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Evaluation of Amputee Rehabilitation Services in Gaza Governorates: Mixed Method Approach

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Dedication

Dedicated to my father and mother for their prayers, love, and support,

To my wife for her patience, motivation, encouragement, and unconditional support,

To my sweet and lovely kids; Amjad, Hala, Mira, and Mohammed,

To my brothers and sisters for their encouragement and support,

To my friends,

To the humanitarian team in my institution that I am proud of, the International Committee of the Red Cross,

To all people with amputation in my country, and I hope that my study will be part of improving and developing rehabilitation services for them, the least we can offer for them,

To everyone who supported me to make this study a reality.

Ahmed H. Mousa

Declaration

I certify that this thesis submitted for the degree of Master, is the result of my own research, except where otherwise acknowledged, and that this thesis (or any part of the same) has not been submitted for a higher degree to any other university or institution.

Signed:

Ahmed Haidar Mousa

Date 31/08/2020

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With respect,

Ahmed Haidar Mousa

Abstract

People with amputations require integrated rehabilitation services. Within the context of the Gaza Strip, no studies have been conducted to evaluate the provided rehabilitation services to people with amputations. This study aims to evaluate the available rehabilitation services to people with amputations in the Gaza Governorate in order to propose recommendation and interventions that could improve the overall performance of amputee's rehabilitation services, thus, improving the overall well-being of people with amputations. This study utilized a mixed-method approach; the quantitative study is cross-sectional that involved collecting data from randomly selected 370 people with amputations through a face-to- face questionnaire. The qualitative data were collected through conducing eight in-depth interviews with key informants and three focus group discussions with healthcare service providers. The quantitative data were analyzed using the SPSS software and the qualitative data were analyzed using the open coding thematic technique. Reliability test was very high.

In the Gaza Strip, the main cause of amputations is conflict-related and the second major cause is the lower-limb amputations due to uncontrolled Diabetes Mellitus. More than half of the study participants were hospitalized before the amputation (58.1%). The mean of hospitalization days after the amputation was 26.54 days. All the study participants (370 amputees) received medical care during their hospitalization, 45.70% received physiotherapy and 24.1% received psychological support services during the same period. After discharge from hospitals, more than two-third of study participants were referred to another health provider to continue and/or to start their rehabilitation program. The study findings have revealed that most of the study participants received rehabilitation services at more than one place. Most of the study participants (87.24%) expressed their satisfaction with the rehabilitation services provided by the Artificial Limbs and Polio Center. Moreover, the findings of the prosthesis evaluation which measured different domains have revealed mainly average results of most domains. The mean of participants' satisfaction with the prosthesis usefulness / utility was 6.17, with the residual limb health was 6.21, with appearance was 6.48, with sound was of 6.18, with ambulation was 5.65, with transfer was 6.64, with perceived response was 8.19, with frustration was 5.79, and with social burden was 7.62.

The quality of life for people with amputations is generally good as the average percentage of quality of life was 74.4%. Only, 45.3% of clients have reported a good quality of life compared to 19% who did report poor quality of life and 1.6% who did report a very low quality of life. Interestingly, 25.7% could not decide if they have a good or a poor quality of life. Additionally, from the study participants point view, the society was not fair enough to them as they feel somehow discriminated and socially excluded. The study results have shown that the available services are effective and relatively of good quality. However, there is a room for further improvements in the interaction and dynamics across the provider of the phases of amputee rehabilitation services and referral pathway

People with amputations are not receiving comprehensive services, thus services provided need to tailored to meet the need of people with amputations, including health and education services. Investment in health promotion programmes to prevent and control chronic diseases are highly needed in order to reduce the chances of amputations due to such diseases. Also, people with disabilities need to be financially supported to meet their basic life needs, as well as to meet the increase in their demand for services due to disability. The current financial support is not enough to cover their basic life needs. There is also a need to conduct other studies using mixed methods to deeply explore providers' perspective with regard to available amputee rehabilitation services and to assess the accessibility and affordability of services for people with disabilities, including education, work, and health services. Finally, enforcement of the legal framework Law No.4 (1999), which highlights the rights of people with disabilities to have work and upholds the rights of the People with disabilities based on equity principles is urgently needed.

