of the participants have satisfactory feeling for get up a few steps (stairs) without a handrail by using lower limb prosthesis. (Emerged from category 7).

Category -7: Get up a few steps (stairs) without a handrail.

Table-8: Get up a few steps (stairs) without a handrail.

Coding	P1	P2	P3	P4	P5	P6	P7	P8
Balance	✓	✓		✓	✓		✓	✓
Independent	✓	✓		✓	✓		✓	✓
Easy	✓	✓		✓	✓		✓	✓

Most of all able to maintain balance, independency and its easy for them to use and functioning by this device.

Theme-8

Most of the participants have satisfactory feeling for get down a few steps (stairs) without a handrail by using lower limb prosthesis. (Emerged from category 8).

Category-8: Get down a few steps (stairs) without a handrail.

Table -9: Get down a few steps (stairs) without a handrail.

Coding	P1	P2	P3	P4	P5	P6	P7	P8
Pressure		✓	✓				✓	
Independent	✓	✓	✓	✓	✓	✓	✓	✓
Easy	✓	✓	✓	✓	✓	✓	✓	✓

In this chapter the results of the study are discussed in relation to the research questions and objectives of the study. The discussion focus on satisfaction of lower limb prosthesis for ambulatory function of the participants. The description of the theme according to its category and coding is given below. Each table describes the interview findings. Under the different categories, different opinion is different codes. The tick was given only for those columns where the participant spoke about those issues. Here 'P' was used for participant.

The interviews followed a self-structured, open-ended questionnaire format and all participants were asked the same questions.

After transcripts of the entire interview were completed, the data was organized according to the interview questions. All transcripts were read several times to discover the themes and to find out what the participants actually wanted to say. The researcher at first appointed a category to question number one. The researcher then identified similarities from a list of categories. This procedure was repeated for all the questions. Using the topic analysis the researcher then did the second step data analysis. Each interview was segmented by this topic into categories. During analysis the transcript were several times and the important categories identified. All themes were listed before they were placed into these categories according to their definition. Also some sub themes were listed under main themes and analysis it according to participants. The results obtained from these themes were written on the questionnaire. Eight major categories were detected from questions.

General theme that have emerged from the categories

Different perception about satisfaction for using lower limb prosthesis in their ambulatory function.

From participants answer about satisfaction for using lower limb prosthesis in their ambulatory function it was clear that most of the participants were very satisfied for using their device for getting up from chair, walk in the home, walk outside on uneven ground,

step up a sidewalk curb or footpath, step down a sidewalk curb or footpath, walk outside on inclement weather, get up a few steps (stairs) without a handrail, get down a few steps (stairs) without a handrail.

Some of the participants were less satisfied for using it. They feel difficulties for some of their daily activities.

Their ambulatory function were done independently

When the participants were asked, for which they doing their daily activities specially ambulation independently. Before using their prosthesis it's very hard for them but after using prosthesis and completing their training and at least 6 month using they feel good and it's very easy for them to completing their ambulatory function.

In the result section, it has been possible to understand the patient's opinions by content analysis, where some categories have been found. Under the different categories, patient's different opinions are expressed by different codes. 8 major categories were found these are: getting up from chair, walk in the home, walk outside on uneven ground, step up a sidewalk curb or footpath, step down a sidewalk curb or footpath, walk outside on inclement weather, get up a few steps(stairs) without a handrail, get down a few steps(stairs) without a handrail.

Theme -1

Most of the participants have satisfactory feelings to get up from a chair by using lower limb prosthesis.

Participant-1 said,

“For using this device I am able to maintain my balance when get up from a chair for standing and I could not feel any pain and no support needed by others.”

Participant-3 said,

“For using lower limb prosthesis now there is no lot of pressure feels in my lower limb during sit to stand. I am also able to stand up independently. I am also maintain my balance with in minimum base of support.”

Participant-5 said,

“When I use lower limb prosthesis for sit to stand its very comfortable for me. When I am using stick then there is a chance to slipped and fall down, but this time no chance to fall down.”

Participant-7said,

“I feel happy for using lower limb prosthesis during sit to stand. When I am not using this device it’s very hard for me to stand up from a chair without any persons support. There is no difficulties feel for using this prosthesis.”

So we can say that most of the participants have satisfied and feel easy for using lower limb prosthesis. There they maintain their balance for sit to stand. They observed that it helps to easy the work in their daily life and become independent.

All the participant says that they are able to walk in the home with maintaining posture and independently.

Theme-2

Most of the participants have satisfactory feeling for walk in the home by using lower limb prosthesis.

Participant-3 said,

“It’s very emergency for a person to walk in his or her own room. When I am not using prosthesis sorry to say that I am not transferred one room to others room. Now it’s glad to say that now I have a prosthesis and I am fully and easily able to walk in my home without any dependency.”

Participant-6 said,

“After using lower limb prosthesis for walking in my own room and transferring one room to another room I feel comfortable. It helps me to easy my movement and done my own rooms necessary works easily. I have no tension to fall down in my floor. Now I am habituated in this device.”

Participant-8 said,

“This device is very much helpful for me to walk in my room and done my every day’s personal work without disturbing my family members. It’s very beneficial for me for living independently.”

So most of the participants have satisfied and independent when using their device and they also maintained their correct posture easily. With a synthesis good walking capacity rehabilitation has been shown to have been associated with the following improvements and artificial rehabilitation has been successfully associated with an extra chance of living in a home after significantly significant low gestation. However, rehabilitation with an artificial limb is difficult to predict the following movements. The ability to assume the probability of a person is important because it affects the type of prostate path that is suitable. This forecast can also be helpful in informing FTs about the possible consequences of rehabilitation and thus can help future environmental needs such as planning for home, work or social activities. The effect of the various factors on the chances of walking will help to understand this well (Sansam et al., 2009).

