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IMPACT OF SOCIAL PARTICIPATION OF THE PATIENT WITH AMPUTATION

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

IMPACT OF SOCIAL PARTICIPATION OF THE PATIENT WITH AMPUTATION

Submitted by **FARIHA TASNIM** for the partial fulfillment of the requirements for the degree of Bachelor of Science in Physiotherapy (B. Sc. In PT)

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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 Department of Physiotherapy of Bangladesh Health Professions Institute (BHPI).

Signature: Farziha Tasnim **Date:** 18.11.2023

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Acronyms

AKA	Above Knee Amputation
BHPI	Bangladesh Health Professions Institute
BKA	Below Knee Amputation
BMRC	Bangladesh Medical Research Council
CRP	Centre for the Rehabilitation of Paralysed
ICF	International Classification of Functioning, Disability and Health
IRB	Institutional Review Board
ULA	Upper Limb Amputation
LLA	Lower Limb Amputation
TFA	Trans Femoral Amputation
TTA	Trans Tibial Amputation
WHO	World Health Organization

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ABSTRACT

Background: People with amputation have faced many challenges in their community life after completing their rehabilitation. Some of them can engage in their social events in modifying way, but many of them can not engage in their social events properly. It also restricts their ability and community participations. **Objective:** This study identified the participation restrictions among people with amputation. The purpose of this study was to evaluate social/community participation among people living with amputation. The study also identified the socio-demographic information, injury related information, socio-economic information and health status of the participants. This study also showed the association between demographic information (age, gender, occupation and prosthetic device) and social participation of the participants. **Methodology:** The study was conducted through cross-sectional design in quantitative study. 70 Participants were selected by using purposive sampling process. Data were collected by conducting face to face interview and used the "Participation scale". Chi-square test was used to find out the association between demographic information and social participation. **Result:** In this study, as a evaluation of social participation of people living with amputation, it was found that, about 2.9% (n=2) respondents are in "Mild restriction stage (score: 13-22)", and about 12.9% (n=9) participants are in "Moderate restriction stage (score: 23-32)". Besides, about 80% (n=56) participants are in "Severe restriction stage (score: 32-52)" and about 4.3% (n=3) participants are in "Extremely restriction stage (score: 53-90)". **Conclusion:** The result of the study will be helpful to know about the level of participation among the people with amputation who living in their own community. Almost all the participants experience some degree of restrictions on social participation. The result will also helpful to know about the demographic and health status of the participants. It is very essential to evaluate their participation restriction. This study provides the basis for identifying levels of social participation of community living amputee people at individual perspective.

Key words: *Participation, Social/community participation, Participation restriction, community factors, Environmental factors, Amputation, People living with amputation.*

CHAPTER-I INTRODUCTION

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 (Pooja and Sangeeta 2013, p. 36). Lower limb amputation is a permanent surgical procedure that can influence the daily activity of the person and also effect important functionality (Van Twillert et al. 2014, p. 915).

One of the first known medical procedures, dating to prehistoric times, is amputation. Amputation is the surgically performed deliberate removal of all or a portion of a limb or body part through a bone or joint. Amputations were carried out throughout the Neolithic period more for ritualistic and punitive purposes than for therapeutic ones. Hippocrates described therapeutic amputation for vascular gangrene in De Articularis about 460–377 BC (Hagan et al. 2018, p. 45).

Most amputations are performed in the lower limbs and below knee amputations are the most common procedures performed. There have been reports of a 4:1 ratio between lower and upper limbs. Above-knee amputations were found to be the most common surgery in other research (Hagan et al. 2018, p. 47). Limb amputation is a common surgical procedure performed by orthopedic, general, vascular and trauma surgeons for therapeutic reasons to save lives; it has profound economic, social and psychological effects (Sarvestani and Azam 2013, p. 126)

One or more toes, a portion of the foot, an ankle disarticulation, a trans-tibial (below the knee) amputation, a trans-femoral (above the knee) amputation, a hip disarticulation, and a hemi-pelvectomy (removal of half of the pelvis) can all be removed during a lower limb amputation. In high-income nations, dysvascularity is the primary factor leading to amputation; thus, lower limbs account for the majority of amputations (MacKay et al. 2022). Amputations are currently done to remove diseased tissues or to relieve pain. Indications for amputation vary among and within countries. The need for an amputation varies between and within nations. Additionally, temporal shifts have been seen. Trauma, peripheral vascular disease, tumors, infections, uncontrolled diabetes, and congenital limb deformities are a few examples of the

indications. In the western world, peripheral vascular disease is the most prevalent indicator. However, the most prevalent diseases in impoverished nations are trauma, uncontrolled diabetes, and conventional bone setter's gangrene. Amputations are more likely to occur in males (Hagan et al. 2018, p. 46).

Amputations account for over 185,000 of the almost 2 million people living with limb loss in the United States. Vascular disorders, such as diabetes and peripheral arterial disease, trauma (45%), and cancer (less than 2%) are the leading causes of amputations among people with limb loss in western countries (Kuubiere, Alhassan and Amalba 2015). Although trauma (often caused by car accidents) came in second in the current study, it was discovered to be the most frequent cause of amputation in young adults in their productive and reproductive age group. In this group, limb amputation nearly usually results in a severe financial crisis for the family, particularly when prosthetic limbs are either unavailable or unavoidable. Studies show that vascular conditions are the cause of 80–90% of limb amputations carried out in wealthy countries (Chalya et al. 2012, p. 4).

Due to their frequent travel and propensity for dangerous behavior, young boys are more likely to experience trauma. The productive age group whose economic contribution would be greatest without the physical and emotional handicap that comes with amputation, particularly in a developing country, is the peak age of 30-39 years in this study (Ajibade, Akinniyi and Okoye 2013, p. 185). The prevalence rate varies widely by nation and in accordance with elements including socioeconomic position, location, the severity of trauma, the delay in obtaining medical care, and clinical judgment (Gavan et al. 2016).

Bangladesh is a 160 million strong low-and middle-income nation. Except for a research published in 1997 that examined six years' worth of data from one district and estimated the incidence rate to be 75 per 100,000 population, little is known about the incidence rate of lower limb amputation in Bangladesh (Aftabuddin et al. 1997, p. 131). According to the authors, limb ischemia caused these occurrences in 80% of the cases. Poor road conditions, developed motorized transportation modes, and a rapid rate of urbanization have all been linked to an increase in the incidence of road accidents that end in amputations (Chalya et al. 2012, p. 2).

WHO stated that 21,316 people had died in vehicle accidents in Bangladesh. 2015 Global Status Report on Traffic Safety. Thus, it may be predicted that between 426,320 and 639,480 people in Bangladesh experience injuries as a result of road traffic each year. According to reports, amputations in India are most frequently caused by road accidents. (Pooja and Sangeeta 2013, p. 36). Moreover, the prevalence of peripheral vascular diseases—a prominent cause of limb amputation—is high in low- and middle-income countries (70%) and is rising quickly (Fowkes et al. 2013, p. 1330).

Amputation is a last choice when saving the limb is not possible, the limb is dead or dying, viable but nonfunctional, or the patient's life is in danger. Particularly in underdeveloped nations with subpar prosthetics, limb loss frequently has significant economic, social, and psychological implications. Along with increased perioperative mortality, major limb amputations are disfiguring. The majority of the increase in amputations in Western nations can be attributed to longer life expectancies (Erbes et al. 2022).

Bangladesh is a lower middle-income country in South Asia region and has a population over 167 million, with almost 60% of that participating in the labor force. The majority of labor is physical, such as agriculture or construction, and as such workplace injuries (and motor vehicle injury) are common, often resulting in lower limb amputation. In Bangladesh the majority of lower limb amputations occur in young, working age otherwise healthy males. The culture dictates that men are usually the sole income providers for multigenerational households. When incapacitated by injury or disability, their income is affected as is their role as a man in a patriarchal country (Stuckey and Ullah 2020).

CRP provides medical treatment, rehabilitation and support services focusing on physical, emotional, social, psychological and economic aspects. It promotes the development of skilled personnel in health care and rehabilitation in the country. The priority of P&O department of CRP is its clients' care and wellbeing throughout the process of delivering world class prosthetic devices, rehabilitation programs and orthotic solutions. The P&O team renowned for outstanding customer service, providing personalized care that best suits each client's needs and lifestyle goals (CRP 2019).

1.2 Rationale

Participation in everyday life as much as possible is an important issue of individual people with amputation. Participation is a concept in the International Classification of Functioning, Disability and Health (ICF), defined as “involvement in a life situation”. The goals of physiotherapy for amputee patients are to achieve maximum physical improvement, reduce deformities and facilitation of maximal independence in self-maintenance. This study is important to know about the level of participation among people with amputation in the community as it will provide the basis for identifying kinds the levels of disability of community living amputation people at individual perspective which open the need of the foundations of the society experienced by the victims that expose to amputation. This study will be beneficial for the Physiotherapy department and physiotherapists, because many physiotherapists are already working in different settings and work about amputations. This study will help them to increase the knowledge about the level of community/social participation of people with amputation. There are some studies about activity limitation and participation restriction among amputee people. But this study mainly focuses social participation of people with amputation in their community. It is very much important to know that, how people with amputation lead their social life, how much difficulties/challenges are faced by them. This study will evaluate the social participation of them; and their level of participation, health status would be known from this study, which is very important for health professionals. Besides, this study will helpful to find out the association between socio-demographic and socio-economic factors. Researcher feels very much interest in this area as a student of physiotherapy. It is hoped that further resource will be developed in this area after completing this study. And in future when anyone wants to do future research in this area, health professionals can get ideas and valuable information’s from this study that will help them. The analysis of socio-demographic information’s, socio-economic information’s, health status information’s and participation scale information’s will provide significant evaluation of social participation among the people with amputation at CRP.

1.3 Research question:

What is the level of social participation among the patient with amputation in the community at CRP?

1.4 Aim of the study

To evaluate the level of social participation of amputation patients in community attended at CRP.

1.5 Objectives

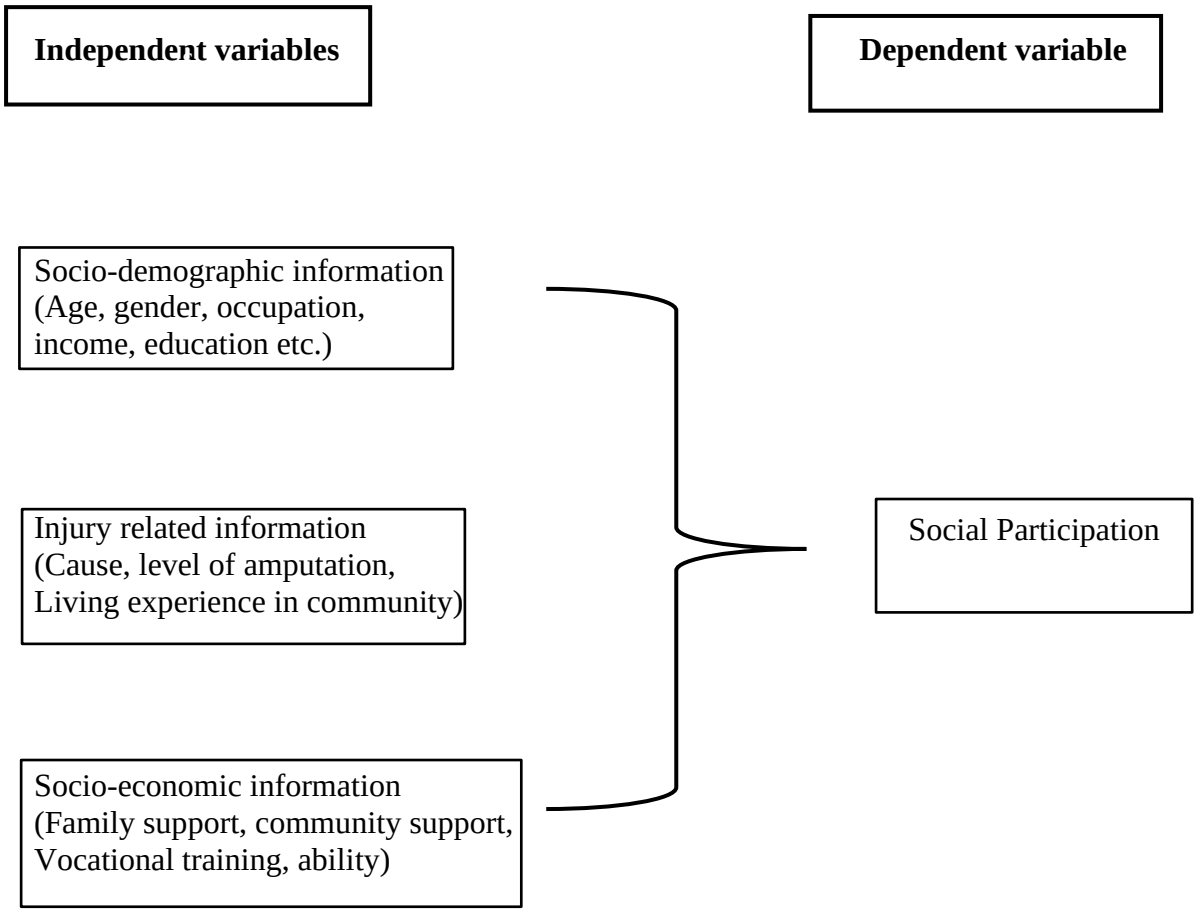
1.5.1 General objective

To identify the level of social participation of amputation patients in the community attended at CRP.

1.5.2 Specific objectives

1. To find out socio demographic information.
2. To evaluate the participation restrictions among the patients with amputation.
3. To find out the association between socio-demographic factors and social participation.
4. To find out the patient's willingness in social activities and community participation.
5. To find out about the patient's social activities and secondary complications.
6. To discuss about the independency and dependency of the patients after amputation.

1.6 Conceptual framework



1.7 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 is 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.

Social participation

Social participation as used in this study combines two terms, namely community integration and participation. Community integration refers to being part of the mainstream of family and community life, resuming normal roles and responsibilities as appropriate to the PLWSCI’s age, gender and culture and being an active and contributing member of society (Dijkers 1998, p. 5). Participation is defined as involvement in everyday life situations (WHO 2001).

Participation restriction

Participation restriction means problems in an individual may experience in involvement in life situations. Determined by comparing an individual's participation to that which is expected of an individual without disability in that culture society (Ustun et al. 2010).

Participation: A person's involvement in a life satiation. It represents the societal perspective of functioning (Ustun et al. 2010).