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List of Abbreviations

ADL	Active Daily Living
ALPC	Artificial Limbs and Polio Center
ASA	Al Salama Association
BACPAR	British Association of Chartered Physiotherapists in Amputee Rehabilitation
CRPD	Convention on Rights of Persons with Disability
DPOs	Disabled People's Organizations
FGD	Focus Group Discussion
GG	Gaza Governorates
GMR	Great March of Return
HI	Humanity and Inclusion
ICRC	International Committee of the Red Cross
INGO	International Non-Governmental Organizations
KII	Key Informant Interview
MMS	Military Medical Services
MoE	Ministry of Education
MoH	Ministry of Health
MoH-PRU	Ministry of Health - Physical Rehabilitation Unit
MoSD	Ministry of Social Development
MSF	Medecins Sans Frontieres
NCDs	Non-communicable Diseases
NGO	Non-Governmental Organizations
NIS	New Israeli Shekels
PA	Palestinian Authority

PCBS	Palestinian Central Bureau of Statistics
PEQ	Prosthesis Evaluation Questionnaire
PMS	Patient Management System
PNGO	Palestinian Non-Governmental Organization
P&O	Prosthetic and Orthotic
PPC	Palestinian Paralympic Committee
PPTA	Palestinian Physiotherapy Association
PRC	Physical Rehabilitation Center
PRP	Physical Rehabilitation Program
PTs	Physiotherapists
PTAs	Physiotherapy assistants
PwD	People with Disability
QoL	Quality of Life
UNRWA	United Nations Relief and Works Agency for Palestine Refugees in the Near East
WCPT	World Confederation for Physical Therapy
WHO	World Health Organization
WHOQOL	World Health Organization Quality of Life

Chapter One

Introduction

1.1 Background

Care of people with amputations requires precise and joined consequence rehabilitation services. The World Health Organization (WHO) has defined rehabilitation as a "set of interventions needed when a person is experiencing or is likely to experience limitations in everyday functioning due to ageing or a health condition, including chronic diseases or disorders, injuries or traumas. Rehabilitation enables individuals of all ages to maintain or return to their daily life activities, fulfil meaningful life roles and maximize their well-being" (WHO, 2019).

Amputation is defined as the removal of limb/extremity or part of it due to trauma, congenital disorders, or surgery. As a surgical treatment modality, it is used to control pain or a disease process in affected limb such as a malignancy, infection, or gangrene. In special cases, the amputation is carried out on patients as a preventative surgery for such problems (Cuccurullo, 2019). The amputation can be classified into upper limb amputation and lower limb amputation, but more often affects lower limb due to vascular disease and trauma (Sinha, 2013).

The loss of a lower limb-has severe implications for a person's mobility in which it affects his/her ability to perform activities of daily living. This negatively impacts on their participation and integration into society (WHO, 2013). The ultimate goal of rehabilitation after limb loss is to ambulate successfully with the use of prosthesis and to return to a high level of social integration with full potential and make the person with an amputation as productive and independent as possible. Prosthetic rehabilitation is a complex task that ideally requires input and collective work from an interdisciplinary rehabilitation team (Cuccurullo, 2019). Amputation leads to a permanent disability and brings a dramatic change in the function of individuals and changes their integration within societies.

Evaluation is a knowledge and an art. The science of evaluation involves systematically gathering and analyzing evidence about the impacts of implemented projects and programs. The art of evaluation includes identifying purposes and audiences, forming

appropriate designs, and interpreting data about a project, program or policy. (Rossi, Lipsey & Henry, 2018).

The evaluation of the health services supports providers to improve their performance as part of a continuous quality improvement cycle (Reeve, Humphreys, & Wakerman, 2015). Generally, evaluation of amputee rehabilitation services is very important to promote overall well-being in general and enhance the mobility and functionality to people with amputation to make sure that services are provided in an effective and efficient way and according to their needs and meet their expectations.

1.2 Research problem

Gaza Governorates (GG) has experienced four major wars over the past 14 years; which resulted in a total of 286 lower limbs and 44 upper limbs amputations. As a consequence of the Great Return March; 158 persons had amputations, of them, 124 lower limbs and 34 upper limbs (MoH, 2019), which increased the number of amputations due to the direct injury by different kinds of weapons, mainly by live ammunition.

The general deterioration of the situation in the GG which is considered as a conflict zone, weakened the general health situation which contributed to the increased numbers of people experience health problems and complications such as vascular complications, which are the second major contributors to lower limb amputations in GG, mainly from uncontrolled Diabetes Mellitus. In 2019, 57% of Artificial Limbs and Polio Center (ALPC's) amputees were due to diabetic/vascular related cause which represents more than half of the ALPC beneficiaries (ALPC, 2019). The ratio between lower limb amputation and upper limb amputation is 4.5:1, respectively (ALPC, 2019).

According to the researcher best knowledge, no studies have been conducted to evaluate the provided services of amputee rehabilitation in GG. Thus, information gap died exist that include but not limited to the comprehensiveness and quality of the rehabilitation process, clients' satisfaction with the services, prosthetic rehabilitation process and outcomes, the outcomes of amputee rehabilitation process provided in GG, and quality of life of people with amputations. Therefore, this study will be among the first to comprehensively evaluate amputee rehabilitation services at GG.