Theme-3

Most of the participants have satisfactory feeling for walk outside on uneven ground by using lower limb prosthesis.

Participant-1 said,

“I feel difficulties when I am not using lower limb prosthesis for walk outside on uneven ground. But during 8 month I am using lower limb prosthesis and now at this moment it’s very easy for me to walk outside on uneven ground. Now I am walking independently and going to visit my all friend’s house and meet with them and I am also going to my college by using this prosthesis.”

Participant-3 said,

“By using lower limb prosthesis I am able to walking long distance in my villages uneven ground or roads. There is no painful pressure in my amputation part due to using lower limb prosthesis during walking uneven ground.”

Participant-7 said,

“By using this I am able to walk in my villages uneven ground and now I not to feel any difficulties due to using this limb during walking.”

Most of them feel easy and comfortable during their using device period. It also helps them in psychological support by avoiding negligence’s.

Theme-4

Most of the participants have satisfactory feeling for step up a sidewalk curb or footpath by using lower limb prosthesis.

Participant-1 said,

“For using this device I am able to maintain my balance when step up a sidewalk curb or footpath. I have no tension to fall down and sleeved.”

Participant-2 said,

“Before using it I am not able to step up a sidewalk curb or footpath. Now I am able and control my balance properly when step up.”

Participant-5 said,

“I have no chance to fall down in the footpath. My limb is covered by my dress and people not look at me in a different look and that’s a thankful condition for every amputee person.”

So we can say that there is no one who feel any pain during this functioning. They maintained their balance and just a one participants feel fear during step up a sidewalk curb or footpath.

Theme-5

Most of the participants have satisfactory feeling for step down a sidewalk curb or footpath by using lower limb prosthesis.

Participant-1 said,

“Before using it I am not able to step down a sidewalk curb or footpath. Now I am able and control my balance properly when step down. Truly it’s easy my work. Such as shopping.”

Participant-3 said,

“By using lower limb prosthesis I am able to walking long distance in my village’s footpath. There is no painful pressure in my amputation part due to using lower limb prosthesis during walking and step down from the footpath.”

Participant-5 said,

“I have no chance to fall down in the footpath. My limb is covered by my dress and people not look at me in a different look and that’s a thankful condition for every amputee person.”

Participant-6 said,

“By using this I am able to walk in my villages side curb and now I not to feel any difficulties due to using this limb during walking and step down from the side curb.”

So most of them were self-dependent and confident. Just 2 of them need support and limitation of movement.

According to the first work of Tinatie et al, estimates were made that balanced beliefs will show a strong relation with each result without fear of falling or falling. (Miller et al., 2001).

Theme-6

Most of the participants have satisfactory feeling for walk outside on inclement weather by using lower limb prosthesis.

Participant-2 said,

“Chance to slip down when walking in the inclement weather. It’s very hard for me to walk outside when rain or other bad weather comes.”

Participant-5 said,

“I feel more difficulties when I going outside but suddenly rain comes. In that time I feel uneasy to walk. And when I was try to walk then I could not maintain my balance without any peoples support.”

Participant-3 said,

“Slip down when walking in the inclement weather. It’s very hard for me to walk outside when rain or other bad weather comes.”

Participant-7 said,

“I am totally able to walk everywhere and every situation in my daily life. This device is help to easy my any weathers walking in the ground or my college going when rain comes. It’s very much satisfactory part of my life.”

So in total 5 participants were slipped during walking outside on inclement weather they were loss of balance and this ambulatory functioning most of them were dependent in their daily activity.

Theme-7

Most of the participants have satisfactory feeling for get up a few steps (stairs) without a handrail by using lower limb prosthesis.

Participant-2 said,

“Now I am able to do many thing by using this lower limb prosthesis. There is no problem to get up a few steps in the stairs without a handrail or any others support. Thankfully said that I use my limb to get up 5th floor without any problem.”

Participant-5 said,

“It’s very easy for me to get up a few steps of the stairs without handrail or any things help. Sometimes I went to my friends or relatives house at 3rd floor.”

Just two participants were feel dependent, uneasy, and imbalanced and most of the participants feel easy, maintain balance and independent.

Theme-8

Most of the participants have satisfactory feeling for get down a few steps (stairs) without a handrail by using lower limb prosthesis.

Participant-1 said,

“I am able to get full pressure in my prosthesis limb during get down from stairs without handrail or any others support. I am totally independent and control my balance properly. This device is very easy for my stair climbing.”

Participant-5 said,

“I do not feel any difficulties during stair down without any support.”

So most of the participants feel easy and comfortable and they were independent from get up a few steps without a handrail.

The study topic is new in the context of physiotherapy in Bangladesh. Therefore it was difficult to find sufficient books or journal on this area in the context of Bangladesh. So, it was not possible to compare the findings with other findings in the context of Bangladesh. Another limitation is researcher could not cover more participants for the limitation of resources and time.

6.1 Conclusion

Amputation is one of the most common disabilities due to accidents, trauma or birth occurring time. It is a serious condition that affects lives dramatically. Although amputation is one of the most serious problem that a person can survive, it is possible to return to a healthy, happy and productive life after even completing prosthesis. From the moment of injury onward, specialized care is essential for maximization of health as well as psychosocial and functional adaptation. After amputation, patients lose some extent of functional abilities. But it is very important to try to return their functional ability. When functional ability is achieved, then the main goal is social reintegration and return to work Vocational training play a significant role to attend a new work. It makes the patients more confident and hopeful upon their future.