Community: A group of people living in the same place or having a particular characteristic in common. A community is a small or large social unit (a group of living things) that has something in common, such as norms, religion, values, or identity. Communities often share a sense of place that is situated in a given geographical area (e.g. a country, village, town, or neighborhood) or in virtual space through communication platforms (James et al. 2012, p. 14).

CHAPTER-II LITERATURE REVIEW

Amputation is the removal of a limb by trauma, medical illness, or surgery. As a surgical measure, it is used to control pain or a disease process in the affected limb, such as malignancy or gangrene. In some cases, it is carried out on individuals as a preventative surgery for such problems (Connel, Dobsom and Machlach 2016, p. 1205).

A person becomes permanently disabled after an amputation. It profoundly alters the victims' way of life, how they operate, and how they move. Lower limb amputees are more likely than upper limb amputees to encounter these new situations. Additionally, lower limb amputations occur more frequently than upper limb amputations (Calle-Pascual et al. 2011).

Amputation leads a man to endless disability. An everlasting cycle of infirmity follows an amputation. It affects the sufferers' quality of life, ability to function, and mobility. Lower limb amputees are more likely than upper limb amputees to encounter these altered circumstances. Additionally, lower limb amputations occur more frequently than upper limb amputations (Ziegler-Graham et al. 2008, p. 423).

Amputation may possibly include a single limb (unilateral), both upper and lower limbs (bilateral), or a combination of upper and lower limb amputations (multiple amputations). Amputation may be performed at different functional levels. Lower limb amputation may comprise amputation of one or more toes, part of the foot, ankle disarticulation (disarticulation means amputation of a body part through a joint), transtibial (below the knee) amputation, knee disarticulation, trans-femoral (above the knee) amputation, hip disarticulation and hemipelvectomy (removal of half of the pelvis).

The removal of one or more fingers, wrist disarticulation, below-elbow amputation, elbow disarticulation, above-elbow amputation, shoulder disarticulation, and forequarter amputation are all examples of upper limb amputation. In high-income nations, dysvascularity is the main factor that results in amputations (Ziegler-Graham et al. 2008, p. 425).

Bangladesh is a 160 million strong low-and middle-income nation. Except for a research published in 1997 that examined six years' worth of data from one district and estimated the incidence rate to be 75 per 100,000 inhabitants, little is known about the incidence rate of lower limb amputation in Bangladesh (Aftabuddin et al. 1997, p. 132). Globally, the rate of lower limb amputation varies greatly, from 5.8 to 31 per 100,000 people (Hisam et al. 2016, p. 852).

The Amputee Coalition of America estimates that there are 185,000 new lower extremity amputations occurs each year just within the United States and also reported that there are nearly 2 million people living with limb loss in the United States (LLA 2012). The ratio of upper limb to lower limb amputation is 1:4. Around 30% of USA amputee patient have lower limb loss and 10% upper limb loss patient (Cooper 2014, p. 70). Congenital amputation, a congenital condition in which fetal limbs have been amputated by constrictive bands, is a special case. Amputation of the hands, feet, or other bodily parts is or was used in various nations as a form of punishment for criminal behavior (Ahmed et al. 2016, p. 348).

The amputees ranged in age from under 20 to over 70 years old. Ages 21 to 30 made up 32.0% of all amputees, making them the most common age range for amputation. Twenty-one and under (age group) was third (14.2%), followed by the 31- to 40-year age group (23.2%) and the 31 to 40-year age group (23.2%) (Pooja and Sangeeta 2013, p. 36). The majority of upper limb amputations (ULA) are brought on by workplace trauma in the form of accidents. As a result, it's crucial to consider the patients' occupations and gender (Brown et al. 2016). Patients occasionally need to change their roles or jobs because they can no longer work in their previous capacities (Jang et al. 2011, p. 907).

LLA in both developed and developing has been found to change in their quality of life after amputation (Perkins et al. 2012, p. 75). The leading causes of lower limb amputation in Sri Lanka are diabetic foot ulcers (37.6%), peripheral vascular disorders (31.7%), trauma, acute limb ischemia, infection, chronic osteomyelitis, elephantiasis, pressure sores, and chronic wounds (Ubayawansa 2016, p. 621).

Lower limb amputation is a lasting surgery that has significant practical and sequelae that can impact the daily living activities of the person with amputation (Van Twillert et al. 2014, p. 915).

Participants cited physical obstacles to prosthesis mobility and the built environment's lack of accessibility as barriers to participation. Some of them experienced physical and emotional distress as a result of their injuries, which further restricted their social and community engagement. They also had chronic and severe health issues. Participants emphasized the usefulness of supportive community groups and peer-support networks in easing the transition to their pre-amputation family, professional, and social roles. In addition, participants believed that having a strong, upbeat attitude and having self-motivation were crucial to helping them resume social and community activity (Keeves et al. 2022, p. 4).

Participating involves having access to resources for this consideration as well as being actively involved in various life situations. According to the ICF model, involvement is influenced by both personal and environmental factors. While exterior environmental elements may be different from the internal characteristics that influence people's life decisions, choices, relationships, and community life, personal characteristics serve to distinguish individual characteristics and their traits (WHO 2001).

Disability has a greater impact on vulnerable populations like women, children, the elderly, and the impoverished. Women with disabilities face double discrimination based on their infirmity and gender, and they also perform less well in school than their husbands. Children with disabilities frequently die young or are mistreated, rejected, and excluded. Others are socially shunned, denied an education, rendered unsuited for employment, and ultimately spiral further deeply into poverty (DFID 2000; Roncancio 2015, p. 113).

The attitudinal and organizational barriers are the basic issues for characterizing persons with disabilities as negligible and their exclusion from the work place. People with disabilities are denied equal access to the available social possibilities because of the general public's unfavorable behavior toward them, which degrades their moral standards at the societal level (Lindsay 2011, p. 845).

Numerous researches have concentrated on the physical and social environment and shown that environmental limits are having a negative impact on social involvement. Environmental factors are thus seen as crucial in limiting the ability to carry out everyday tasks and restricting access to social support (Whiteneck et al. 2004, p. 1793; Noreau and Boschen 2010, p. 45).

Author Roncancio (2015) mentioned, individuals with impairments face additional expenses and boundaries for their rehabilitative health care services and are socially isolated for education and employment opportunities which adversely affect their consumption leading them to poverty. Even if two people have the same health condition, participation aspects like its nature, duration, or quality depend on personality factors and cannot in any way be compared. Instead of considering a person's range of activities, participation is assessed in light of the condition in society as a whole. Certain medical conditions and concerns may come from limited participation.

An individual can take part in a variety of activities in their profession if their engagement is appropriate. Some individuals associate involvement with social skills, however experts claim that it is more difficult than other types of participation (Akyurek and Bumin 2017). PWDs' conditions in Bangladesh differ from the norm in a number of sectors, including education, employment, civil rights, and the social sector. Discrimination against people with disabilities is causing problems in their daily life, which directly affects sociocultural and economic activity (Rahman 2017, p. 15).

Disability remains a neglected issue in Bangladesh. There haven't been many studies done at the policy level in this area yet. However, in this political work cycle, the strategy's implementation is a significant issue. Despite having a legal obligation to ensure equal access and opportunities for those with disabilities, little has changed in the way that these individuals actually work or receive their education (Jalil 2012, p. 87). Inadequacies in empirical research may be explained by the conceptual complexity of activity and involvement, which are significant constructs. Environmental factors interact with impairment and there are methodological and conceptual problems with the definition of participation (Whiteneck 2009, p. 145).

The Participation scale (P- scale) has 18 items, in which the person is asked to respond whether they perceived their level of participation as equal to their peer in each of the situations described by the scale items. If the person considers that his or her level of participation is lower than that of his/her peer, representing a possible restriction to participation, he/she is also asked to indicate to what degree this is a problem in his/her daily routine (van Brakel 2010, p. 50).

Eight of the nine major areas of life identified by the ICF—learning and applying knowledge, communication, personal care, mobility, domestic life, interpersonal interactions and relationships, major areas of life, and community, social, and civic life—are the focus of the P-Scale, which aims to measure the restrictions experienced by the individual in each of these areas (van Brakel et al. 2006, p. 194).

The scale's novel feature is that respondents are asked to evaluate their own performance in relation to that of a real or imagined "peer"—someone who is identical to them in all aspects, with the exception of disease or disability. This comparison was put up to enable portrayal of participation expectations and roles in various social and cultural contexts (van Brakel 2010, p. 52). These unique characteristics suggest that the P-scale may be helpful for determining a client's involvement limitations in various life scenarios. The p-scale is intended to measure and evaluate the involvement of people with a health condition or handicap, particularly those that are stigmatized or discriminatory (van Brakel et al. 2006, p. 196).

Participation is assessed at the level of person and environment. “Activity” was understood to refer to the broad class behavioral, cognitive, and emotional experiences of individuals. “Participation” by contrast, is considered to refer to persons interactions with their social environment. One possibility for using ICF classifications is to make this conceptual distinction between activity and participation, which is consistent with other stated theoretical viewpoints (Whiteneck 2009, p. 149).

Adjusting to an acquired amputation or other obvious changes along with functional limitations and physical function deficits, the patients face includes not only impairments in body function and activity limitations but also participation restrictions. Participation is the term used by the International Classification of Functioning,

Disability, and Health to describe a person's involvement in everyday activities. Social involvement is a component of participation, although the term's meaning is unclear, particularly when it comes to defining the difference between activity and participation. It has been argued that the extra idea "social participation" would be a better term to highlight both the societal involvement and the individual participant's subjective experience (Kristjansdottir et al. 2020, p. 521).

The Global Lower Extremity Amputation Study Group examined the prevalence of lower limb amputation in 10 different places around the world using a consistent technique for data collecting, and they found significant variations among test sites in their annual rates of lower limb amputation (Yari, Dijkstra and Geertzen 2008, p. 1128). According to the most recent figures in the United States, there are currently more than 1.7 million people living with amputations (Mousavi, Saied and Heidari 2012, p. 1555).

The Navajo region of the United States reported the highest rates of all-cause amputation (22.4 per 100,000 women, 43.9 per 100,000 men), while the lowest age-adjusted rates of first major lower limb amputation were found in Madrid, Spain (0.5 per 100,000 women, 2.8 per 100,000 men) (Moxey et al. 2010, p. 1350). According to estimates, one in every 190 Americans has lost a limb, and if current trends continue, the number of Americans who live with amputations would more than double to 3.6 million by the year 2050 (Ziegler- Graham et al. 2008, p. 422). Multiple facets of a person's life are impacted by major limb amputation, including his mobility, self-care routines, mental health, and chances for employment and leisure (Ikram et al., 2014, p. 168).

When patients are unable to function freely in the community and may need long-term institutional care, the costs of limb amputation might be exorbitant in terms of initial hospital treatment, rehabilitation, and continuous community support (Peach et al. 2012, p. 36). Amputations are most frequently caused by vascular disorders, trauma, cancer, and congenital deficiencies. Amputation rates have gone up for people with cardiovascular conditions, down for people with trauma, and steady for people with cancer and congenital amputations (Varma, Stineman and Dillingham 2014, p. 1).

According to a five-year assessment of lower limb amputation prevalence rates in England, 39% of patients who had significant amputations during this time had diabetes as their primary diagnosis. In addition, 43% had been diagnosed with CVD, with only 13.9% of interventions being related to stress or injury (Moxey et al. 2010, p. 1348). After a successful lower-limb amputation, one of the main objectives of rehabilitation is the effective fitting of a prosthesis and use of the prosthesis to achieve functional mobility (Kahle et al. 2016, p. 125).

It is important to have a deeper understanding of experiences that arise in social circumstances and the impact that an esthetic prosthesis may have interest to further develop therapeutic approaches in accordance with patients' individual needs (Kristjansdottir et al. 2020, p. 521). Physical rehabilitation services for those who have had amputations, as it has been determined that long-term rehabilitation and prosthetic treatments are necessary due to the prevalence and economic impact of amputation (Dillingham, Yacub and Pezzin 2011, p. 336).

After an amputation, a number of issues, including pain, altered functional abilities, psychological adjustment, effects on employment and occupations, and burden on families and society, can affect one's rehabilitation status and quality of life. Patients with upper limb amputations, who desired and were in need of esthetic prostheses due to appearance-related concerns, have been provided with devices (Kristjansdottir et al. 2020, p. 523).

Here, a number of factors contribute to the existence and tenacity of pain following lower limb amputation. Patients may experience pain during surgery right away or discomfort following amputation, including pain from a residual limb or pain from a phantom limb. The part of the limb that is still attached after an amputation experiences residual limb discomfort. Mechanical causes of the pain may include an ill-fitting prosthesis, bruising of the limb, chafing, or skin rubbing. Ischemia, heterotopic ossification, and post-amputation neuromas are other conditions that may result in pain in the residual limb. Phantom pain affects the limb(s) that have been amputated or have had portions of them removed. One third of their respondents reported having phantom pain (Desmond and Maclachlan 2010, p. 280).

Most amputees are likely to feel phantom sensations, which might include tingling, warmth, cold, cramping, or constriction in the missing part of the leg and may last their entire lives. Phantom sensations should be ignored and only treated if they start to interfere with daily activities. Phantom pain and sensations are physical complications related to amputation. The pre-status of patients with LLA also determines their eligibility for rehabilitation, including if they are non-ambulatory (bedridden), have a mental illness, are older than 60, or have another disease (Mosaku et al. 2009, p. 21).

However, despite these issues and their sparing use of their prosthesis, some persons prefer to engage in physical activities independently (MacNeill et al. 2008, p. 189). Individuals' actual level of engagement (objective participation) and their happiness with this level of activity (subjective participation) are two different aspects of this participation. When key activities inside or outside of the home become challenging due to physical or cognitive constraints, people may experience reductions in both aspects of engagement (Roepke et al. 2017, p. 741).

Participation is evaluated at the individual and environmental levels. The term "activity" was used to describe a broad range of human behavioral, cognitive, and emotional experiences. Contrarily, "participation" is thought to refer to a person's interactions with their social surroundings. One method for using ICF classifications is to make this conceptual distinction between activity and participation, which is consistent with other stated theoretical viewpoints (Whiteneck 2009, p. 147).

Re-engagement and participation in a variety of personal, familial, and social responsibilities are also necessary for successful rehabilitation. Participation has been identified as a crucial element of successful recovery from severe physical or mental illnesses. Therefore, a better comprehension of Veterans' engagement in chosen life roles and activities may be beneficial for the creation and study of therapeutic options for Veterans living with amputation (Erbes et al. 2022).