1.3 Justification of study

Amputee rehabilitation services for the lower and upper limb amputee consist of nine phases, pre-operative, amputation surgery, acute post-surgical, pre-prosthetic, prosthetic prescription & provision, prosthetic training, community integration, vocational rehabilitation and follow up (Esquenazi, 2004).

In 2018, the International Committee of the Red Cross (ICRC) estimates around over 1600 people with amputations live in GG. There were other people that would seek health services abroad, data about those people was not included in ALPC data. This was based on the fact that there were 1,547 people with amputations registered in the Patient Management System (PMS) at ALPC (ALPC, 2019). This is reflected the high levels of demand for the amputee rehabilitation services.

Therefore, this study attempts to tackle this issue and identify the gaps in the amputee rehabilitation nine phases and the actual performance in the field, to compare the efficacy of rehabilitation interventions with the factors influencing the quality of amputee rehabilitation in order to improve the quality of rehabilitation program for people with amputation/s and to propose measures to bridge the gaps. On the one hand, the finding of the study may be used by decision makers and donors to improve the quality of amputees life through funding initiatives that could improves much as possible the efficiency and effectiveness of amputee rehabilitation services within GG.

Also, this study would be the first study conducted to evaluate the amputee rehabilitation using a comprehensive approach, starting from pre-operative care to the community reintegration, which should be the case eventually. Thus, recommendations will be proposed to improve the quality of provided services at all levels: input, process, outcomes, and outputs as well as may contribute to the development the national amputee rehabilitation guidelines and strategies which are ongoing right now.

The study results are important to the Researcher as he is experienced in the field of amputee rehabilitation, it would help him to increase the efficiency and effectiveness of aids provided through ICRC to the ALPC, the findings of the study might also be a base

for any reform that could be implemented to improve the overall performance and quality of services provided to people with amputations.

1.4 Aim of study

This study aims to evaluate the amputee's rehabilitation services in GG in order to propose recommendation and interventions that could improve the overall performance of amputee's rehabilitation services, thus, improving the overall well-being of people with amputations.

1.5 Research objectives

1. To assess the relevance, effectiveness, sustainability, and impact of rehabilitation services provided to people with amputations.
2. To appraise the nine phases of the rehabilitation process.
3. To examine the satisfaction of people with amputation with the provided service, including satisfaction with the prosthesis.
4. To evaluate the quality of life of people with amputations.
5. To identify areas of strength and areas of weaknesses in the amputee rehabilitation services.
6. To propose recommendations to policy makers and stakeholders that might improve and enhance amputee rehabilitation performance.

1.6 Context of the study

1.6.1 Geographic and Demographic contexts

GG is a small piece of land located in the southern area of Palestine with a narrow section about 365 km2, and it is divided into five governorates: Gaza, North Gaza, Khan Younis, Rafah, and Deir El-Balah.

According the results of the Population, Housing and Establishments Census 2017, the total population of Palestine in 2017 was about 4.78 million; the number of population of Gaza Strip was 1.90 million of which 963 thousand males and 936 thousand females, the individuals aged (0-14) years constituted 41.8% and the elderly population aged (65 years and above) constituted 2.8%. High Population Density in Gaza Strip is 5,204 persons/km2 (Palestinian Central Bureau of Statistics (PCBS), 2017).

1.6.2 Disability framework and situation

The Palestinian Authority (PA) demonstrated its commitment to addressing disability issues and reducing barriers experienced by Persons with Disabilities (PwD) by becoming the 144 State Party to ratify the Convention on Rights of Persons with Disability (CRPD). On April 2, 2014. This United Nations Convention obliges states to promote, protect, and ensure the full and equal enjoyment of all human rights and essential freedoms by all PwDs and to encourage respect for their inherent dignity.

The Palestinian Legal Framework Law No.4 (1999) citing the rights of the PwDs based on equity principles came into force in the Palestinian territory; however, it remains only partially enforced.

Ministry of Social Development (MoSD) was mandated by law to oversee the protection of PwD while other ministries (Health, Education and Higher Education, Labor, etc.) were required to ensure the provision of relevant services (Articles 7 and 10 -Disability Law).
The PCBS 2017 data of population, housing and establishments census, report that persons suffered from at least one difficulty (wide definition) 5.8% of the overall population in Palestine have a disability (127,266 in the West Bank constituting 5.1% of the total population of West Bank, and 127,962 in Gaza Strip constituting 6.8% of the total population of Gaza Strip). Its further reports that broadly mobility concerns affect 1.8% of total population (PCBS, 2017).