The specific objectives of this study were to explore the satisfaction level of lower limb prosthesis patient's ambulatory function. According to data analysis, it is explored that the participants were very satisfied. The result indicates that the aim and objectives of the device has been achieved. Lower limb prosthesis help the person with amputation to improve their quality of life and to achieve the purpose of the ambulatory function. So government should offer more opportunities to take lower limb prosthesis of amputee patient for erasing all negligence and making their future meaningful and purposeful.

6.2 Recommendation

This study put forward that it is important to use lower limb prosthesis for more of their function completing easily in everyday life, CRP needs to supervised and ensure available materials to improve the service and also minimize difficulties for ambulation during bad weather. We should arrange many health camp to inform the unaware people more and more. Some new activities can be added and should apply for other patients nicely.

REFERENCES

- Chalya, P.L., Mabula, J.B., Dass, R.M., Kabangila, R., Jaka, H., Mchembe, M.D., Kataraihya, J.B., Mbelenge, N. and Gilyoma, J.M., (2011). Surgical management of diabetic foot ulcers: a Tanzanian university teaching hospital experience. *BMC Research notes*, 4(1):365.
- Chalya, P.L., Mabula, J.B., Dass, R.M., Ngayomela, I.H., Chandika, A.B., Mbelenge, N. and Gilyoma, J.M., (2012). Major limb amputations: a tertiary hospital experience in northwestern Tanzania. *Journal of Orthopedic Surgery and Research*, 7(18):1-6.
- Chin, T. and Toda, M., (2016). Results of prosthetic rehabilitation on managing transtibial vascular amputation with silicone liner after wound closure. *Journal of International Medical Research*, 44(4):957-967.
- Czerniecki, J.M., Turner, A.P., Williams, R.M., Hakimi, K.N. and Norvell, D.C., (2012). The effect of rehabilitation in a comprehensive inpatient rehabilitation unit on mobility outcome after dysvascular lower extremity amputation. *Archives of Physical Medicine and Rehabilitation*, 93(8):1384-1391.
- Deans, S.A., McFadyen, A.K. and Rowe, P.J., (2008). Physical activity and quality of life: a study of a lower-limb amputee population. *Prosthetics and Orthotics International*, 32(2):186-200.
- DiCicco-Bloom, B. and Crabtree, B.F., (2006). The qualitative research interview. *Medical Education*, 40(4):314-321.
- Esquenazi, A., (2004). Amputation rehabilitation and prosthetic restoration. From surgery to community reintegration. *Disability and Rehabilitation*, 26(14):831-836.
- Feinglass, J., Shively, V.P., Martin, G.J., Huang, M.E., Soriano, R.H., Rodriguez, H.E., Pearce, W.H. and Gordon, E.J., (2012). How 'preventable' are lower extremity amputations? A qualitative study of patient perceptions of precipitating factors. *Disability and Rehabilitation*, 34(25):2158-2165.

Geertzen, J., van der Linde, H., Rosenbrand, K., Conradi, M., Deckers, J., Koning, J., Rietman, H.S., van der Schaaf, D., van der Ploeg, R., Schapendonk, J. and Schrier, E., (2015). Dutch evidence-based guidelines for amputation and prosthetics of the lower extremity: rehabilitation process and prosthetics. Part 2. Prosthetics and Orthotics International, 39(5):361-371.

Geertzen, J.H., Bosmans, J.C., Van Der Schans, C.P. and Dijkstra, P.U., (2005). Claimed walking distance of lower limb amputees. Disability and Rehabilitation, 27(3):101-104.

Highsmith, M.J., Kahle, J.T., Miro, R.M., Orendurff, M.S., Lewandowski, A.L., Orriola, J.J., Sutton, B. and Ertl, J.P., (2016). Prosthetic interventions for people with transtibial amputation: systematic review and meta-analysis of high-quality prospective literature and systematic reviews. Journal of Rehabilitation Research and Development, 53(2):157-183.

Hiwot, W., (2016). Satisfaction of lower prosthesis limb users in Addis Ababa, Ethiopia (Doctoral Dissertation, Addis Ababa University).

Horne, C.E. and Neil, J.A., (2009). Quality of life in patients with prosthetic legs: a comparison study. Journal of Prosthetics and Orthotics, 21(3):154-159.

Jefferies, P.L., (2015). 'Just Normal': A grounded theory of prosthesis use (Doctoral Dissertation, Dublin City University).

Kahle, J.T., Highsmith, M.J., Schaepper, H., Johannesson, A., Orendurff, M.S. and Kaufman, K., (2016). Predicting walking ability following lower limb amputation: an updated systematic literature review. Technology and Innovation, 18(2):125.

Kholwadwala, D., Slepova, L., Wheeler, J., Rahimian, K., Rohrer, B., Johnston, G., Coleman, J., Vaughn, M., Pervushin, V. and Ivanov, A., Kholwadwala Deepesh K., (2006). Lower limb prosthesis. U.S. Patent Application 11/527,143.

Kohler, F., Cieza, A., Stucki, G., Geertzen, J., Burger, H., Dillon, M.P., Schiappacasse, C., Esquenazi, A., Kistenberg, R.S. and Kostanjsek, N., (2009). Developing core sets for persons following amputation based on the international classification of functioning,

disability and health as a way to specify functioning. *Prosthetics and Orthotics International*, 33(2):117-129.

Miller, W.C., Deathe, A.B., Speechley, M. and Koval, J., (2001). The influence of falling, fear of falling, and balance confidence on prosthetic mobility and social activity among individuals with a lower extremity amputation. *Archives of Physical Medicine and Rehabilitation*, 82(9):1238-1244.

Mont, D., (2007). *Measuring Disability Prevalence*. World Bank social protection discussion paper no. 0706. Washington, DC: The World Bank.