There were 1.6 million people living without a limb in 2005. Of these cases, 38% had an amputation due to dysvascular disease and concurrently received a diagnosis of diabetes mellitus, and 42% were non-White. By 2050, there will likely be 3.6 million individuals living with limb loss, a more than twofold increase from the current estimate. This figure would decrease if incidence rates related to dysvascular disease could be lowered by 10% (Ziegler-Graham et al. 2008, p. 426).

The extent of participation in religious, social, recreational, professional, political, and other organizational community groups and activities is referred to as "community-based participation". The situation of social involvement varies depending on the perspective of the country, the culture, and the results may alter depending on whether the perspective is from a developed country or a developing/poor country. In conclusion, it can be said that, social participation might be well or in satisfactory level in developed country, because of their high-income rate, good environment and accessibility facilities. These sides or facilities are not well or not in satisfactory level in low economic country, that’s why social participation might not be well in low-economic country.

CHAPTER-III METHODOLOGY

3.1 Study Design

This study was conducted using cross sectional design under a quantitative study method. Survey methodology was chosen to meet the study aim as an effective way to collect data

3.2 Study Population

A population was the total group or set of event or totality of the observation on which research was carried out. In this study, sample population were selected from the participant of Prosthetics and Orthotics department of Centre for the Rehabilitation of the paralyzed (CRP), Savar, Dhaka and amputee patients lived in community in CRP area.

3.3 Study Site

The study was conducted at Prosthetics and Orthotics department of Centre for the Rehabilitation of the paralyzed (CRP), Savar, Dhaka and amputee patients lived in community in CRP area.

3.4 Duration of data collection: The study was conducted from 15th May to 20th July, 2023.

3.5 Sample Size

Sample was a group of subjects selected from population, who were used in a piece of research. A sample was a smaller group taken from the population. Sometimes the sample size may be big and sometimes it may be small, depending on the population and the characteristics of the study. When the sample frame was finite,

The equation of finite population correction in case of cross sectional study was:

$$n = \frac{Z^2 pq}{d^2}$$

$$= \frac{(1.96)^2 x\ 0.45\ x 0.55}{(0.05)^2}$$

=380

Here,

Z (confidence interval) = 1.96

P (prevalence) =45% (Ziegler et al., 2008)

And, q= (1-p)

= (1-0.45)

=0.55

The actual sample size was, n= 380.

According to this equation the sample should be more than 380 people but due to lack of opportunity the study was conducted with 70 participants attending at prosthetics and orthotics department, CRP, selected according to inclusion and exclusion criteria.

3.6 Sampling Techniques

Researcher selected purposive sampling techniques to collect data and Purposive sampling starts with a purpose in mind and the sample was thus selected to include people of interest and exclude those who do not suit the purpose. Usually, the population was too large for the research to attempt to survey all of its members. Purposive sampling technique were selected because it involves the deliberate selection of individuals by the researcher based on pre-define criteria and getting of those samples whose criteria was concerned with the study purpose. Here another factor was resource limitation to get the sample in bigger aspect as well as the limitation of time. Moreover, purposive sampling is a non-representive subset of some larger population, and is constructed to serve a very specific need or purpose (Oliver 2006).

A small, but carefully chosen sample can be used to represent the population. The sample reflects the characteristics of the population from which it is drawn. As well as purposefully selected 70 people with amputation, who were living in their own community after completing rehabilitation from CRP.

3.7 Inclusion criteria

- People with limb amputation (Acquired) (Kristjansdottir et al. 2020, p. 521).
- Age range:

  The age of the amputees ranged from 18 years to 64 years (Geiss et al. 2019, p. 50). 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 (Pooja and Sangeeta 2013, p. 36).
- Both gender:

  There were more male amputees than female ones, with 86% of all amputees being men (Pooja and Sangeeta 2013, p. 36).
- Amputation patients who were participate different sports (Matthews, Sukeik and Haddad 2014, p. 481)
- People who were involve in social participation with amputation.
- People who were willing to participate in the study.

3.8 Exclusion Criteria

- Patient with others mental or physical illness.
- Patients who are <18 years old and >64 years old.
- Patients with cognitive disorders.
- Not able to give consent.
- Totally uninvolved in social gathering.

3.9 Data collection tools

Participation scale (P-scale) was the data collection tool. Other instruments are:

1. Socio-demographic Information sheet
2. Consent form
3. Pen, Pencil
4. Eraser
5. Sharper

3.10 Data collection method:

The approval of the study protocol was taken from the Institutional Review Board (IRB) of the Bangladesh Health Professions Institute (BHPI). Written permission from the

authorities of the specific unit of Centre for the Rehabilitation of the Paralyzed (CRP) was provided to conduct the study. Data for this study was collected through face to face interview via interviewer administrated questionnaire. A self-developed socio-demographic questionnaire (including of socio-economic information, injury related information and health status) and participation scale were used to conduct the interview with the participants.

3.11 Data analysis:

There are many statistical methods that might be useful but the researcher used descriptive statistics. Descriptive statistics are those that describe, organize and summarize the data and include think as frequencies, percentages, and description of central tendency and descriptive of relative relation. The data analysis was done by statistical software named Statistical Package for Social Science (SPSS) version 22; by using descriptive statistic method and Microsoft excels spreadsheet. Each subject was defined by a code number and every question was conducted as a variable.

The code number and variables were labeled in a list in the variable view and the data input was performed in the data view of SPSS. The researcher checked the both questionnaire (demographic and participation scale questionnaire) and also data view for any unclear or missing or incorrect information. Then the data set was ready to analysis. Descriptive statistics was used to estimate the information about socio-demographic status, socio-economic status, injury and health status; and also used to find out the frequency and percentage of these variables and the level of social participation of the participants. Data were analyzed by descriptive statistics and calculated as percentages and presented by using table, bar graph, pie charts etc. Microsoft office Excel 2022 was used to decorating the bar graph and pie charts. The results of this study were consisted of quantitative data. By this study a lot of information was collected.

Chi-squared test:

A chi-squared test, also written as $\chi 2$ test, is any statistical hypothesis test where the sampling distribution of the test statistic is a chi-squared distribution when the null hypothesis is true. Without other qualification, 'chi-squared test' often is used as short for Pearson's chi-squared test. The chi-squared test is used to determine whether there

is a significant difference between the expected frequencies and the observed frequencies in one or more categories.

Assumptions of the Chi-square:

1. The data in the cells should be frequencies, or counts of cases rather than percentages or some other transformation of the data.
2. The levels (or categories) of the variables are mutually exclusive. That is, a particular subject fits into one and only one level of each of the variables
3. Each subject may contribute data to one and only one cell in the χ2. If, for example, the same subjects are tested over time such that the comparisons are of the same subjects at Time 1, Time 2, Time 3, etc., then χ2 may not be used.
4. The study groups must be independent. This means that a different test must be used if the two groups are related. For example, a different test must be used if the researcher's data consists of paired samples, such as in studies in which a parent is paired with his or her child.

Calculating Chi-square

The formula for calculating a Chi-Square is:

$$\sum \chi^2_{i-j} = \frac{(O - E)^2}{E}$$

Where,

O = Observed (the actual count of cases in each cell of the table)

E = Expected value

χ2 = The cell Chi-square value

∑χ2 = Formula instruction to sum all the cell Chi-square values

$xi2-j$ = i–j is the correct notation to represent all the cells, from the first cell (i) to the last cell (j); in this case Cell 1 (i) through Cell 6 (j).22 The first step in calculating a χ2 is to calculate the sum of each row, and the sum of each column. These sums are called the "marginals" and there are row marginal values and column marginal values.

3.12 Ethical consideration:

Ethical considerations implemented to avoid ethical problem. The researcher got permission from research supervisor and head of the department of Physiotherapy of Bangladesh Health Professions Institute (BHPI), an academic institute of CRP to conduct the study. Researcher also got permission from CBR department to collect research participants address and contact number for data collection purpose. Information sheet and consent form were provided to each participants. Aim and objectives were clearly described in information sheet and consent form. Researcher informed verbally about the topic and purpose of the study to participant. The researcher assured them that confidentiality of personal information will be strictly maintained in future. The researcher ensured that the service of patient will not be hampered from their participation in this study. Participant had full right to withdraw their participation from this study at any time. The researcher also committed not to share the information given with others except the research supervisor. As the participants were informed by the information sheet about the study, so they provided their consent by the consent form. The information gathered from the participants anonymously. The researcher was available to answer any study related questions or inquiries from the participants. All sources cited and acknowledged appropriately. The field notes and answer sheet not shared or discussed with other.

CHAPTER-IV RESULTS

For the purpose of this research, a total of 70 participants who had limb Amputation were questioned. The results of this investigation are summarized in the following paragraphs.

4.1 Results with respect to the Socio-Demographic status

4.1.1 Age of the participants

Table no 1: Age of the participants

Age range	n (%)
18-30 years	26 (37)
31-40 years	19 (27.2)
41-50 years	16 (22.8)
51-64 years	9 (12.8)

Among 70 participants, 37%(n=26) were between 18-30 years age range, 27.2% (n=19) were 31-40 years range, 22.8% (n=16) were 41-50 years range, 12.8% (n=9) were 51-64 years range. The mean age is 36. The standard deviation is 11.105.

4.1.2 Gender of the participants

Male was predominantly higher than female. Out of 70 participants 62.90% (n=44) were male and 37.10% (n=26) were female.

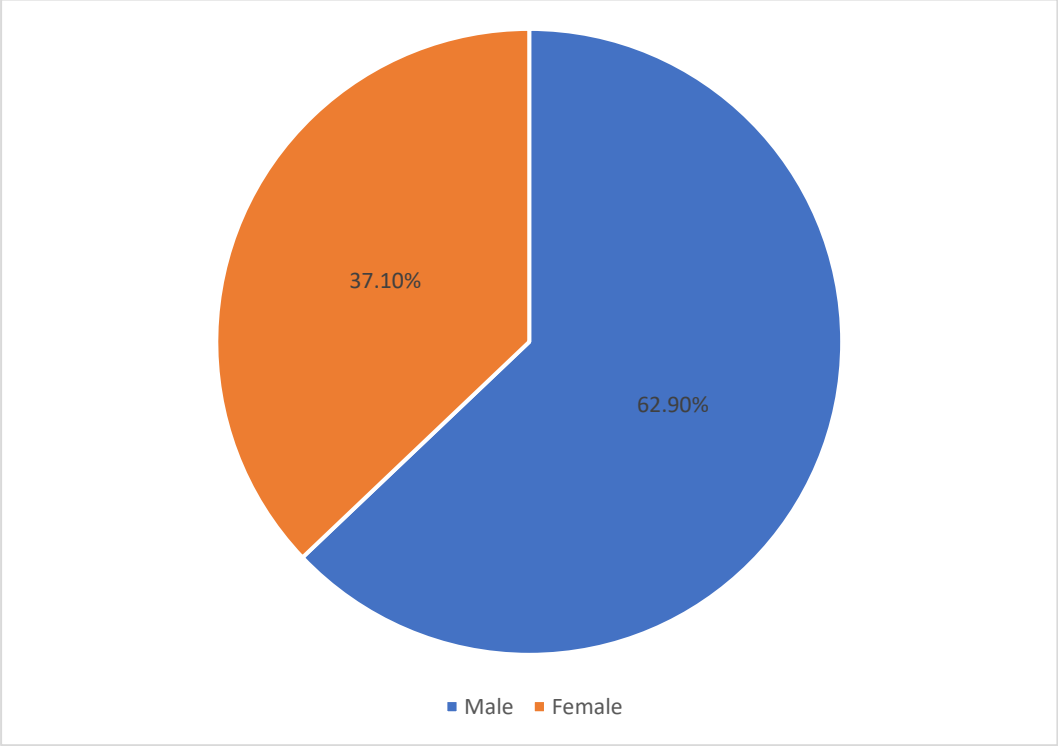


Figure 1: Gender distribution of the respondents

4.1.3 Educational level of the participants

This figure-2 showed that Graduated participants were the highest rate, at 31.4% (n = 22). Secondary passed participants had the second-highest rate, which was 24.3% (n = 17). Among the HSC passed participants, third position was 20% (n = 14), Post graduated was 5.7% (n = 4), Primary passed was 11.4% (n = 8) and 7.1% (n = 5) was illiterate.

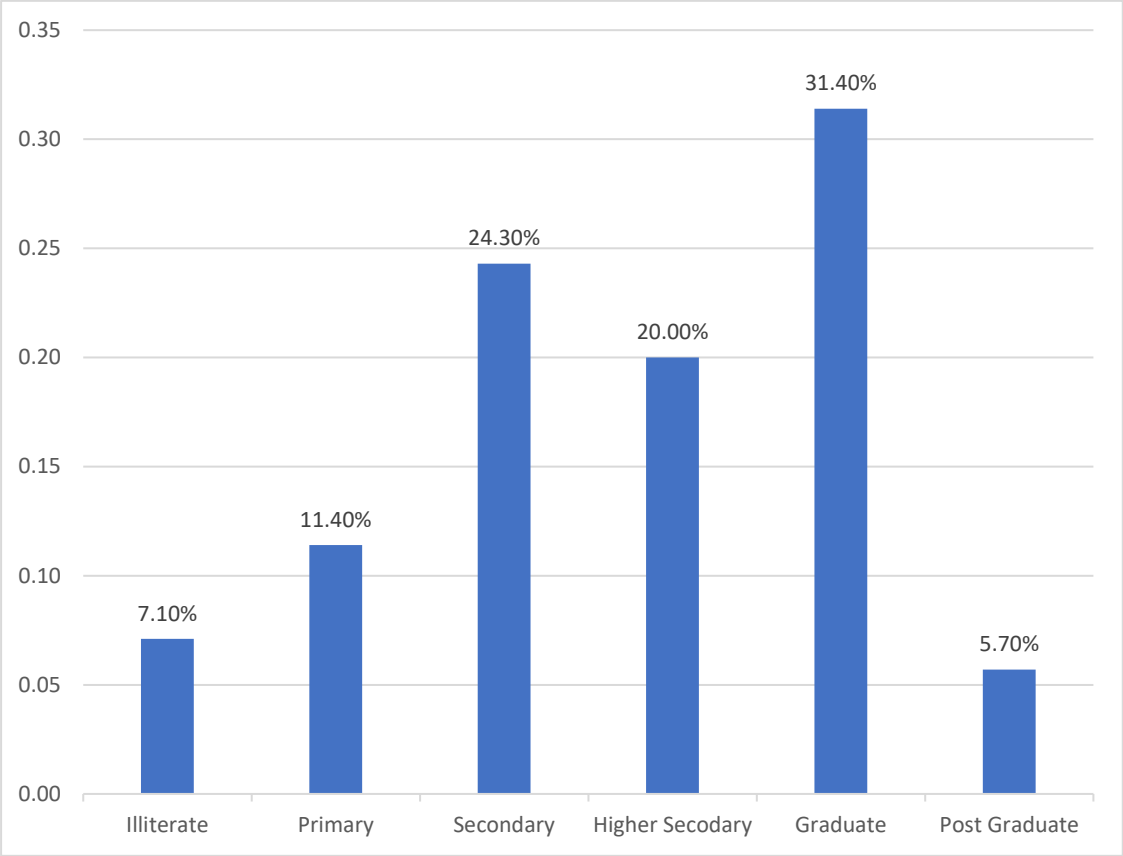


Figure 2: Educational level of the participants

4.1.4 Marital status of the participants

Table no 2: Marital status of the participants

Marital status	**n(%)**
Married	56 (80.0)
Unmarried	13 (18.6)
Divorced	1 (1.4)

About 18.6% respondents (n=13) were unmarried and 80% respondents (n=56) were married among 70 participants. Around 1.4% respondents (n=1) had divorced.