From 30th March 2018 to October 2019, regular protests took place in the border areas to demand the Right to Return to occupied Palestine in 1948. These protests were collectively called 'The Great March of Return (GMR). GMR was well-organized gatherings have been held mostly every Friday (and other designated days) with thousands of participants. Although these protests are peaceful movement of Gaza residents close to the 'no-go zone' resulted in the use of tear gas and live-ammunition from Israeli Army, which continued to violate human rights and International Humanitarian Law in the Gaza Strip through its killings, shootings citizens who claim their most basic rights, which are guaranteed under International Law**,** resulting in a 35,703 injures and 316 deaths (up to December 2019), Among them, 7,927 people have been affected by live ammunition, of which 9,389 (48.2%) presented limb gunshot wounds, the total amputation 158 people (124 lower limb and 34 upper limb) with high possibility for many secondary amputation especially for

complicated cases with ex-fixators which placed more burden on the existing struggling healthcare system in Gaza (Ministry of Health (MoH), 2019).

A lack of resources and of political will explain why rehabilitation services are offered by Non-Governmental Organizations (NGO`s) and other non-state actors. Despite the legislative framework for inclusion a majority of PwDs remain socially and economically excluded and marginalized.

Disabled People's Organizations (DPOs) in GG are well organized and vocal, but in a chronically under resourced system, their role of referral and advocacy is a difficult one and have not resulted in a significant improvement with regard to the rights of PwDs.

1.6.3 National capacity and services provided

Amputee rehabilitation in GG is provided by different actors; including the Ministry of Health (MoH) through the post-surgical inpatient physiotherapy at the 6-main governmental hospitals, the ALPC; which considered the main provider of prosthetic services in GG. Other organizations provide fragmented not fully coordinated physiotherapy services as pre-prosthetic rehabilitation and social integration projects through sports or micro initiative projects, home adaptation and vocational training, example of these organizations are Palestinian Paralympic Committee (PPC), Al Salama Association (ASA), Humanity and Inclusion (HI), and Medecins Sans Frontieres (MSF). Recently, Hamad Hospital for rehabilitation and Artificial Limbs.

The MoSD in Gaza is broadly responsible for the rehabilitation sector but has a severe lack of funding and mainly provides cash assistance to PwDs. MoSD also lobbies other relevant ministries for them to provide services that are inclusive for PwDs. It also seeks to be the main reference point for organizations providing economic initiatives for PWDs. The political division between the Gaza Strip and the West Bank has led to severe shortages of funds.

The Ministry of Health - Physical Rehabilitation Unit (MoH-PRU) is important in providing oversight of physiotherapy services within MoH structures. Self-initiated improvement has been limited due to a lack of financial resources for the unit.

The municipality of Gaza administers and manages the ALPC in provision of Orthotic and Prosthetic (P&O) services, the only disability related activity which the municipality of Gaza is involved in. In practical terms physical rehabilitation mostly is delivered and administered by INGOs and NGOs.

There are 11 technicians in GG, working for both ALPC and Hamad Hospital for rehabilitation and Artificial Limbs) that are certified by the International Society of Prosthetic and Orthotic as a diploma degree (CAT-II) technologists (9 full Prosthetic and Orthotic (P&O) and 2 prosthetic discipline, trained by the ICRC) and 3 on the job trained P&O technicians that have various amounts of training at short courses and through mentoring (through ICRC and other various donors).

The oldest and first center which was established in GG providing (P&O) services as a holistic approach is the ALPC, it was established as an NGO in 1976. It has been providing orthotic and prosthetic services to amputees and patients since 1978. It is registered as a non-profit organization and it managed under the umbrella of the Municipality of Gaza since 1999 (ALPC, 2018). The centre has been supported by ICRC since 2007 and has assisted the ALPC to deliver comprehensive physical rehabilitation services in the areas of Prosthetic and Orthotic, Physiotherapy, Wheelchairs and mental health and psychosocial support.

Opportunities for social inclusion have also been provided by the ICRC's Economical Security Department. There are small private workshops in the Gaza Strip which provide severely limited scope of services, as well as in April 2019 Hamad Hospital for rehabilitation and Artificial Limbs there started functioning and providing the prosthetic services with full agreements with the ALPC to avoid the duplication.

There are about 1100 qualified Physiotherapists (PTs) and Physiotherapy assistants (PTAs) in GG, out of which 980 are registered Palestinian Physiotherapy Association. The MoH delivers in and out patient physiotherapy services at eight referral hospitals and two primary health care centers, in total the MoH in GG employs 128, PTs and PTAs, United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA) employs 34. ALPC has 5 PTs working exclusively in amputee rehabilitation.

In addition to the MoH, the Military Medical Services (MMS), employs around 30 physiotherapists for its 3 hospitals. Services of the MMS do not cater to the needs of combatants alone but to the general public and detention facilities.

NGOs employ PTs, predominantly offering direct PT services, assistive and mobility devices, UNRWA has 11 clinics which provide physiotherapy to outpatients having refugee status.