Mousavi, A.A., Saied, A.R. and Heidari, E., (2012). A survey on causes of amputation in a 9-year period in Iran. *Archives of Orthopedic and Trauma Surgery*, 132(11):1555-1559.

Moxey, P.W., Hofman, D., Hinchliffe, R.J., Jones, K., Thompson, M.M. and Holt, P.J.E., (2010). Epidemiological study of lower limb amputation in England between 2003 and 2008. *British Journal of Surgery*, 97(9):1348-1353.

Norvell, D.C., Turner, A.P., Williams, R.M., Hakimi, K.N. and Czerniecki, J.M., (2011). Defining successful mobility after lower extremity amputation for complications of peripheral vascular disease and diabetes. *Journal of Vascular Surgery*, 54(2):412-419.

Obalum, D.C. and Okeke, G.C.E., (2009). Lower limb lmputations at a nigerian private tertiary hospital. *West African journal of medicine*, 28(1):314–317.on mobility outcome after dysvascular lower extremity amputation. *Archives of Physical Medicine and Rehabilitation*, 93(8):1384-1391.

Ostler, C., Ellis-Hill, C. and Donovan-Hall, M., (2014). Expectations of rehabilitation following lower limb amputation: a qualitative study. *Disability and Rehabilitation*, 36(14):1169-1175.

Pohjolainen, T., Alaranta, H. and Kärkäinen, M., (1990). Prosthetic use and functional and social outcome following major lower limb amputation. *Prosthetics and Orthotics International*, 14(2):75-79.

Pooja, G.D. and Sangeeta, L., (2013). Prevalence and Etiology of amputation in Kolkata, India: a retrospective analysis. *Hong Kong Physiotherapy Journal*, 31(1):36-40.

- Rau, B., Bonvin, F. and DeBie, R., (2007). Short-term effect of physiotherapy rehabilitation on functional performance of lower limb amputees. *Prosthetics and Orthotics International*, 31(3):258-270.
- Sansam, K., Neumann, V., O'Connor, R. and Bhakta, B., (2009). Predicting walking ability following lower limb amputation: a systematic review of the literature. *Journal of Rehabilitation Medicine*, 41(8):593-603.
- Sharkey, A.M., Charnock-Jones, D.S., Boocock, C.A., Brown, K.D. and Smith, S.K., (1993). Expression of mRNA for vascular endothelial growth factor in human placenta. *Journal of Reproduction and Fertility*, 99(2):609-615.
- Swinnen, E., Lafosse, C., Van Nieuwenhoven, J., Ilsbrouckx, S., Beckwée, D. and Kerckhofs, E., (2017). Neurological patients and their lower limb orthotics: an observational pilot study about acceptance and satisfaction. *Prosthetics and Orthotics International*, 41(1):41-50.
- Traballesi, M., Porcacchia, P., Aversa, T. and Brunelli, S., (2008). Energy cost of walking measurements in subjects with lower limb amputations: a comparison study between floor and treadmill test. *Gait & Posture*, 27(1):70-75.
- Van Brakel, W.H., Poetsma, P.A., Tam, P.T. and Verhoeff, T., (2010). User satisfaction and use of prostheses in ICRC's special fund for the disabled project in Vietnam. *Asia Pacific Disability Rehabilitation Journal*, 21:70-91.
- Van Eijk, M.S., van der Linde, H., Buijck, B., Geurts, A., Zuidema, S. and Koopmans, R., (2012). Predicting prosthetic use in elderly patients after major lower limb amputation. *Prosthetics and Orthotics International*, 36(1):45-52.
- Van Twillert, S., Stuive, I., Geertzen, J.H., Postema, K. and Lettinga, A.T., (2014). Functional performance, participation and autonomy after discharge from prosthetic rehabilitation: barriers, facilitators and outcomes. *Journal of Rehabilitation Medicine*, 46(9):915-923.

VanWagner, L.B., Bhave, M., Te, H.S., Feinglass, J., Alvarez, L. and Rinella, M.E., (2012). Patients transplanted for nonalcoholic steatohepatitis are at increased risk for postoperative cardiovascular events. *Hepatology*, 56(5):1741-1750.

Vrieling, A.H., Van Keeken, H.G., Schoppen, T., Otten, E., Hof, A.L., Halbertsma, J.P.K. and Postema, K., (2008). Balance control on a moving platform in unilateral lower limb amputees. *Gait & Posture*, 28(2):222-228.

Webster, J.B., Hakimi, K.N. and Czerniecki, J.M., (2012). Prosthetic fitting, use, and satisfaction following lower-limb amputation: a prospective study. *Journal of Rehabilitation Research and Development*, 49(10):1493.

Yari, P., Dijkstra, P.U. and Geertzen, J.H., (2008). Functional outcome of hip disarticulation and hemipelvectomy: a cross-sectional national descriptive study in the Netherlands. *Clinical Rehabilitation*, 22(12):1127-1133.

Zidarov, D., Swaine, B. and Gauthier-Gagnon, C., (2009). Quality of life of persons with lower-limb amputation during rehabilitation and at 3-month follow-up. *Archives of Physical Medicine and Rehabilitation*, 90(4):634-645.

Ziegler-Graham, K., MacKenzie, E.J., Ephraim, P.L., Travison, T.G. and Brookmeyer, R., (2008). Estimating the prevalence of limb loss in the United States: 2005 to 2050. *Archives of Physical Medicine and Rehabilitation*, 89(3):422-429.