4.1.5 Occupation of the participants

Table no 3: Occupations of the participants

Occupation	**n(%)**
Government employee	5 (7.1)
Non-government employee	9 (12.9)
Businessman	22 (31.4)
Student	12 (17.1)
House wife	19 (27.1)
Retired	1 (1.4)
Unemployed	2 (2.9)

In the case of occupation of the participants 7.1% (n=5) participants was government employee, 12.9% (n=9) participants were non-government employee, 31.4% (n=22) participants were businessman, 17.1% (n=12) participants were students, 27.1% (n=19) participants were house wife, 1.4% (n=1) participants were retired and 2.9% (n=2) participants were unemployed.

4.1.6: Living area

Among 70 participants 38.6% (n=27) participants lived in rural areas, 48.6% (n=34) lived in urban areas and 12.9% (n=9) participants lived in semi-rural areas.

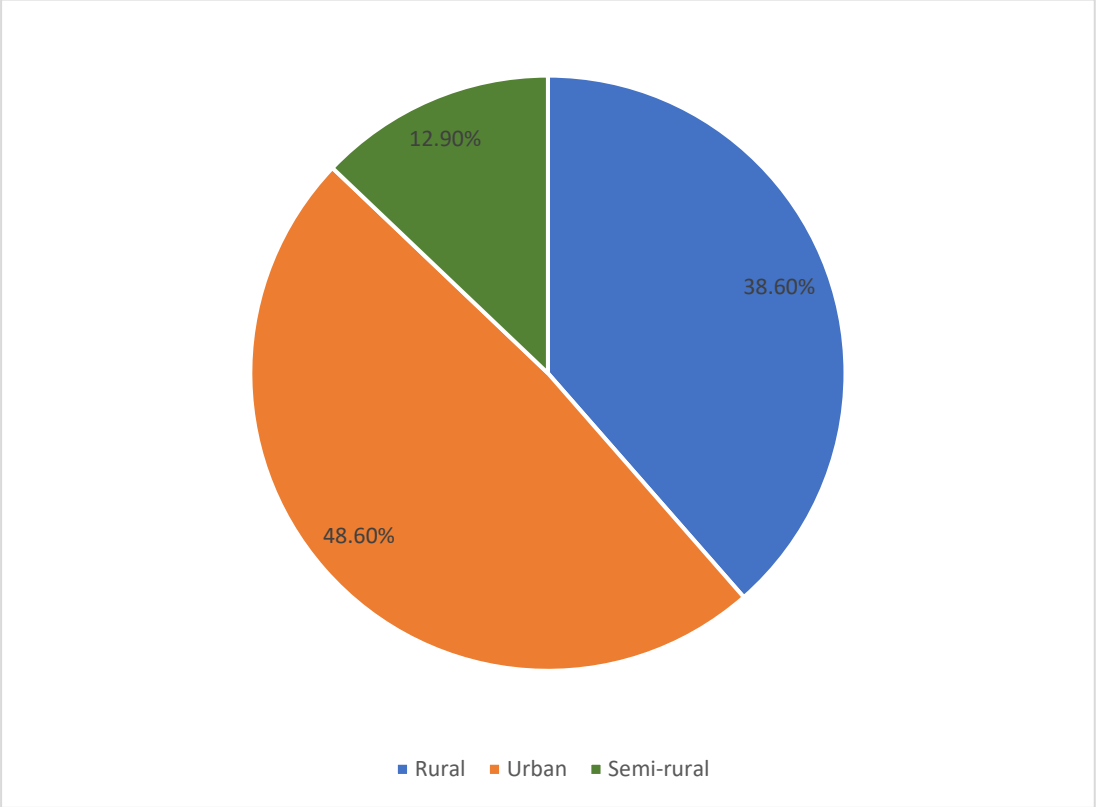


Figure 3: Living area of the participants

4.1.7 Type of living place

Table no 4: Type of living place of the participants

Type of living area	**N(%)**
Building	44 (62.9)
Tin shaded	24 (34.3)
Mud house	2 (2.9)

On account of analysis about type of living place 62.9% (n=44) participants lived in buildings, 34.3% (n=24) participants lived in tin shaded houses and 2.9% (n=2) participants lived in mud houses among 70 participants.

4.1.8 Earning persons in family

In this case, earning person of the family is self-earner 51.4%, where 27.1% is husband of the female participants and 17.1% is father, 2.9% are mother of the participants and lastly 1.4% earners are other members of the family.

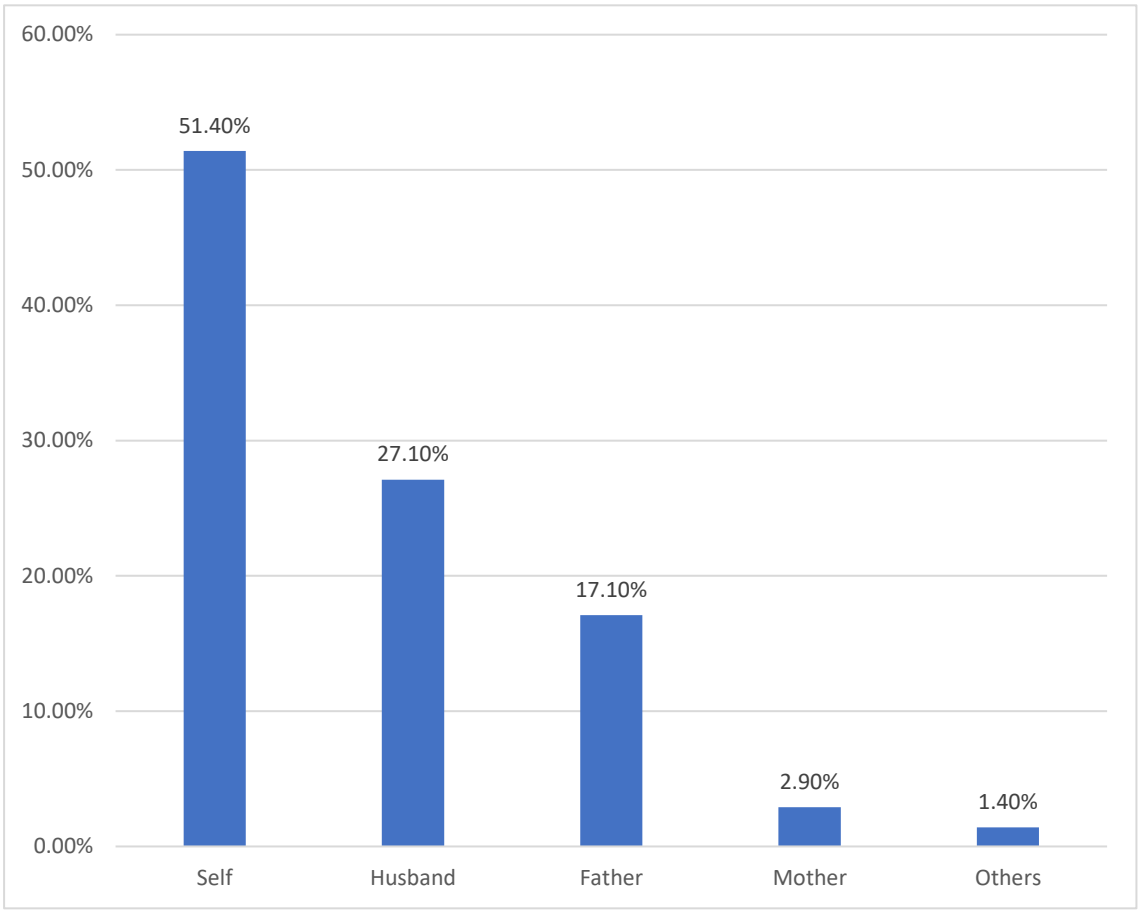


Figure 4: Earning persons in family

4.1.9 Monthly income of the participants

Table no 5: Monthly income of the participants

Family Income(monthly)	N(%)
<2000	0
2000-5000	9(12.9)
5001-8000	4(5.7)
8001-12000	34(48.6)
>12000	23(32.9)

In the case of monthly family income most participants had more than 12000 income (n=23) and the percentage was 32.9%. In 8001-12000 range family income were found in 48.6% (n=34) participants. 5.7% (n=4) participants were found having 5001-8000 range of family income. 12.9% (n=9) participants were found having 2000-5000 and less than 2000 of family income.

4.2 Amputation related findings of this study

4.2.1 Type of amputation of the participants

Among 70 participants 30% (n=21) were trans-femoral amputed, 60% (n=42) were trans-tibial amputed, 1.4% (n=1) were knee disarticulated, 4.3% (n=3) were hip disarticulated, and 4.3% (n=3) amputation occur in others area of the body.

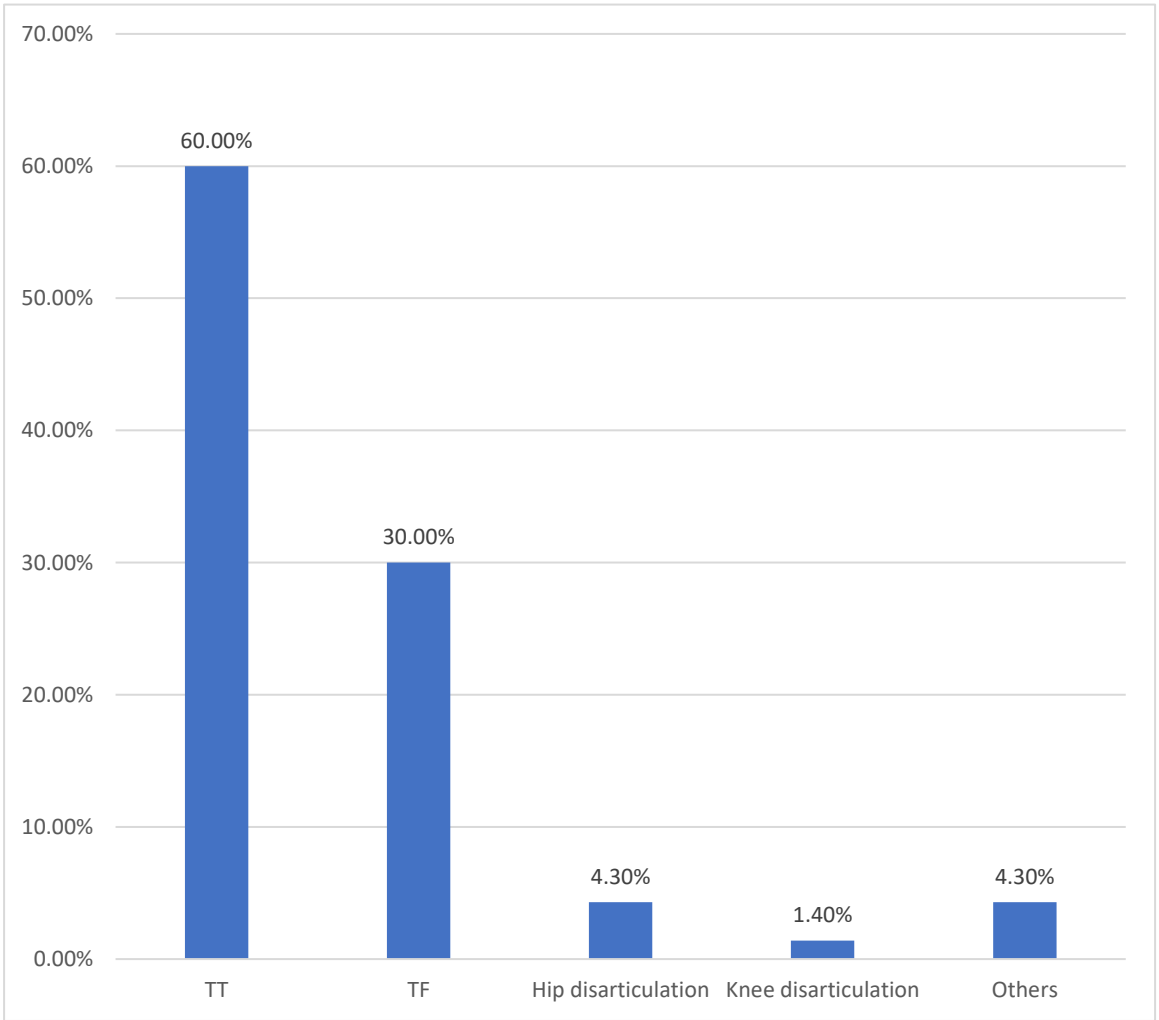


Figure 5: Type of amputation

4.2.2 Cause of amputation

As the causes of amputation, most participants attended amputation because of accident. The data showed that 70% (n=49) participants were traumatic and 25.7% (n=18) participants were pathological and 4.3% (n=3) data showed due to other cause.