1.7 Operation definitions

1.7.1 Amputee Rehabilitation Process

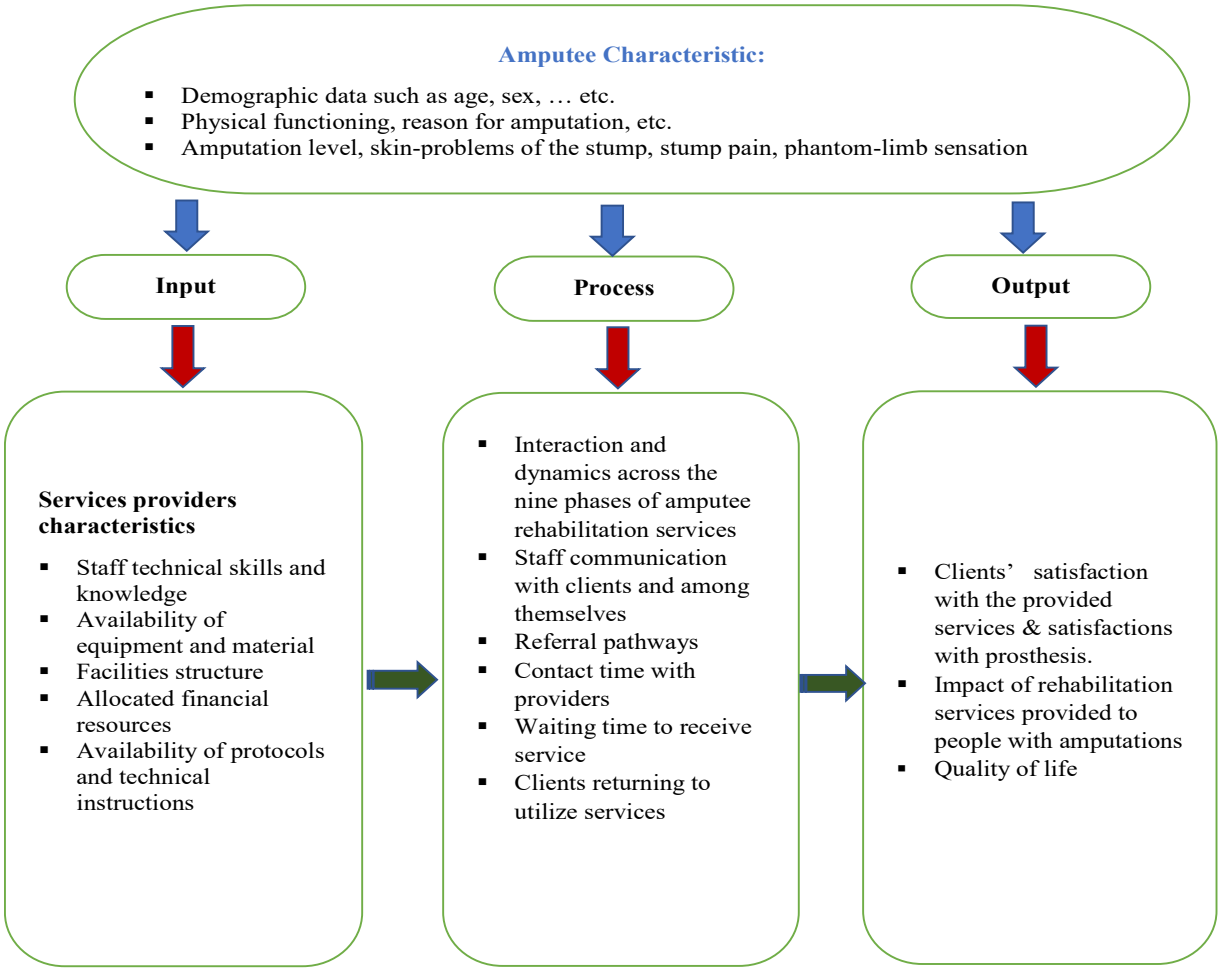
The process of rehabilitation intervention is considered from the date of admission to the hospital and determined after the amputation surgery and preceding to discharge from the hospital to the community reintegration.

Chapter Two

Conceptual Framework & Literature review

2.1 Conceptual Framework

A conceptual framework is a map that a researcher uses to guides his studies. It explains the links and the relations between variables for each domain. A conceptual framework can help manage thinking, observations and their linkages. Thus, it provides inclusive understanding of specific variables and the connections between them. The following figure demonstrates the conceptual framework which was developed by the researcher:



Figuer (2.1): Diagram of conceptual framework for the study, Self-developed

2.1.1 Amputee Characteristic

Amputee rehabilitation may be affected by amputee socio-demographic factors, including gender, age, marital status, level of education, and place of residency. Also, the physical functioning and reason of amputation have an impact on the amputee rehabilitation. In addition to the amputation level, skin-problems of the stump, stump pain, phantom-limb sensation. Those characteristics have a main effect on the amputee's rehabilitation process and outcome.