APPENDIX

CONSENT STATEMENT

Assalamualaikum,

I am Md. Nahidul Islam Nahid, 4th professional B.Sc. in Physiotherapy student of Bangladesh Health Professions Institute (BHPI) affiliated to the Faculty of Medicine, University of Dhaka. To obtain my Bachelor degree, I have to conduct a research project and it is a part of my study. My research titled is **“SATISFACTION LEVEL OF LOWER LIMB PROSTHESIS PATIENTS FOR AMBULATORY FUNCTION AT CRP IN BANGLADESH.”** By this I would like to know the satisfaction for various ambulatory function among the prosthesis users. Now I want to ask some related question. This will take approximately 20-25 minutes.

I would like to inform you that this is a purely academic study and will not be used for any other purpose. Your participation in the research will have no impact on your present or future treatment in this area. All information provided by you will be treated as confidential and in the event of any report or publication it will be ensured that the source of information remains anonymous.

Your participation in this study is voluntary and you may withdraw yourself at any time during this study without any negative consequences. You also have the right not to answer a particular question that you don't like or do not want to answer during interview.

If you have query about the study or your right as a participant, you may contact with me and /or my research supervisor Mohammad Habibur Rahman, Assistant Professor, Physiotherapy Department, BHPI, CRP, Savar, Dhaka-1343.

Do you have any question before I start?

So may I have your consent to proceed with the interview?

Yes

No

Signature and date of the participant_____

Signature and date of the interviewer_____

Data collector signature and date_____

সম্মতিপত্র

আসসালামুআলাইকুম/ নমস্কার,

আমি মোঃ নাহিদুল ইসলাম নাহিদ, আমি এই গবেষণা প্রকল্পটি বাংলাদেশ হেলথ প্রফেশন্স ইন্সটিটিউট (বিএইচপিআই)-এ পরিচালনা করছি যা আমার চতুর্থ বর্ষ বিএসসি ইন ফিজিওথেরাপি কোর্স অন্তর্ভুক্ত। আমার গবেষণার শিরোনাম হল- “নিম্নাংশের কৃত্রিম পা সংযোজিত রোগীদের চলাচলের ক্ষেত্রে সন্তুষ্টির মাত্রা” এর মাধ্যমে আমি কৃত্রিম পা সংযোজিত রোগীদের সন্তুষ্টির মাত্রা সম্পর্কে জানতে চাই। আমি এখন আপনাকে আনুসঙ্গিক কিছু প্রশ্ন করতে চাচ্ছি। এতে আনুমানিক ২০-২৫ মিনিট সময় নিবো।

আমি আপনাকে অবগত করছি যে, এটা আমার অধ্যয়নয়নের অংশ এবং যা অন্য কোন উদ্দেশ্যে হবে না। আপনি যে সব তথ্য প্রদান করবেন তার গোপনীয়তা বজায় থাকবে এবং আপনার প্রতিবেদনের ঘটনা প্রবাহে এটা নিশ্চিত করা হবে যে এই তথ্যের উৎস অপ্রকাশিত থাকবে।

এই অধ্যয়নে আপনার অংশগ্রহণ স্বেচ্ছাপ্রণোদিত এবং আপনি যে কোন সময় এই অধ্যয়ন থেকে কোন নেতিবাচক ফলাফল ছাড়াই নিজেকে প্রত্যাহার করতে পারবেন এছাড়াও কোন নির্দিষ্ট প্রশ্ন অপছন্দ হলে উত্তর না দেয়ার এবং সাক্ষাৎকারের সময় কোন উত্তর না দিতে চাওয়ার অধিকারও আপনার আছে।

এই অধ্যয়নে অংশগ্রহণকারী হিসেবে যদি আপনার কোন প্রশ্ন থাকে তাহলে আপনি আমাকে অথবা এবং আমার সুপারভাইজার মোহাম্মদ হাবিবুর রহমান, সহকারী অধ্যাপক, ফিজিওথেরাপি বিভাগ, বিএইচপিআই, সিআরপি, সাভার, ঢাকা- ১৩৪৩ তে যোগাযোগ করতে পারেন।

সাক্ষাৎকার শুরু করার আগে কি আপনার কোন প্রশ্ন আছে?

সুতরাং আমি আপনার অনুমতিতে এই সাক্ষাৎকার শুরু করতে পারি?

হ্যাঁ না

১। অংশগ্রহণকারীর স্বাক্ষর ও তারিখ _____

২। উপাত্ত সংগ্রহকারীর স্বাক্ষর ও তারিখ _____

৩। গবেষকের স্বাক্ষর ও তারিখ _____

TITLE:
SATISFACTION LEVEL OF LOWER LIMB PROSTHESIS
PATIENTS FOR AMBULATORY FUNCTION AT CRP IN
BANGLADESH.

Questionnaire (English)

This question is developed to identify the satisfaction level of lower limb prosthetic patients for ambulatory function.

Please give a tick (✓) mark on the left side of the box of correct answer. It is realized indicated that you may consider two or more statements in any one section related to you, but please just mark the box that most closely describes your answer:

1. Patient's name:

Identification number:

2. Patient's age: year

3. Patient's sex:

Male

Female

4. Educational level:

Illiterate

Primary

Secondary

Higher secondary

Graduate

5. Phone number:

6. Marital status:

Married

Unmarried

Divorce

7. Living area:

Village

Town

8. Occupation:

Before amputation:

After amputation:

Vocational training:

Others:

Nothing done

9. Cause of amputation:

Accident

Any other cause (.....)

10. Date of amputation:

11. Level of amputation:

Transtibial

Transfemoral

12. Site of amputation:

Right

Left

Bilateral

13. Device used for mobility:

14. How long you are using prosthesis:

6 month

Less than 6 month

More than 6 month

15. How many hours do you use the prosthesis in an average per day?

Answer:

16. Are you able to get up from chair by using lower limb prosthesis?

Yes

No

If yes,

How it is easy now than previous time while you don't use lower limb prosthesis for getting up from chair?