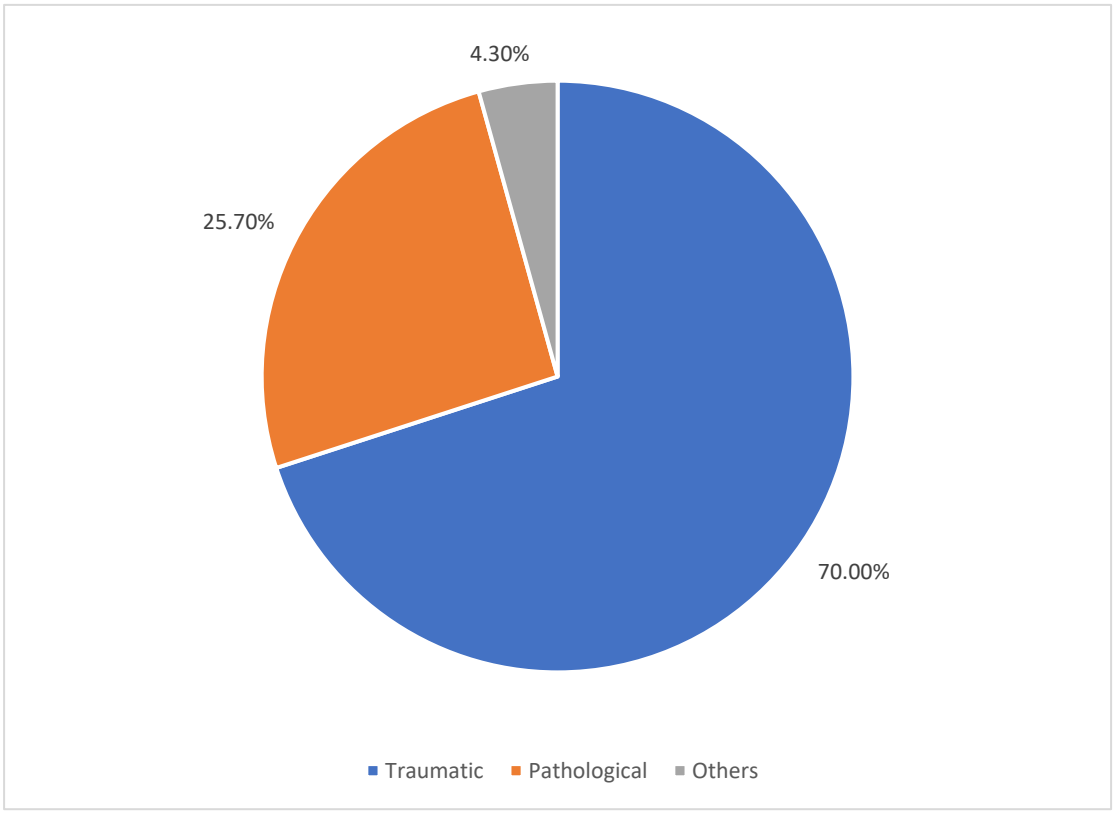


Figure 6: Cause of amputation

4.2.3 Site of amputation

Among 70 participants 50% (n=35) had right sided amputation, 44.3% (n=31) had left sided amputation and 5.7% (n=4) had both sided (bilateral) amputation.

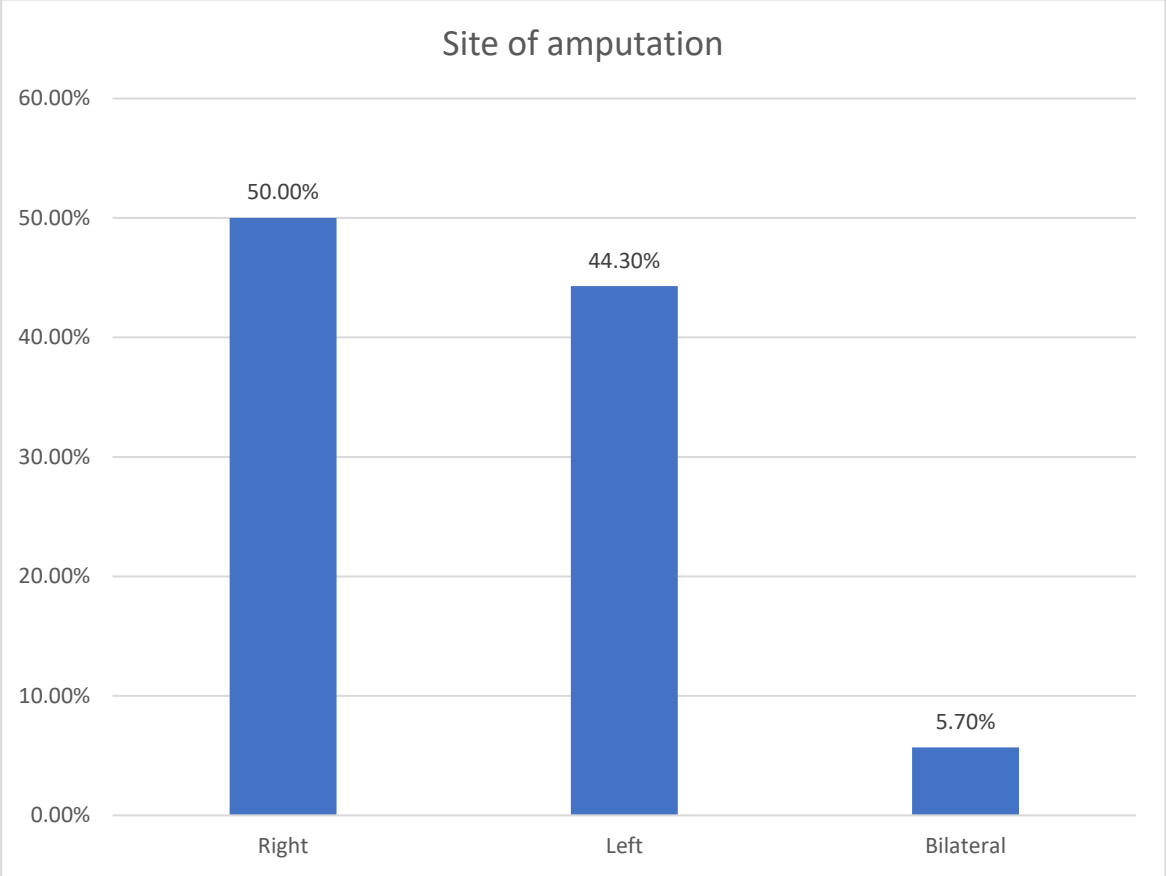


Figure 7: Site of amputation

4.2.4 Duration of using prosthesis

Table no 6: Duration of using prosthesis

Prosthesis using	**N(%)**
<6 months	10 (14.3%)
6 months-1 year	20 (28.6%)
>1 year	31 (44.3%)
N/A	9 (12.9%)

Among 70 participants 14.3% (n=10) participants were found using their prosthesis less than 6 months, 28.6% (n=20) participants used their prosthesis for 6 months-1 year and 44.3% (n=31) participants used their prosthesis more than 1 year. Lastly 12.9%(n=9) participants didn't use any prosthesis.

4.2.5 Types of prosthesis

Table no 7: Types of prosthesis

Type of prosthesis	N(%)
Unilateral TT	39(55.7)
Bilateral TT	4(5.7)
Unilateral TF	17(24.3)
N/A	10(14.3)

Among 70 participants 55.7% (n=39) had unilateral TT prosthesis, 5.7% (n=4) had bilateral TT and 24.3 % (n=17) had unilateral TF and 14.3%(n=10) participants hadn't use any prosthesis.

4.2.6 Having complications

Among 70 participants, most reported no complications (edema, blisters, ulceration, gangrene, protruded bone) and it was 84.3% (n=59) of the attended participants. Data showed that 15.7% (n=11) participants got complications after using prosthesis.

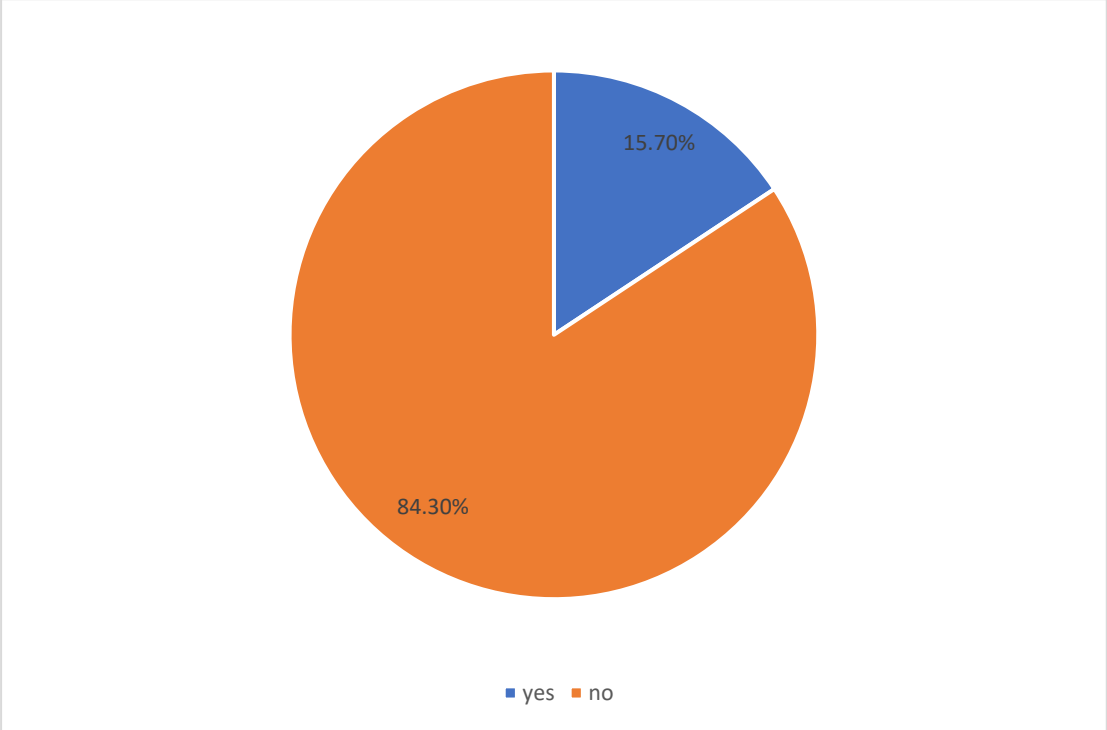


Figure 8: Complications

4.3 Level of participation among people with Amputation in community after completing Rehabilitation

The total respondents (n=70) were asked about their social perception according to the questionnaire of participation scale. Different responses were found about these from the participant's. After completing data collection from the participant's, it was found that, about 2.90% (n=2) respondent's are in "Mild restriction stage (score: 13-22)", and about 12.90% (n=9) respondent's are in "Moderate restriction stage (score: 23-32)". Besides, about 80% (n=56) respondent's are in "Severe restriction stage (score: 32-52)" and about 4.3% (n=3) respondent's are in "Extremely restriction stage (score: 53-90)".

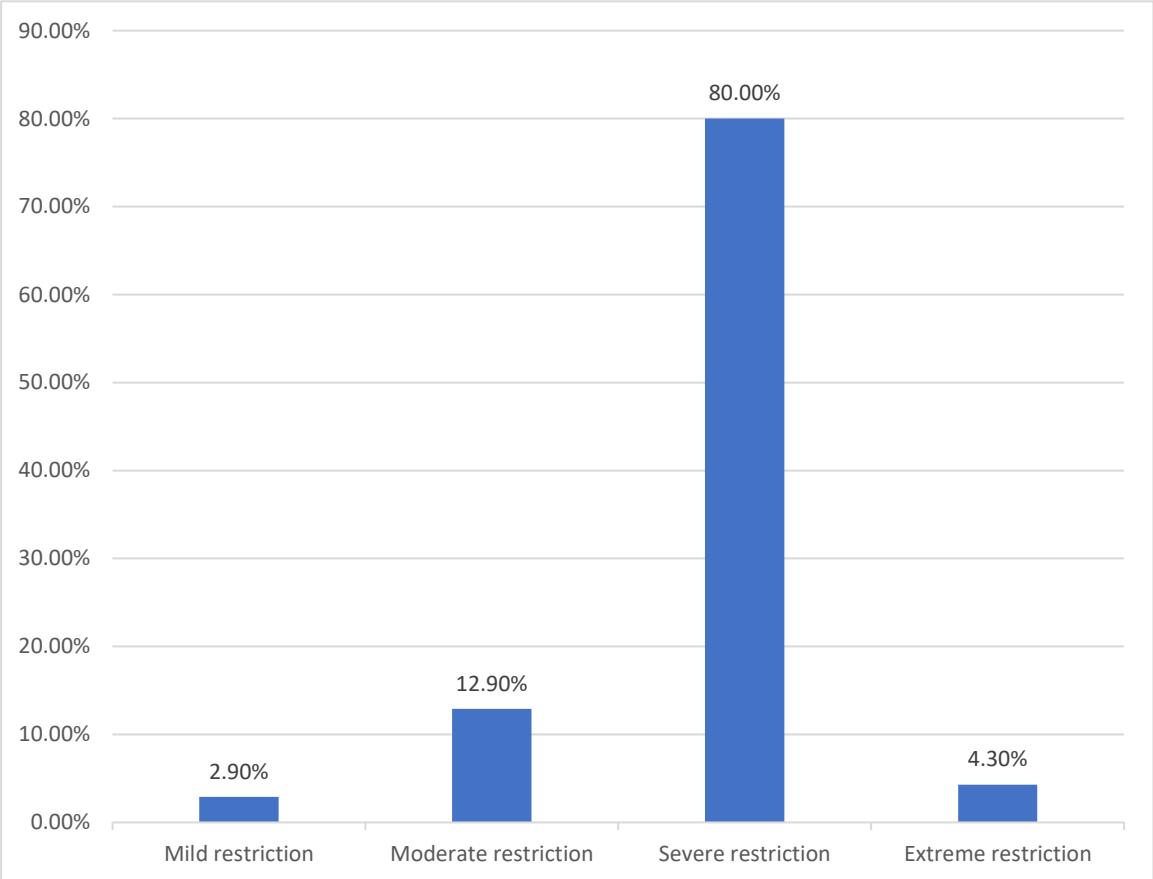


Figure 9: Statistic about level of social participation restriction score

4.4 The association between demographic factors (age, gender, current occupation, type of amputation) and social participation

The study found that, there are associations between demographic factors (age, gender, current occupation, type of amputation) and social participation. A participant's chi-square test was performed to show association between these variables.

4.4.1 Table 8: The association between participant's age and restriction of social participation. Equal opportunities as peers to find work (How big problem is it to the participant)

Age range	No problem	Small	Medium	Large	Total	Chi square value	P value
18-30 years	11 4.4%	5 7.5%	7 12.4%	3 2%	26 25%		
31-40 years	0 2.12%	8 3.88%	10 8.9%	1 1.3%	19 17%		
41-50 years	19 2.8%	5 4.6%	9 7.6%	1 1.2%	16 16%	100.809	.102
51-60 years	0 1.6%	2 2.6%	7 4.3%	0 0.7%	9 9%		

This table is showed that, here is no association between the participant's age and restrictions of social participation (in equal opportunities as peers to find work as peers). The founded x^2 value is 100.809 and $p<0.102$, while n= 70.