2.1.2 Input Factors

Input characteristics information is important, which includes staff technical skills and knowledge, availability of equipment and material, facilities structure, allocated financial resources & availability of protocols, and technical instructions. Based on Donabedian model, this is the input factors has impact on the process and the output and these include the below.

2.1.2.1 Services providers' characteristics

Staff technical skills and knowledge

Knowledge and skills of health care and rehabilitation providers are very important to achieve best outcomes of amputees' rehabilitation services, consequently, the health care and rehabilitation providers need to have educational, clinical, managerial skills and knowledge to identify rehabilitation needs, know how to fulfill clients' needs, manage staff time and, all issues related to clinical settings. As well as, educate the amputee and give them the needed health education material.

Availability of equipment, material and facilities structure

These factors are an important input factors because they affect the effectiveness of the overall amputee rehabilitation services. These factors include rehabilitation and health care facilities, such as the materials, tools, and equipments that are used during the rehabilitation sessions of physiotherapy, occupational therapy, psychosocial, and nursing care.

Allocated financial resources

This one of the essential input factors refers to the long-term sustainability of rehabilitation services. In order to promote long-term sustainability, it is important that rehabilitation

programmes depend on the sustained financial resources and diversifying funding mechanisms. Within the context of Gaza, the issue of long-term sustainability of rehabilitation services is vital as most such programs depend solely on donors.

Availability of protocols and technical instructions

Under input factors, the availability of protocols and /or technical instructions that include best practice statements for concerns regarding screening, diagnosis, management, or monitoring. A viability of protocols effectively impacts the process of rehabilitation and surely impact the overall wellbeing of people who have gone through such traumatizing event.

2.1.3 Process

Process characteristics show what is done for the amputee including the interaction and dynamics across the nine phases of amputee rehabilitation services, mentioned below, staff communication with clients and among themselves, referral pathways, contact time with providers, waiting time to receive service and clients returning to utilize services. According to Donabedian model, these characteristics affect the amputee's rehabilitation process and outcome.

2.1.3.1 Interaction and dynamics across the nine phases of amputee rehabilitation services

Amputee rehabilitation for people with traumatic and non-traumatic amputations uses a comprehensive approach that requires input from a transdisciplinary rehabilitation team to achieve its complex task. This comprehensive approach is divided according to specific rehabilitation goals into nine phases, according to the periods of rehabilitative evaluation and intervention, namely: pre-operative, amputation surgery, acute post-surgical, pre-prosthetic, prosthetic prescription, prosthetic training, community integration, vocational rehabilitation and follow up. Each of these phases has own evaluation measures, treatment goals and objectives. The scope of this study will cover the nine phases and link the phase with the final outcomes that includes the quality of life of people with amputations.

2.1.3.2 Staff communication with clients and among themselves

One of the requirements for good clinical practice in amputee rehabilitation is amputee involvement, as it increases amputee satisfaction, as well as the good communication and interaction among the all amputee rehabilitation providers will improve the amputee rehabilitation outcomes. Amputees' involvement in amputee rehabilitation decision making

or shearing opinions about different methods of rehabilitation includes sharing information and accepting health team instructions.

2.1.3.3 Referral pathways

Referral pathways concern with a holistic approach of rehabilitation process to enable the amputees to receive all the needed rehabilitation from different places and providers. As well as it explains the place of referral, the referral in charge provider, if there was any problem during the referral process.

2.1.3.4 Contact time with providers

This is one main process factor describes the amputee rehabilitation services delivery, which includes the time that the rehabilitation provider spends with the amputee each session, number of session per a day, for all different types of provided rehabilitation.

2.1.3.5 Waiting time to receive service

This is a key process factor as the waiting time regarding the amputate rehabilitation has negatively associated with amputee satisfaction; as longer waiting time is associated with lower amputee satisfaction.

2.1.3.6 Clients returning to utilize services

This central process factor defines the follow-up and discharged plan for amputees when they completed all their rehabilitation process and came back to follow up

2.1.4 Outcome

These characteristics show how the patient responds to the care and rehabilitation the amputee received and reflects the impact of the services on pre-admission and social integration after received the prostheses. These factors include; amputees' satisfaction with the provided services and satisfaction with prosthesis, impact of rehabilitation services provided to people with amputations and quality of life. Based on Donabedian model, these factors are the outcome factors and reflects the effectiveness and quality of the services.