Answer:

If no,

What difficulties do you face now for using lower limb prosthesis for getting up from chair?

Answer:

17. Are you able to walk in the home by using lower limb prosthesis?

Yes

No

If yes,

How it is now easy than previous time while you don't use lower limb prosthesis for walking in the home?

Answer:

If no,

What difficulties do you face now for using lower limb prosthesis for walking in the home?

Answer:

18. Are you able to walk outside on uneven ground by using lower limb prosthesis?

Yes

No

If yes,

How it is easy now than previous time while you don't use lower limb prosthesis for walking on uneven ground?

Answer:

If no,

What difficulties do you face now for using lower limb prosthesis for walking on uneven ground?

Answer:

19. Are you able to step up a sidewalk curb or footpath by using lower limb prosthesis?

Yes

No

If yes,

How it is easy now than previous time while you don't use lower limb prosthesis for stepping up a sidewalk curb or footpath?

Answer:

If no,

What difficulties do you face now for using lower limb prosthesis for stepping up a sidewalk curb or footpath?

Answer:

20. Are you able to step down a sidewalk curb or footpath by the using lower limb prosthesis?

Yes

No

If yes,

How it is easy now than previous time while you don't use lower limb prosthesis for stepping down a sidewalk curb or footpath?

Answer:

If no,

What difficulties do you face now for using lower limb prosthesis for stepping down a Sidewalk curb or footpath?

Answer:

21. Are you able to walk outside on inclement weather by the using lower limb prosthesis?

Yes

No

If yes,

How it is easy now than previous time while you don't use lower limb prosthesis for walking outside in inclement weather?

Answer:

If no,

What difficulties do you face now for using lower limb prosthesis for walking outside in inclement weather?

Answer:

22. Are you able to go up a few steps (stairs) without a handrail by using lower limb prosthesis?

Yes

No

If yes,

How it is easy now than previous time while you don't use lower limb prosthesis for going up a few steps (stairs) without a handrail?

Answer:

If no,

What difficulties do you face now for using lower limb prosthesis for going up a few steps (stairs) without a handrail?

Answer:

23. Are you able to go down a few steps (stairs) without a handrail by using lower limb prosthesis?

Yes

No

If yes,

How it is easy now than previous time while you don't use lower limb prosthesis for going down a few steps (stairs) without a handrail?

Answer:

If no,

What difficulties do you face now for using lower limb prosthesis for going down a few steps (stairs) without a handrail?

Answer:

“ নিম্নাংশে কৃত্রিম পা সংযোজিত রোগীর চলাচলের সন্তুষ্টি মাত্রা ”

প্রশ্নপত্র (বাংলা)

এই প্রশ্নপত্রটি নিম্নাংশে কৃত্রিম পা সংযোজিত রোগীর চলাচলের সন্তুষ্টি মাত্রা নির্ণয়ের জন্য গঠন করা হয়েছে।

অনুগ্রহপূর্বক নিচের প্রশ্নগুলোর মধ্যে সঠিক উত্তরের বাম পাশে টিক (✓) চিহ্ন দিন। এখানে দুই অথবা দুই এর অধিক উত্তর হতে পারে কিন্তু আপনি সেই বক্স এ টিক দিবেন যেটা আপনার কাছে বেশি উপযুক্ত মনে হবে।

১। রোগীরনামঃ

সনাত্তকরণ নাম্বারঃ

২। রোগীরবয়সঃ

৩। রোগীরলিঙ্গঃ

পুরুষ

মহিলা

৪। বসবাসেরএলাকাঃ

গ্রাম

শহর

৫। মোবাইলনাম্বারঃ

৬। শিক্ষাগত যোগ্যতাঃ

অশিক্ষিত

প্রাথমিক

মাধ্যমিক

উচ্চমাধ্যমিক

স্নাতক

৭। পেশাঃ

পা কেটে যাওয়ার পূর্বেঃ

পা কেটে যাওয়ার পরেঃ

কারিগরি প্রশিক্ষণঃ

অন্য কাজঃ

বেকারঃ

৮। বৈবাহিকঅবস্থাঃ

বিবাহিত

অবিবাহিত

বিচ্ছেদ

৯। পা কেটে যাওয়ার কারণঃ

দুর্ঘটনা

অন্য কোন কারণ (.....)

১০। পা কেটে যাওয়ার তারিখঃ

১১। পা কেটে যাওয়ার অবস্থানঃ

হাঁটুর উপর

হাঁটুর নিচে

১২। পা কেটে যাওয়ার পাশঃ

ডান

বাম

দুই পাশেই

১৩। চলাচলের উপকরণ ব্যবহারঃ

১৪। কত দিন যাবত ব্যবহার করছেন?

৬ মাস

৬ মাসের কম

৬ মাসের বেশি

১৫। সারা দিনে আপনি গড়ে কত ঘন্টা কৃত্রিম পা ব্যবহার করেন?

উত্তরঃ

১৬। আপনি কি নিম্নাংশের কৃত্রিম পা ব্যবহার করে চেয়ার থেকে উঠে দাঁড়াতে পারেন?

হ্যাঁ

না

যদি হ্যাঁ হয়,

যখন আপনি শরীরের নিম্নাংশের কৃত্রিম পা ব্যবহার না করে চেয়ার থেকে উঠে দাঁড়াতে তার চেয়ে বর্তমানে এটি ব্যবহারে কেমন সহজ?

উত্তরঃ

যদি না হয়,

নিম্নাংশের কৃত্রিম পা ব্যবহার করে চেয়ার থেকে উঠার জন্য আপনার কি অসুবিধা হয়?