4.4.2 Table 9: The association between participant's gender and social participation (equal opportunities as peers to find work as peers). How big problem is it to the participants.

Gender	No problem	Small	Medium	Large	Total	Chi square value	P value
Male	12 7.5%	13 12.6%	16 20.7%	3 3.1%	44 44%	10.067	.018
Female	0 4.5%	7 7.4%	17 12.3%	2 1.9%	26 26%		
Total	12 12%	20 20%	33 33%	5 5%	70 70%		

This table is showed that, here is strong association between the participant's gender and restrictions of social participation (in equal opportunities as peers to find work as peers). The founded value is 10.067 and $p<0.018$, while $n= 70$.

4.4.3 Table 10: The association between participant's gender and social participation (Ability to make visits outside of community as peers). How big problem is it to the participant.

Gender	No problem	Small	Medium	Large	Total	Chi square value	P value
Male	9 5.7%	16 11.9%	18 24.5%	1 1.9%	44 44%		
Female	0 3.3%	3 7.1%	21 14.5%	2 1.1%	26 26%	14.810	.002
Total	9 9%	19 19%	39 39%	3 3%	70 70%		

This table is showed that, here is very strong association between the participant's gender and restrictions of social participation (in ability to make visits outside of community as peers). The founded value is 14.810 and $p<0.002$, while n= 70.

4.4.4 Table 11: The association between participant's gender and social participation (Socially activeness as peers). How big problem it is.

Gender	No problem	Small	Medium	Large	Total	Chi square value	P value
Male	5 3.5%	18 16.3%	18 21.4%	3 3.1%	44 44%		
Female	0 1.9%	8 9.7%	16 12.6%	2 1.9%	26 26%	4.856	.183
Total	5 5%	26 26%	34 34%	5 5%	70 70%		

This table is showed that, here is no association between the participant's gender and restrictions of social participation (in socially activeness as peers). The founded value is 4.856 and $p<0.183$, while $n= 70$.

4.4.5 Table 12: The association between participant's gender and social participation (Ability to visit public places as peers). How big problem it is.

Gender	No Problem	Small	Medium	Large	Total	Chi square value	P value
Male	4 2.5%	21 16.3%	18 23.4%	1 1.3%	44 44%		
Female	0 1.5%	5 9.7%	20 14.1%	1 .7%	26 26%	9.983	.019
Total	4 4%	26 26%	38 38%	2 2%	70 70%		

This table is showed that, here is strong association between the participant's gender and restrictions of social participation (inability to visit public places as peers). The founded value is 9.983 and $p<0.019$, while $n= 70$.

4.4.6 Table 13: The association between participant's gender and social participation (Ability of comfort in meeting with new people). How big problem it is.

Gender	No problem	Small	Medium	Total	Chi square value	P value
Male	6 5.7%	33 26.4%	5 11.9%	44 44%		
Female	3 3.3%	9 15.6%	14 7.1%	26 26%	15.365	.000
Total	9 9%	42 42%	19 19%	70 70		

This table is showed that, here is heavy strong association between the participant's gender and restrictions of social participation (inability of comfort in meeting with new people). The founded value is 15.365 and $p<0.000$, while $n= 70$.

4.4.7 Table 14: The association between participant's current occupation and social participation (Economical contribution ability to household as peers). How big problem it is.

Occupation	No problem	Small	Medium	Large	Total	Chi square value	P value
Govt employee	0 1.6%	5 2.6%	0 .6%	0 .2%	5 5%	26.479	.089
Non govt employee	3 2.8%	6 4.6%	0 1.2%	0 .4%	9 9%		
Businessman	4 6.9%	15 11.3%	3 2.8%	0 .9%	22 22%		
Student	7 3.8%	1 6.2%	3 1.5%	1 .5%	12 12%		
Housewife	6 6%	8 9.8%	3 2.4%	2 .8%	19 19%		
Retired	0 .3%	1 .5%	0 .1%	0 .0%	1 1%		
Unemployed	2 .6%	0 1.0%	0 .3%	0 .1%	2 2%		
Total	22 22%	36 36%	9 9%	3 3%	70 70%		

This table is showed that, here is not strong association between the participant's current occupation and restrictions of social participation (in economical contribution ability to household as peers). The founded value is 26.479 and $p<0.089$, while n= 70

4.4.8 Table 15: The association between participant's types of amputation and social participation (Acceptance of opinion in family discussion as peers). How big problem it is.

Type of amputation	No problem	Small	Medium	Total	Chi square value	P value
TT	7 10.2%	31 27%	4 4.8%	42 42%	11.176	.192
TF	6 5.1%	12 13.5%	3 2.4%	21 21%		
Hip disarticulation	1 .7%	2 1.9%	0 .3%	3 3%		
Knee disarticulation	1 .2%	0 .6%	0 .1%	1 1%		
Others	2 .7%	0 1.9%	1 .3%	3 3%		
Total	17 17%	45 45%	8 8%	70 70%		

This table is showed that, here is no association between the participant's current occupation and restrictions of social participation (in acceptance of opinion in family discussion as peers). The founded value is 11.176 and $p<0.192$, while $n= 70$.

CHAPTER-V DISCUSSION

The purpose of the study was to evaluate social participation among amputation patients. Besides, the association was showed between the demographic factors and social participation of the participants through this study. In other hand, socio-economic status and health status are also showed through this study.

For evaluating social participation, "participation scale (P-scale)" was used in the study, which is directly focused on social/community participation and the scale is validated for the people living with amputation. In this study, the participants were 70, while 62.9% (n=44) were male and 37.1% (n=26) were female and age range was 18-64 years and participants mean±SD was 0.37 ±0.487. In another study in Iran of 216 patients, most participants were male 79.62% and 20.37% were female. They also found that most of the people belong from 14 to 32 years and the mean age of amputation was 39.26± 12.6 years (Sarvestani and Azam 2013, p. 126).

In this study, among 70 patients 7.1% were illiterate, 11.4% participants had primary education, 24.3% had secondary education, 20% had higher secondary education, 31.4% had graduated and 5.7% were post-graduated. In a study with 100 participants with limb prosthesis in Pakistan, 18 participants had primary education, 33 participants had middle class education according to their country, 20 participants had secondary education, 8 participants had intermediate education, 10 participants had their graduation and only 2 participants had post-graduation degree (Malik et al. 2013, p. 135). In another study conducted in Bangladesh, the educational status revealed that among 332, 83 participants or 25% had no formal education, 37% had gone to primary school, 18.4% had gone to secondary school and 10.5% to higher secondary school. 7.5% had bachelor degree and 1.5% had religious education (Hassan et al. 2019, p. 5).

In this study, it was seen that, after amputation, as current occupation; maximum respondents involved with own business. About 31.4% (n=22) respondents maintain own-business, 12.9% (n=9) respondents were non government employee, 7.1% (n=5) respondents were government employee , 27.1% (n=19) respondents were housewife 17.1% (n=12) respondents went back to their study. About 2.9% (n=2) respondents were unemployed.

In my study among 70 participants 30% (n=21) were trans-femoral amputed, 60% (n=42) were trans-tibial amputed, 1.4% (n=1) were knee disarticulated, 4.3% (n=3) were hip disarticulated, and 4.3% (n=3) amputation occur in upper limb. A different study conducted from Bangladesh had shown that majority of the participants had below knee amputation 52.1% followed by above knee 30.4%, through knee 6.0%, through hip 5.7%, through ankle 4.2%, and below ankle 1.5%. Moreover, unilateral amputation made up the majority 95.8% (Hassan et al. 2019, p. 6).

The most common cause of amputation was trauma. Among the traumatic cause 83.7% were male. Where, most amputations (78%) were transtibial or lower due to trauma (Roepke et al. 2017, p. 741). For upper limb amputations, trauma is the leading cause, accounting for 80% of acquired amputations, occurring in men aged 15 to 45 years. In ascending order, there is trans-phalangeal, trans-metacarpal, trans-carpal, wrist disarticulation, trans-radial, elbow disarticulation, trans-humeral, shoulder disarticulation, and forequarter amputation. Trans-phalangeal accounts for 78% of all upper extremity amputations (Maduri and Akhondi 2019).

The causes and severity of amputation vary by country depending on degree of industrialization, mode of transportation, social and economic circumstances, and health care system (Pooja and Sangeeta 2013,p. 38). Here in my study among 70 participants 70% amputation occur due to trauma and road traffic accident, 25.7% amputation occur due to pathological cause and 4.3% due to other causes. Another study in Bangladesh shows that RTA occurs in 58.7% population, peripheral vascular disease 7.5%, infection 6.3%, congenital disease 5.4%, diabetes 5.1% (Hassan et al. 2019, p. 6).

The complication rate (84.30 %) in our study where compared with study by Sarvestani and Azam is lower (25.92%) than this study. In this study, as an evaluation of social participation of people living with amputation, it was found that, about 2.9% (n=2) respondents are in “Mild restriction stage (score: 13-22)”, and about 12.9% (n=9) respondents are in “Moderate restriction stage (score: 23-32)”. Besides, about 80% (n=56) respondents are in “Severe restriction stage (score: 32-52)” and about 4.3% (n=3) respondents are in “Extremely restriction stage (score: 53-90)”.

In other study at America, of 67 participants reported their participation levels in the 18 activities. Among the top three most valued activities, participation rates varied widely; although 81% had ability to manage their finances and 84% were having a best friend, only 50% were able to how often they visited loved ones. The mean (SD) total subjective participation score of 20.4 (7.8%), just above the midpoint of this scale's 0 to 36 range, suggests that the overall level of participation with one's ability to participate was modest. Level of participation value is P = 0.05. In the final multivariable model, greater social participation was associated with better mobility P = 0.02. greater satisfaction with participation was associated only with social support P = 0.01 (Roepke et al. 2017, p. 741).

Another study by Erbes et al. stated that participants reported diminished ability to participate in social roles and activities where mean Participation-score is 43.2. For the most part, demographic variables, and those relating to the characteristics of the amputation, were not significantly correlated with participation. The amputation-specific correlates, amputation-specific body image was independently associated with importance and control over community participation. Therefore, paying attention to the mental well-being, physical appearance of the prosthesis, and overall appearance of the individual in relation to the amputation may be crucial facilitators of community involvement. (Erbes et al. 2022).

A better body image and increased involvement may both be helped by prosthetics that allow for a natural gait. Our results conclusions that balance confidence is essential for community engagement. Participation may benefit from prosthetics and therapeutic techniques that enhance balance performance and balance confidence (Erbes et al. 2022).

In this study, some associations were found between demographic factors (gender) and social participation of the participants. Associations were found between participant's gender and social participation (in equal opportunities as peers to find work as peers), while $p<0.018$; participant's gender and social participation (in ability to make visits outside of community as peers), while $p<0.002$; participant's gender and social participation (in ability to visit public places as peers), while $p<0.019$; participant's gender and restrictions of social participation (inability of comfortness in meeting with

new people), while p<0.000. On the other hand, there is no association between participants age and social participation (equal opportunity to find the work as peers), while p< 0.102; participant's current occupation and restrictions of social participation (in economical contribution ability to household as peers), while p<0.089; participant's prosthesis and restrictions of social participation (in acceptance of opinion in family discussion as peers), while p<0.192.

In the final model only four dimensions; finding a work, visiting outside of community, ability to visit public place and meeting with new people succeed to establish association with gender (where, male > female) and social participation. In other words, due to greater mental and physical condition, more specifically the barriers related to motivation and support, stigma and prejudice. The greater the increase in restrictions on social participation and conversely the less the barrier on work and community, the less the restriction on social participation of patients with amputation. This explains that lots of barrier of an amputee patients faced in everyday life due to their physical condition can be a result for decreased social participation. Thus, attention to psychological health, physical appearance of the prosthesis and of the whole person as related to the amputation may be important facilitators of community participation.

Limitation:

The current study had some potential limitations. The researcher choose just 70 samples due to time limitation which is very small to generalize the result in all over the Bangladesh. There are few literatures found about activity participation of people with amputation in the world. There is no related study found about level of participation of Bangladesh. Thus, it is difficult to compare the study with the other research. The questionnaire was developed only through searching sufficient literature but considering the context of the demography of the population a pilot study would substantial before developing questionnaire. Apart from (some of) the ex-patients, most of the study sample lives in another situation as those persons with amputations living elsewhere in Bangladesh. Thus, the results are probably not generalizable to the situation in the whole of Bangladesh.

CHAPTER-VI CONCLUSION

This study offers a standard measure of the effect of amputation on communal living. It also makes it possible to design and monitor the impact of health and health related interventions and for providing proper guidelines, techniques in terms of community living, in case of amputation. This study is a first step toward understanding which variables are most correlated with participation. Use of these measures with those for participation may be helpful to amputation rehabilitation teams and other interdisciplinary medical teams toward addressing amputation-specific and generic factors that associate with participation. Future studies should also examine the effects of targeted interventions on the correlates of participation to see if they lead to improvements in participation of persons with lower limb amputations.

This study provides the basis for identifying levels of social participation of community living in amputation people at individual perspective which open the need for foundations for country level participation data to inform policy and set-up rehabilitation. This study makes it possible to focus directly on level of social participation from living amputation people.

However, proper rehabilitation is very necessary for people with amputation. It facilitates the greatest degree of independence, the highest quality of life, and increased community engagement for those with amputation. The findings of the study identified that there is a significant association between social participation and demographic status of the participants. A significant factor in determining community participation is a key objective of rehabilitation. It is the capacity to engage in worthwhile and appreciated social and community activities.

For this, it should be considered that it is necessary to provide more information during the rehabilitation period. Consequently, limitations on social involvement cannot be simply attributed to individual characteristics. Resources should be dedicated to removing obstacles and improving conditions that enable people with amputation to fully participate and engage in social contacts on a daily basis. This is especially true for those who have the opportunity to do so. If we increase awareness among the

community people to enhance accessibility and well transportation system for the respondents which helps them to increase participation level in community and then this study will be helpful for the people with amputation.

6.2 Recommendations

The aim of this study was to find out the social participation of the patient with amputation and the result which found from the study has fulfilled the aim of this research project. The following recommendations are-

Should take more samples for generating the result and make more valid and reliable.