2.1.4.1 Clients' satisfaction with the provided services & satisfactions with prosthesis

This outcome factor is important because healthcare and rehabilitation providers depend on the source of information that concentrates on the clients' perspective. Clients satisfaction remains an important concept for healthcare and rehabilitation providers.

2.1.4.2 Impact of rehabilitation services provided to people with amputations

This focal outcome factor shows amputees' outcome results pre-admission and social integration after received the prostheses. Satisfaction is an indicator of the quality of services in healthcare and rehabilitation settings. This explains that the services received by the amputee met their expectations and needs.

2.1.4.3 Quality of life

Quality of Life (QoL) defines an individual's perception of her or his position in a context in relation to goals and concerns, QoL is a complex, multifaceted concept that requires multiple approaches from different angles. QoL was measured as a multi-dimension's issue: physical, psychosocial, social, and environmental. Amputation leads to permanent disability and brings a dramatic change in the life and function of the individual which affects the quality of life of people who experience it.

2.2 Literature review

2.2.1Amputation

Amputation is the planned surgical removal of a limb or body part. It is performed to remove diseased tissues or relieve pain. It includes all levels of the limbs (arms, legs, hands, feet, fingers, and toes) which can all be amputated. Amputation is performed for the following reasons: to remove tissue that no longer has an suitable blood supply, because of severe trauma to the body part and to remove malignant tumors (Michael & Bowker, 2004). A well-planned and executed amputation can remove a dysfunctional limb, reduce pain, and allow rehabilitation with a prosthetic limb to a painless and functional state. In this regard, the surgery of amputation may be considered as reconstructive surgery (Krajbich, Pinzur, Potter, & Stevens, 2016), with the restoration of function to a state that is improved compared to what would have been without the removal of the body part.

The prevalence of amputation differs from country to another. The drivers of amputation depend mainly on morbidity patterns, ageing of population, infrastructure and quality of health services, prevention of accidents, trauma and the occurrence of armed conflict. Vascular disorders are the main contributors to lower limb amputations in western countries, whereas traumatic accidents are the major cause of amputation in developed countries (Sinha, 2013).

The number of people in the world with diabetes (age standardized) has doubled since 1980 with 422 million people now estimated to be living with diabetes in 2016. The prevalence of diabetes was growing most rapidly in low and middle-income countries (WHO 2020). Presence of diabetic foot ulceration and Charcot foot has been shown to lead to reduced life expectancy (Bus et al., 2016), and significantly higher rates of lower limb amputation. In general, 85% of lower limb amputations in people with diabetes follow a diabetic foot ulceration (Singh et al., 2005). People with neuropathy in the lower limb often have an absence of protective sensation and impairments to the motor and autonomic nervous system which lead to a reduced physical stress tolerance of the sole of the foot (Bus et al., 2016).

Internationally, diabetic foot ulceration is a main cause of lower limb amputation. Due to diabetes, every 20 seconds a lower limb is lost someplace in the world (Bakker et al., 2016). In GG Diabetic foot is one of the serious and common complications of diabetes, which lead to negative effects on health, QoL and is associated with major health care costs (Salwe, Kalyansundaram, & Bahurupi, 2016).

Traumatic loss of limbs is considered a burden that requires a long term special care and attention. Many of the amputations in GG are caused by military attacks during the Israeli military incursions into Gaza from 2006 to 2016 and in cross border shooting incidents in the GMR in 2018-2019. People that had resulting amputations commonly have various other physical injuries and psychological issues. Skin problems are also a common complication in traumatic amputees due to superficial injuries, scarring and skin grafts (Heszlein-Lossius et al., 2018).

2.2.2 Rehabilitation

Article 26, Habilitation and Rehabilitation, of the CRPD calls for: "appropriate measures, including through peer support, to enable persons with disabilities to attain and maintain their maximum independence, full physical, mental, social and work ability, and full participation and inclusion in all aspects of life" (Skempes, Stucki, & Bickenbach, 2015).

The Palestinian Authority (PA) approved their commitment to addressing disability issues in line with the CRPD and reducing barriers experienced by PwDs. The PA became the 144th State Party to ratify the CRPD in 2014, although progress towards the implementation has been limited due to limited financial and political resources and commitment.

Usually, rehabilitation outcome measures have focused on the individual's impairment level. Recently, outcomes measurement has been extended to measure individual activity and participation outcomes. Participation outcomes and measurements of activity and assess the individual's performance across a range of areas – including communication, mobility, self-care, education, work and employment, and quality of life. Participation outcomes and activity may also be measured for programs. Examples include the number of people who remain in or return to their community or home, return-to-work rates,

independent living rates, hours spent in leisure and recreational pursuits (WHO, 2019). Such measures allow for the effect of programmatic changes to measure in terms of impact on people utilizing services.