উত্তরঃ

১৭। আপনি কি নিম্নাংশের কৃত্রিম পা ব্যবহার দ্বারা বাড়িতে হাঁটতে পারেন?

হ্যাঁ

না

যদি হ্যাঁ হয়,

যখন আপনি শরীরের নিম্নাংশের কৃত্রিম পা ব্যবহার না করে বাড়িতে হাঁটতে তার চেয়ে বর্তমানে এটি ব্যবহারে কেমন সহজ?

উত্তরঃ

যদি না হয়,

নিম্নাংশের কৃত্রিম পা ব্যবহার করে বাড়িতে হাঁটার জন্য আপনার কি অসুবিধা হয়?

উত্তরঃ

১৮। আপনি কি নিম্নাংশের কৃত্রিম পা ব্যবহার করে বাইরে অসমতল মাঠে হাঁটতে পারেন?

হ্যাঁ

না

যদি হ্যাঁ হয়,

যখন আপনি শরীরের নিম্নাংশের কৃত্রিম পা ব্যবহার না করে বাইরে অসমতল মাঠে হাঁটতে তার চেয়ে বর্তমানে এটি ব্যবহারে কেমন সহজ?

উত্তরঃ

যদি না হয়,

নিম্নাংশের কৃত্রিম পা ব্যবহার করে বাহিরে অসমতল মাঠে হাঁটতে আপনার কি অসুবিধা হয়?

উত্তর:

১৯। আপনি কি নিম্নাংশের কৃত্রিম পা ব্যবহার করে রাস্তা থেকে ফুটপাতে উঠতে সক্ষম?

হ্যাঁ

না

যদি হ্যাঁ হয়,

যখন আপনি শরীরের নিম্নাংশের কৃত্রিম পা ব্যবহার না করে রাস্তা থেকে ফুটপাতে উঠতে তখন তার চেয়ে বর্তমানে এটি ব্যবহারে কেমন সহজ?

উত্তর:

যদি না হয়,

নিম্নাংশের কৃত্রিম পা ব্যবহার করে রাস্তা থেকে ফুটপাতে উঠতে আপনি এখন কি অসুবিধার সম্মুখীন হন?

উত্তর:

২০। আপনি কি নিম্নাংশের কৃত্রিম পা ব্যবহার করে ফুটপাত থেকে রাস্তায় নামতে সক্ষম?

হ্যাঁ

না

যদি হ্যাঁ হয়,

যখন আপনি শরীরের নিম্নাংশের কৃত্রিম পা ব্যবহার না করে ফুটপাত থেকে রাস্তায় নামতে তখন তার চেয়ে বর্তমানে এটি ব্যবহারে কেমন সহজ?

উত্তর:

যদি না হয়,

নিম্নাংশের কৃত্রিম পা ব্যবহার করার জন্য ফুটপাত থেকে রাস্তায় উঠতে আপনি এখন কি অসুবিধার সম্মুখীন হন?

উত্তর:

২১। আপনি কি নিম্নাংশের কৃত্রিম পা ব্যবহার করে খারাপ আবহাওয়ায় বাহিরে হাঁটতে পারেন?

হ্যাঁ

না

যদি হ্যাঁ হয়,

যখন আপনি শরীরের নিম্নাংশের কৃত্রিম পা ব্যবহার না করে খারাপ আবহাওয়ায় বাহিরে হাঁটতে তার চেয়ে বর্তমানে এটি ব্যবহারে কেমন সহজ?

উত্তর:

যদি না হয়,

নিম্নাংশের কৃত্রিম পা ব্যবহার করে আপনি বাহিরে খারাপ আবহাওয়ার মধ্যে হাঁটার সময় কি অসুবিধার সম্মুখীন হন?

উত্তর:

২২। আপনি কি নিম্নাংশের কৃত্রিম পা ব্যবহার করে হাতল ছাড়া কয়েকটি পদক্ষেপ (সিঁড়ি) উঠতে পারেন?

হ্যাঁ

না

যদি হ্যাঁ হয়,

যখন আপনি শরীরের নিম্নাংশের কৃত্রিম পা ব্যবহার না করে হাতল ছাড়া কয়েকটি পদক্ষেপ (সিঁড়ি) উঠতে তার চেয়ে বর্তমানে এটি ব্যবহারে কেমন সহজ?

উত্তর:

যদি না হয়,

নিম্নাংশের কৃত্রিম পা ব্যবহার করে একটি হাতল ছাড়া কিছু পদক্ষেপ (সিঁড়ি) উঠার জন্য আপনি এখন কি অসুবিধার সম্মুখীন হন?

উত্তর:

২৩। আপনি কি নিম্নাংশের কৃত্রিম পা ব্যবহার করে হাতল ছাড়া কয়েকটি পদক্ষেপ (সিঁড়ি) নিচে নামতে পারেন?

হ্যাঁ

না

যদি হ্যাঁ হয়,

যখন আপনি শরীরের নিম্নাংশের কৃত্রিম পা ব্যবহার না করে হাতল ছাড়া কয়েকটি পদক্ষেপ (সিঁড়ি) নিচে নামতে তার চেয়ে বর্তমানে এটি ব্যবহারে কেমন সহজ?

উত্তর:

যদি না হয়,

নিম্নাংশের কৃত্রিম পা ব্যবহার করে একটি হাতল ছাড়া কিছু পদক্ষেপ (সিঁড়ি) নিচে নেমে যাওয়ার জন্য আপনার কি অসুবিধা হয়?

উত্তরঃ

Permission letter

March 30, 2017

The Head of the Department
Department of Physiotherapy
Bangladesh Health Professions Institute (BHPI)
CRP, Savar, Dhaka-1343.

Subject: An application for permission to collect data.