Sample should collect from different hospital, clinic, institute and organization in different district of Bangladesh to generalize the result.This is an undergraduate study and doing the same study at graduate level will give more precise output. There were some limitations of this study mentioned at the relevant section; it is recommended to overcome those limitations during further study. So, for further study it is strongly recommended to increase sample size with adequate time to generalize the result in all of the amputee patients in Bangladesh for better results and perspectives.

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APPENDIX

Informed consent (English)
(Please read out to the participant)

Assalamu Alaikum,

My name is Fariha Tasnim ,4th year B.Sc in physiotherapy student of Bangladesh Health Professions Institute (BHPI) . I am conducting this research study which is the part of B.Sc. in Physiotherapy program and my research title is "Impact of social participation for the patients with amputation" under Bangladesh Health Professions Institute (BHPI), University of Dhaka. Because of that I would like to know about some personal and other related information. This will take approximately 15-20 minutes.

I would like to inform you that this is a purely professional study and will not be used for any other purpose. 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 any query about the study or your right as a participant, you may contact with me or my supervisor Shazal Kumar Das, Lecturer, Department of Physiotherapy, BHPI.

Department of Physiotherapy, CRP, Savar, Dhaka-1343.

Do you have any questions before I start?

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

Yes ……. No ……

Signature of the Participant's..... Date…….

Signature of the Data collector's…… Date…….

আনুমতি পত্র

(অংশগ্রহণকারীকে পড়ার জন্য অনুরোধ করা হলো)

আসসালামু আলাইকুম

আমি ফারিহা তাসনিম, ঢাকা বিশ্ববিদ্যালয় এর চিকিৎসা অনুষদের অন্তর্ভুক্ত বাংলাদেশ হেলথ প্রফেশন্স ইন্সটিটিউট এর বিএসসি ইন ফিজিওথেরাপি কোর্সের ২০১৭-২০১৮ সেশনের শিক্ষার্থী। বিএসসি ইন ফিজিওথেরাপি ডিগ্রী অর্জনের জন্য আমাকে একটি থিসিস সম্পূর্ণ করতে হবে। আমার থিসিসটির শিরোনাম হল " **অঙ্গবিচ্ছেদ রোগীদের সামাজিক অংশগ্রহণের প্রভাব** "। এই থিসিসটি অধ্যয়নের মূল লক্ষ্য হচ্ছে অঙ্গবিচ্ছেদের পরে রোগীদের সামাজিক অংশগ্রহণে কি পরিবর্তন হচ্ছে তা নিরুপণ করা। এই থিসিস সম্পূর্ণ করার জন্য আমি আপনাকে আপনার সামাজিক অবস্থা সম্পর্কিত কিছু প্রশ্ন করব । আপনাকে আশ্বস্ত করছি, আমার ও আমার প্রশ্নের দ্বারা আপনার কোনরুপ ক্ষতি হবে না। আপনার দেওয়া তথ্য গোপন রাখা হবে এবং শুধুমাত্র থিসিসের উদ্দেশ্য ব্যবহার করা হবে। যে কোন সময় থিসিসে আপনার আংশগ্রহণ বন্ধ করার অধিকার রয়েছে। পাশাপাশি আপনি যদি কোন প্রশ্নের উত্তর দিতে অশ্বস্তি বোধ করেন তবে আপনি সেই প্রশ্নটি এরিয়ে যেতে পারেন। প্রশ্নাবলী পূরণ করতে ৩০ মিনিট থেকে ৪০ মিনিট সময় লাগবে। অনুগ্রহ করে আমাকে প্রশ্নগুলির সঠিক উত্তর দিন এবং আপনার স্বাস্থ্যের মূল্যায়ন করতে ডেটা সংগ্রহকারীকে যথাসাধ্য সহযোগিতা করুন। আপনার কোন প্রশ্ন থাকলে আমার সুপারভাইজারের সাথে যোগাযোগ করতে পারেন। সজল কুমার দাস, বিএইচপিআই এর প্রভাষক, ফিজিওথেরাপি ডিপার্টমেন্ট, বিএইচপিআই, সিআরপি। আপনি যদি অনুগ্রহপূর্বক আপনার সম্মতি দেন, তবে আমরা শুরু করতে পারি।

হ্যাঁ না

ধন্যবাদ আপনার অংশগ্রহণের পাশপাশি প্রশ্নগুলোর যথাযথ উত্তর দিয়ে সহযোগিতা করার জন্য।

অংশগ্রহণকারীর স্বাক্ষর ..... তারিখ .....

তথ্য সংগ্রহকারীর স্বাক্ষর ..... তারিখ .....

গবেষকের স্বাক্ষর ..... তারিখ .....

QUESTIONNAIRE

A. Personal Information

Date of assessment	
Patient's name	
Address	
Contact number (if possible)	

B. Socio-demographic Information

Questions	Response	Code
1. Age		
2. Sex	1. Male	1
	2. Female	2
3. Educational level	1. Illiterate	1
	2. Primary	2
	3. Secondary	3
	4. Higher secondary	4
	5. Graduate	5
	6. Post graduate	6
4. Marital status	1. Married	1
	2. Unmarried	2
	3. Divorced	3
	4. Separated	4

5. Occupation	1. Government employee	1
	2. Non-government employee	2
	3. Businessman	3
	4. Student	4
	5. House wife	5
	6. Retired	6
	7. Unemployed	7
6. Living area	1. Rural	1
	2. Urban	2
	3. Semi-rural	3
7. Type of living place	1. Building	1
	2. Tin shaded	2
	3. Mud house	3
8. Earning persons in family	1. Self	1
	2. Husband	2
	3. Wife	3
	4. Father	4
	5. Mother	5
	6. Others	6
9. Family income (monthly)	1. < 2000	1
	2. 2000-5000	2
	3. 5001-8000	3
	4. 8001-12000	4
	5. < 12000	5

C. Amputation Related Information

Questions	Response	Code
10. Type of amputation	1. Transtibial (TT) 2. Trans-femoral (TF) 3. Hip disarticulation 4. Knee disarticulation 5. Others	1 2 3 4 5
11. Cause of amputation	1. Truamatic 2. Pathological	1 2
12. Year of amputation		
13. Site of amputation	1. Right 2. Left 3. Bilateral	1 2 3
14. How long you are using prosthesis?	1. Less than 6 months 2. 6 months – 1 year 3. More than 1 year	1 2 3
15. Type of prosthesis	1. Unilateral TT 2. Bilateral TT 3. Unilateral TF 4. Bilateral TF	1 2 3 4
16. Any complications caused by using prosthesis	1. Yes 2. No	1 2

No	Participation Scale	Not specified, not answered	Yes	Sometimes	No	Irrelevant, I don't want to, don't have to	NO problem	Small	Medium	Large	SCORE
1	Do you have equal opportunity as your peers to find work?		0			0					
	[if sometimes or no] How big a problem is it to you?						1	2	3	5	
2	Do you work as hard as your peers do? (Same hours, type of work etc.)		0			0					
	[if sometimes or no] How big a problem is it to you?						1	2	3	5	
3	Do you contribute to the household economically in a similar way to your peers?		0			0					
	[if sometimes or no] How big a problem is it to you?						1	2	3	5	
4	Do you make visits outside your village / neighborhood as much as your peers do? (except for treatment) e.g., bazaars, markets		0			0					
	[if sometimes or no] How big a problem is it to you?						1	2	3	5	
5	Do you take part in major festivals and rituals as your peers do? (e.g., weddings, funerals, religious festivals)		0			0					
	[if sometimes or no] How big a problem is it to you?						1	2	3	5	
6	Do you take as much part in casual recreational/social activities as do your peers? (e.g., sports, chat, meetings)		0			0					
	[if sometimes or no] How big a problem is it to you?						1	2	3	5	
7	Are you as socially active as your peers are? (e.g., inreligious/community affairs)		0			0					
	[if sometimes or no] How big a problem is it to you?						1	2	3	5	
8	Do you have the same respect in the community as your peers?		0			0					
	[if sometimes or no] How big a problem is it to you?						1	2	3	5	
9	Do you have opportunity to take care of yourself (appearance, nutrition, health, etc.) as well as your peers?		0			0					
	[if sometimes or no] How big a problem is it to you?						1	2	3	5	
10	Do you have the same opportunities as your peers to start or maintain a long-term relationship with a life partner?		0			0					
	[if sometimes or no] How big a problem is it to you?						1	2	3	5	
11	Do you visit other people in the community as often as other peopledo?		0			0					
	[if sometimes or no] How big a problem is it for you?						1	2	3	5	

No	Participation Scale	Not specified,	Yes	Sometimes	No	Irrelevant, I don't want to,	No problem	Small	Medium	Large	SCORE
12	Do you move around inside and outside the house and around the village / neighborhood just as other people do?		0			0					
	[If sometimes or no] How big a problem is it to you?						1	2	3	5	
13	In your village / neighborhood, do you visit public places as often as other people do? (e.g., schools, shops, offices, market and tea/coffee shops)		0			0					
	[If sometimes or no] How big a problem is it to you?						1	2	3	5	
14	In your home, do you do household work?		0			0					
	[If sometimes or no] How big a problem is it to you?						1	2	3	5	
15	In family discussions, does your opinion count?		0			0					
	[If sometimes or no] How big a problem is it to you?						1	2	3	5	
16	Do you help other people (e.g., neighbors, friends or relatives)?		0			0					
	[If sometimes or no] How big a problem is it to you?						1	2	3	5	
17	Are you comfortable meeting new people?		0			0					
	[If sometimes or no] How big a problem is it to you?						1	2	3	5	
18	Do you feel confident to try to learn new things?		0			0					
	[If sometimes or no] How big a problem is it to you?						1	2	3	5	

Comment: Total score:

Name:_____

Age:_____ Gender:_____

Interviewer: _____ Date of interview:____/____/_____

Grades of participation restriction

No significant restriction	Mild restriction	Moderate restriction	Severe restriction	Extreme restriction
0 – 12	13 – 22	23 – 32	33 – 52	53 – 90

প্রশ্নপত্র

ক. ব্যক্তিগত তথ্য

তথ্য গ্রহণের তারিখ	
রোগীর নাম	
ঠিকানা	
মোবাইল নাম্বার (যদি থাকে)	

খ. সামাজিক ও জনসংখ্যাতাত্ত্বিক তথ্য

প্রশ্নাবলী	প্রতিক্রিয়া	কোড
১. বয়স		
২. লিঙ্গ	১. পুরুষ	১
	২. নারী	২
৩. শিক্ষাগত যোগ্যতা	১.অশিক্ষিত	১
	২. প্রাথমিক	২
	৩. মাধ্যমিক	৩
	৪. উচ্চ মাধ্যমিক	৪
	৫. স্নাতক	৫
	৬. স্নাতকোত্তর	৬
৪. বৈবাহিক অবস্থা	১. বিবাহিত	১
	২. অবিবাহিত	২
	৩. তালাকপ্রাপ্ত	৩
	৪. বিচ্ছেদ	৪

৫. পেশা	১. সরকারি চাকরিজীবী	১
	২. বেসরকারি চাকরিজীবী	২
	৩. ব্যবসায়ী	৩
	৪. ছাত্র	৪
	৫. গৃহীনী	৫
	৬. অবসরপ্রাপ্ত	৬
	৭. বেকার	৭
৬. বসবাসের স্থান	১. গ্রাম	১
	২. শহর	২
	৩. মফস্বল	৩
৭. বাসস্থানের ধরন	১. বিল্ডিং	১
	২. টিনের ঘর	২
	৩. মাটির ঘর	৩
৮. পরিবারের উপার্জনক্ষম ব্যক্তি	১. নিজ	১
	২. স্বামী	২
	৩. স্ত্রী	৩
	৪. বাবা	৪
	৫. মা	৫
	৬. অন্যান্য	৬
৯. পারিবারিক আয় (মাসিক)	১. < ২০০০	১
	২. ২০০০-৫০০০	২
	৩. ৫০০১-৮০০০	৩
	৪. ৮০০১-১২০০০	৪
	৫. < ১২০০০	৫

গ. অঙ্গহানী সম্পর্কিত তথ্য

প্রশ্নাবলী	প্রতিক্রিয়া	কোড
১০. অঙ্গহানির ধরন	১. হাঁটুর নিচে ২.হাঁটুর উপরে ৩.নিতম্ব থেকে ৪.হাঁটু থেকে ৫.অন্যান্য	১ ২ ৩ ৪ ৫
১১. অঙ্গহানির কারণ	১. দুর্ঘটনা ২. রোগজনিত	১ ২
১২.অঙ্গহানির সাল		
১৩. অঙ্গহানির অবস্থান	১. ডান ২. বাম ৩. উভয় পার্শ্বে	১ ২ ৩
১৪. কতদিন যাবৎ কৃত্রিম অঙ্গ ব্যবহার করেন?	১. ৬ মাসের কম ২. ৬ মাস – ১ বছর ৩. ১ বছরের বেশি	১ ২ ৩
১৫. কৃত্রিম অঙ্গের ধরন	১. হাঁটুর নিচে একপাশে ২. হাঁটুর নিচে উভয়পাশে ৩. হাঁটুর উপরে একপাশে ৪. হাঁটুর উপরে উভয়পাশে	১ ২ 3 ৪
১৬. কৃত্রিম অঙ্গ ব্যবহারের ফলে কোনো জটিলতায় ভুগছেন	১. হ্যাঁ ২. না	১ ২

Participation Scale (Bangla)

Peers are those who are similar to respondents in all respects (Socio-cultural, economic and demographic) expect for the disease or disabilities. The respondent is asked whether (s)he is restricted in participation in comparison to his or her peers. If a question refers to age, gender, occupation, position in the family or community, then peers would be those of similar age, gender, occupation etc. It is necessary to keep reminding the respondent to compare his or her situation with that of their peers. Ask the patient to think of a particular person (e.g., colleague, brother, sister, someone from the community) during the questions.

Sl. No.	অংশগ্রহনমূলক মাত্রা Participation-scale	সুনির্দিষ্ট নয়/ জবাব নেই	হ্যাঁ Yes	মাঝে মাঝে Sometimes	না No	অপ্রাসঙ্গিক,Irrelevant	সমস্যা নেই No problem	অল্প Small	মাঝারী Medium	গুরুতর Large	স্কোর Score
			0			0	1	2	3	5	
1	আপনার সমকক্ষদের যেভাবে কাজ খোঁজার/পাওয়ার সুযোগ আছে আপনারও সেভাবে আছে কি? Do you have equal opportunity as your peers to find work?		0			0					
	এটি আপনার ক্ষেত্রে কত বড় সমস্যা? [If sometimes, no or irrelevant] how big a problem is it to you?						1	2	3	5	
2	আপনি কি আপনার সমকক্ষদের মতো কঠোর পরিশ্রম করেন? (একই রকম সময়/শ্রমঘন্টা কাজের ধরন ইত্যাদি) Do you work as hard as your peers do? (same		0			0					

	hours, type of work etc)										
	এটি আপনার ক্ষেত্রে কত বড় সমস্যা? [If sometimes, no or irrelevant] how big a problem is it to you?						1	2	3	5	
3	আপনি কি পারিবারিক কাজে আপনার সমকক্ষদের মতো পরিবারে টাকা পয়সা দিয়ে সহযোগিতা করেন? Do you contribute to the household economically in a similar way to your peers?		0			0					
	এটি আপনার ক্ষেত্রে কত বড় সমস্যা? [If sometimes, no or irrelevant] how big a problem is it to you?						1	2	3	5	
4	আপনি কি আপনার সমকক্ষদের মতো গ্রামের বাইরে বেড়াতে যান? (চিকিৎসা ছাড়া) উদাহরণস্বরুপ বাজার, মেলা, নিকটবর্তী গ্রামে। Do you make visits (travel) outside your village/neighborhood as much as your peers do? (except for treatment) e.g. Bazaars, markets, nearby villages .		0			0					
	এটি আপনার ক্ষেত্রে কত বড় সমস্যা? [If sometimes, no or irrelevant] how big a problem is it to you?						1	2	3	5	
5	আপনি কি বড় বড় উৎসবে এবং ধর্মীয় অনুষ্ঠানে যোগদান করেন, যেখানে সবাই যোগদান করেন? (উদাহরণ স্বরুপ বিবাহ, অন্ত্যেষ্টিক্রিয়া, ধর্মীয় অনুষ্ঠান) Do you take part in major festivals and rituals as your peers do? (e.g. wedding, funerals, religious festivals)		0			0					
	এটি আপনার ক্ষেত্রে কত বড় সমস্যা? [If sometimes, no or irrelevant] how big a problem is it to you?						1	2	3	5	
6	আপনি কি আপনর সমকক্ষদের মতো পাড়ায় বিভিন্ন অনুষ্ঠানে ও সামাজিক কাজে আপনার যতটুকু সম্ভব অংশ গ্রহন করেন? (উদাহরণস্বরুপ খেলাধূলা, খোশগল্প করা, আলোচনা সভা) Do you take as much part in casual recreational/social activities as do your peers? (e.g. sports, chat, meetings)		0			0					

	এটি আপনার ক্ষেত্রে কত বড় সমস্যা? [If sometimes, no or irrelevant] how big a problem is it to you?						1	2	3	5	
7	আপনি কি আপনার সমকক্ষদের মতো সামাজিক কর্মকান্ডে সক্রিয়? (উদাহরণ স্বরূপ ধর্মীয় ও মহল্লার সামাজিক কাজে) Are you as socially active as your peers are (e.g. in religious/community affairs)		0			0					
	এটি আপনার ক্ষেত্রে কত বড় সমস্যা? [If sometimes, no or irrelevant] how big a problem is it to you?						1	2	3	5	
8	এলাকায় আপনার সমকক্ষদের মতো আপনিও কি একই রকম সম্মান পান? Do you have the same respect in the community as your peers?		0			0					
	এটি আপনার ক্ষেত্রে কত বড় সমস্যা? [If sometimes, no or irrelevant] how big a problem is it to you?						1	2	3	5	
9	আপনার কি সমকক্ষদের মতো নিজের যত্ন নেওয়ার সুযোগ আছে (উদাহরণ স্বরূপ চেহারা, পুষ্টি, স্বাস্থ্য ইত্যাদি) Do you have opportunity to take care of yourself (appearance, nutrition, health, etc.) as well as your peers?		0			0					
	এটি আপনার ক্ষেত্রে কত বড় সমস্যা? [If sometimes, no or irrelevant] how big a problem is it to you?						1	2	3	5	
10	আপনার কি সমকক্ষদের মতো জীবন সঙ্গীর সাথে দীর্ঘমেয়াদী সম্পর্ক শুরু/বজায় রাখার সুযোগ আছে? Do you have the same opportunities as your peers to start or maintain a long-term relationship with a life partner?		0			0					
	এটি আপনার ক্ষেত্রে কত বড় সমস্যা? [If sometimes, no or irrelevant] how big a problem is it to you?						1	2	3	5	
11	আপনি কি অন্যদের মতো এলাকার লোকদের বাড়ীতে প্রায় বেড়াতে যান? Do you visit other people in the community as often as other people do?		0			0					
	এটি আপনার ক্ষেত্রে কত বড় সমস্যা? [If sometimes, no or irrelevant] how big a problem is it to you?						1	2	3	5	
12	আপনি কি অন্যদের মতো বাড়ির ভিতরে, বাইরে এবং গ্রামের সবদিকে বা প্রতিবেশীদের		0			0					

	বাড়িতে চলাফেরা করেন? Do you move around inside and outside the house and around the village/neighborhood just as other people do?										
	এটি আপনার ক্ষেত্রে কত বড় সমস্যা? [If sometimes, no or irrelevant] how big a problem is it to you?						1	2	3	5	
13	আপনার গ্রামে বা এলাকায় যেখানে অনেক লোকের সমাগম সেখানে আপনি কি যান? (উদাহরণ স্বরুপ বিদ্যালয়, দোকান পাঠ, কার্যালয়, বাজার, চা/কফির দোকান) In your village/neighborhood, do you visit public place as often as other people do? (e.g. school, shop, offices, market and tea/coffee shops)		0			0					
	এটি আপনার ক্ষেত্রে কত বড় সমস্যা? [If sometimes, no or irrelevant] how big a problem is it to you?						1	2	3	5	
14	আপনি কি বাড়িতে পারিবারিক/গৃহস্থালী কাজ করেন? In your home, do you do household work?		0			0					
	এটি আপনার ক্ষেত্রে কত বড় সমস্যা? [If sometimes, no or irrelevant] how big a problem is it to you?						1	2	3	5	
15	পারিবারিক আলোচনায় আপনার মতামাতের গুরুত্ব দেয় কি? In family discussions, does your opinion count?		0			0					
	এটি আপনার ক্ষেত্রে কত বড় সমস্যা? [If sometimes, no or irrelevant] how big a problem is it to you?						1	2	3	5	
16	আপনি কি অন্যদের সাহায্য করেন? (উদাহরণ স্বরুপ প্রতিবেশী, বন্ধু বান্ধব অথবা আত্মীয় স্বজন) Do you help other people (e.g. neighbors, friends		0			0					

	or relatives)?										
	এটি আপনার ক্ষেত্রে কত বড় সমস্যা? [If sometimes, no or irrelevant] how big a problem is it to you?						1	2	3	5	
17	অচেনা লোকদের সাথে দেখা হলে কথা বলতে আপনি কি স্বাচ্ছন্দ্য বোধ করেন? As you comfortable meeting new people?		0			0					
	এটি আপনার ক্ষেত্রে কত বড় সমস্যা? [If sometimes, no or irrelevant] how big a problem is it to you?						1	2	3	5	
18	আপনি কি আত্মবিশ্বাসের সাথে নতুন কোন কিছু শিখতে চেষ্টা করেন? Do you feel confident to try to learn new things?		0			0					
	এটি আপনার ক্ষেত্রে কত বড় সমস্যা? [If sometimes, no or irrelevant] how big a problem is it to you?						1	2	3	5	

মন্তব্য:

Total score:

উত্তরদাতার নাম:

বয়স: **লিঙ্গ:**

সাক্ষৎকার গ্রহনকারী: **সাক্ষাৎকার গ্রহনের তারিখ:**

No significant restriction	Mild restriction	Moderate restriction	Severe restriction	Extreme restriction
0 – 12	13 – 22	23 – 32	33 – 52	53 – 90

Date: 4th February 2023
The Chairman
Institutional Review Board (IRB)
Bangladesh Health Professional Institute (BHPI), CRP
Savar, Dhaka-1343, Bangladesh

Subject: Application for review and ethical approval.

Dear sir,

With due respect, I am Fariha Tasnim, student of B.Sc. in physiotherapy program at Bangladesh Health Professional Institute (BHPI) the academic institute of Centre for the Rehabilitation of the Paralyzed (CRP) under the Faculty of Medicine, University of Dhaka. As per the course curriculum, I have to conduct a dissertation entitled **"Impact of social participation of the patients with amputation"** under the supervision of Shazal Kumar Das, Lecturer, Department of Physiotherapy, BHPI.

The purpose of the study is to determine the factors related to social participation of amputation patients. The study involves face-to-face interview by using semi-structured questionnaire to explore the social participation of persons with amputation residing at CRP, Savar, Dhaka that may take 20 to 30 minutes to fill in the questionnaire and there is no likelihood of any harm to the participants. Related information will be collected from the patients' guide books. Data collectors will receive informed consent from all participants and the collected data will be kept confidential.

Therefore, I look forward to having your kind approval for the dissertation proposal and to start data collection. I can also assure you that I will maintain all the requirements for study.

Sincerely,

Fariha Tasnim
Fariha Tasnim
4th Year B.Sc. in Physiotherapy
Session: 2017-2018 Student ID: 112170400
BHPI, CRP, Savar, Dhaka-1343, Bangladesh

Dissertation presentation date: 9th January 2023

Head, Department of Physiotherapy, BHPI
Md. Shofiqul Islam
Associate Professor & Head
Department of Physiotherapy
Bangladesh Health Professions Institute (BHPI)
CRP, Chapain, Savar, Dhaka-1343

Recommendation from the dissertation supervisor

Shazal Kumar Das
Lecturer
Department of Physiotherapy, BHPI.

March 28, 2023

The Head of the Physiotherapy Department

Centre for the Rehabilitation of the Paralyzed (CRP)

Chaplain, Savar, Dhaka-1343

Through: Head, Department of Physiotherapy, BHPI

Subject: Seeking permission for data collection to conduct my research project.

Dear Sir,

With due respect and humble submission to state that I am **Fariha Tasnim**, student of 4th Professional B.Sc in Physiotherapy at Bangladesh Health Professions Institute (BHPI). According to the course curriculum, we have to conduct research for the partial fulfillment of our degree. My research project entitled **"Impact of social participation of the patient with amputation"** under the supervision of **Shazal Kumar Das**, Lecturer, Department of Physiotherapy, BHPI, CRP. So I need to take permission to collect data for my research project from the Prosthetics & Orthotics Department, CRP-Savar. I would like to assure you that anything in my study will not be harmful to the participants.

I, therefore, pray and hope that you would be kind enough to grant my application & give me permission for data collection and oblige thereby.

Sincerely Yours

Fariha Tasnim

Fariha Tasnim

4th Professional B.Sc in Physiotherapy

Roll: 18, Session 2017-2018

Bangladesh Health Professions Institute (BHPI)

Approved

Dr. Mohammad Anwar Hossain, PhD
Senior Consultant & Head
Physiotherapy Department
Associate Professor, BHPI
CRP, Savar, Dhaka-1343

forwarded to Head PT
sd/4

Recommended

Md. Shofiqul Islam
Associate Professor & Head
Department of Physiotherapy
Bangladesh Health Professions Institute (BHPI)
CRP, Chapain, Savar, Dhaka-1343

28/03/23

বাংলাদেশ হেল্‌থ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই)
Bangladesh Health Professions Institute (BHPI)
(The Academic Institute of CRP)

Ref: CRP/BHPI/IRB/03/2023/699

Date: 13/03/2023

To
Fariha Tasnim
B.Sc. in Physiotherapy,
Session: 2017-2018, DU Reg. No: 8638
BHPI, CRP, Savar, Dhaka- 1343, Bangladesh

Subject: Approval of the dissertation proposal **"Impact of Social Participation of the Patient with Amputation"**- by ethics committee.

Congratulations
Dear
Fariha Tasnim
The Institutional Review Board (IRB) of BHPI has reviewed and discussed your application to conduct the above-mentioned dissertation, with yourself, as the Principal Investigator Shazal Kumar Das, Lecturer, Bangladesh Health Professions Institute (BHPI).
as dissertation supervisor. The following documents have been reviewed and approved:

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

The purpose of the study is to find out the factors related to the social participation of patient with amputation those who are following rehabilitation from CRP. Should there any interpretation, typo, spelling, grammatical mistakes in the title, it is the responsibilities of the investigator. Since the study involves questionnaire that takes maximum 20- 25 minutes and have no likelihood of any harm to the participants. The members of the Ethics committee approved the study to be conducted in the presented form at the meeting held at 09:00 AM on January 9, 2023 at BHPI, 34th IRB Meeting.

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

সিআরপি-চাপাইন, সাভার, ঢাকা-১৩৪৩, বাংলাদেশ। ফোন: +৮৮ ০২ ২২৪৪৪৫৪৬৪-৫, +৮৮ ০২ ২২৪৪৪১৪০৪, মোবাইল: +৮৮ ০১৭৩০ ০৫৯৬৪৭
CRP-Chapain, Savar, Dhaka-1343, Bangladesh. Tel: +88 02 224445464-5, +88 02 224441404, Mobile: +88 01730059647
E-mail : principal-bhpi@crp-bangladesh.org, Web: bhpi.edu.bd

May 22, 2023

The Head of the Prosthetics and Orthotics Department

Centre for the Rehabilitation of the Paralyzed (CRP)

Chaplain, Savar, Dhaka-1343

Subject: Seeking permission for data collection to conduct my research project.

Dear Sir,

With due respect and humble submission to state that I am **Fariha Tasnim**, student of 4th Professional B.Sc in Physiotherapy at Bangladesh Health Professions Institute (BHPI). According to the course curriculum, we have to conduct research for the partial fulfillment of our degree. My research project entitled **"Impact of social participation of the patient with amputation "** under the supervision of **Shazal Kumar Das**, Lecturer, Department of Physiotherapy, BHPI, CRP. So I need to take permission to collect data for my research project from the Prosthetics & Orthotics Department, CRP-Savar. I would like to assure you that anything in my study will not be harmful to the participants.

I, therefore, pray and hope that you would be kind enough to grant my application & give me permission for data collection and oblige thereby.

Sincerely Yours

Fariha Tasnim

4th Professional B.Sc in Physiotherapy

Roll: 18, Session 2017-2018

Bangladesh Health Professions Institute (BHPI)

Forwarded to PRO
Dept Head.
Sir

Approved
She can take data from PO dept. Please cooperate her for data collection.
16.5.23