Dear Sir,

I respectfully to state that I am Md. Nahidul Islam Nahid, a student of 4th(final)Professional B.Sc. in Physiotherapy at Bangladesh Health Professions Institute (BHPI). As a part of 4th(final)Professional I am conducting a research on "SATISFACTION LEVEL OF LOWER LIMB PROSTHESIS PATIENTS FOR AMBULATORY FUNCTION AT CRP IN BANGLADESH." I want to collect data from Prosthetics and Orthotics Department at CRP-Savar. For this reason I need participants who are currently using prosthesis for their mobilities. In this regard Prosthesis and Orthotics Department of CRP is a best suited place to collect data from prosthesis users.

I therefore, pray and hope that you would be kind enough to grant me and give me the permission to collect data from Prosthetics and Orthotics Department.

Sincerely Yours,

Md. Nahidul Islam Nahid

Md. Nahidul Islam Nahid

Class roll: 37

4th(final)Professional B.Sc. in Physiotherapy

Session: 2012-2013

BHPI, CRP, Savar, Dhaka-1343.

Forwarded
Habib 30.3.17

Allowed for data collection
91 30/03/17

Md. Obaidul Haque
Associate Professor & Head of the Department
Department of Physiotherapy
Bangladesh Health Professions Institute (BHPI)
C/O, Chappain, Savar, Dhaka-1343



বাংলাদেশ হেল্থ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই)
Bangladesh Health Professions Institute (BHPI)

(The Academic Institute of CRP)

Ref:

CRP-BHPI/IRB/10/17/141

Date: 15.10.2017

To
Md. Nahidul Islam Nahid
B.Sc in Physiotherapy
Session: 2012-2013.
Student ID: 112120038.
BHPI, CRP, Savar, Dhaka-1343, Bangladesh.

Subject: "Satisfaction Level Of Lower Limb Prosthesis Patients For Ambulatory Function At CRP In Bangladesh."

Dear Md. Nahidul Islam Nahid,
The Institutional Review Board (IRB) of BHPI has reviewed and discussed your application on 16/08/2016 to conduct the above mentioned thesis, with yourself, as the Principal investigator. The following documents have been reviewed and approved:

Sr. No.	Name of the Documents
1	Thesis Proposal
2	Questionnaire (English and Bengali version)
3	Information sheet & consent form.

Since the study involves self-administered questionnaire that takes 20 to 25 minutes and have no likelihood of any harm to the participants. The members of the Ethics committee have approved the study to be conducted in the presented form at the meeting held at 09:00 AM on August 17, 2016 at BHPI.

The institutional Ethics committee expects to be informed about the progress of the study, any changes occurring in the course of the study, any revision in the protocol and patient information or informed consent and ask to be provided a copy of the final report. This Ethics committee is working accordance to Nuremberg Code 1947, World Medical Association Declaration of Helsinki, 1964 - 2013 and other applicable regulation.

Best regards,

Muhammad Millat Hossain

Muhammad Millat Hossain
Assistant Professor, Dept. of Rehabilitation Science
Member Secretary, Institutional Review Board (IRB)
BHPI, CRP, Savar, Dhaka-1343, Bangladesh.

সিআরপি-চাপাইন, সাভার, ঢাকা-১৩৪৩, বাংলাদেশ, ফোন : ৭৭৪৫৪৬৪-৫, ৭৭৪১৪০৪ ফ্যাক্স : ৭৭৪৫০৬৯

CRP-Chapain, Savar, Dhaka-1343, Tel : 7745464-5, 7741404, Fax : 7745069, E-mail : contact@crp-bangladesh.org, www.crp-bangladesh.org



বাংলাদেশ হেল্থ প্রফেশন্স ইনষ্টিটিউট (বিএইচপিআই)
BANGLADESH HEALTH PROFESSIONS INSTITUTE (BHPI)

(The Academic Institute of CRP)

CRP-Chapain, Savar, Dhaka, Tel: 7745464-5, 7741404, Fax: 7745069

BHPI-Mirpur Campus, Plot-A/5, Block-A, Section-14, Mirpur, Dhaka-1206. Tel: 8020178, 8053662-3, Fax: 8053661

তারিখ : ০৬.০৪.২০১৭

প্রতি
ইনচার্জ
প্রহেটিক্স এন্ড অর্থোটিক্স বিভাগ
সিআরপি, সাভার, ঢাকা।

বিষয় : রিসার্চ প্রজেক্ট (dissertation) প্রসঙ্গে।

জনাব,

বিএইচপিআই'র ৪র্থ পেশাগত বিএসসি ইন ফিজিওথেরাপি কোর্সের ছাত্র মোঃ নাহিদুল ইসলাম নাহিদকে তার রিসার্চ সংক্রান্ত কাজের জন্য আগামী ০৮.০৪.২০১৭ তারিখ থেকে ০৮.০৫.২০১৭ তারিখ পর্যন্ত সময়ে আপনার নিকট প্রেরণ করা হলো। তার রিসার্চ শিরোনাম

“Satisfaction level of lower limb Prosthesis patients for ambulatory function at CRP in Bangladesh.”

তাই তাকে সার্বিক সহযোগিতা প্রদানের জন্য অনুরোধ করছি।

ধন্যবাদান্তে

মোঃ ওবায়দুল হক
সহযোগী অধ্যাপক ও বিভাগীয় প্রধান
ফিজিওথেরাপি বিভাগ
বিএইচপিআই।

Approved,
• He must have basic knowledge about lower limb prosthesis.
• Dear colleague, please cooperate with him in data collection. Please take his consent for taking photos and data collection.

Shohidul-912
SHOHIDUL NEAZ IMRAN
Acad. Pro-charge
Prosthesis & Orthotics Department
CRP, Savar, Dhaka