2.2.3 Amputee Rehabilitation Services

Amputation has severe consequence on people's mobility and their ability to fully achieve the activities of daily living. Thus, the negative impact has significant influence on productive activities and quality of life (Dillingham & Pezzin, 2008) which will lead to negative effects on their contribution and integration into society (WHO, 2013).

The general goal of lower limb amputee rehabilitation is to ambulate successfully and to integrate clients back into society with the use of a prosthesis. This reintegration has been more easily achieved with the great changes in prosthetic technology in the past several years, with more advanced components and techniques of manufacturing (Sinha, 2013).

Amputee rehabilitation for people with traumatic and non-traumatic amputations uses a comprehensive approach that requires input from a transdisciplinary rehabilitation team to achieve its complex task. The participants in the rehabilitation team share goals and overlap in terms of their areas of practice, rather than working on separate discipline specific goals. Team members rely on effective communication during all stages to ensures that a coordinated person centered approach is achieved and therefore rehabilitation is likely to be more successful (Engstrom & Van de Ven, 1999).

Prosthetic rehabilitation aims to reach maximum independence, safely and with minimum extra energy expenditure. Each individual's rehabilitation program takes into account their pre-amputation lifestyle, medical limitations and expectations. The level of amputation, physical and psychological presentation, and social environment all have an impact on the expected level of functional independence. The physiotherapist develops the patient through a program based on constant assessment and evaluation. Through regular assessment, the physiotherapist should recognize when the individual has achieved an ideal function with a prosthesis (Broomhead et al., 2012).

This comprehensive approach is divided according to specific rehabilitation goals into nine phases. according to the periods of rehabilitative evaluation and intervention, namely: pre-operative, amputation surgery, acute post-surgical, pre-prosthetic, prosthetic prescription, prosthetic training, community integration, vocational rehabilitation and follow up. Each of these phases has own evaluation measures, treatment goals and objectives (Esquenazi, 2004).

Studies have shown that most amputees reviewed who completed rehabilitation successfully improved their level of function, returned to work and were using their prosthesis. Those amputees whose benefited mostly from rehabilitation programs were ones that included medical, prosthetic and vocational services (Pasquina et al., 2006).

Amputee rehabilitation, when possible, can start prior to the amputation surgery and should be delivered by a specialized rehabilitation team. Communication between the team members, the amputees, and their family members is important. The rehabilitation team requires information to develop and design the treatment plan. From and with the rehabilitation team the patient should input into and receives a clear vision to form realistic expectations after surgery and rehabilitation. From this clear information, the rehabilitation team will consider the amputees' physical and medical status, level of amputation, previous lifestyle, and thought, all this information will help the patient set accurate short- and long-term goals (Manig, 2018).

2.2.3.1 Pre-operative amputation assessment and consultation

The principle of the pre-operative amputation assessment and consultation is that individuals facing amputation surgery should have a full interdisciplinary assessment pre-operatively. This allows a full process that shared decision making can be undertaken. But in the real practical this is not always possible for several reasons, including the urgency of the surgery in many cases including trauma, the patient's level of consciousness, the quality of provided health services including the presence of qualified surgeons.

Pre-rehabilitation in amputations resulting from peripheral vascular disease and diabetic patients are rare. The specialists described peripheral vascular disease and diabetic patients at risk for a lower limb amputation are difficult group for preoperative-rehabilitation due to short time prior to surgery, multiple co-morbidities, older age, and lack of motivation for behavioral change. The specialists concluded that a pre-rehabilitation program should focus on patients who have enough time to allow improvement before the amputation for pre-rehabilitation and who are motivated to participate (Dekker et al., 2018).

Adolescents & children who require limb amputation as part of cancer treatment face several emotional and physical challenges. Pre-operative rehabilitation interventions could serve to facilitate positive coping and improved long-term adjustment, including reducing anxiety and post-operative suffering. As a result of including preparatory interventions including pre-operative education, play therapy, film and/or peer modeling, relaxation training, hypnosis there may be significant improvement in the coping capacities and long-term adjustment of youth undergoing amputation (Loucas et al., 2017).

Early assessment and planning can start at this stage when possible, and helps to prepare the patient for rehabilitation, prevent secondary complications and maximize the patient's physical outcome (Bowring, 2008).

2.2.3.2 Acute post-operative

Goals of the acute post-operative phase are to prevent complications, manage the wound and residual limb or ‘stump’, restore mobility and independence, manage pain and start discharge planning. Patients need to start the rehabilitation early to avoid complications such as joint contractures, pathological scars, and a depressed psychological state. The earlier the start of rehabilitation, the greater the potential for success will be (Morvan et al., 2014).

Like in other stages of the rehabilitation process, the pre-prosthetic management is essential to achieve the functional independence of the amputee. By improving the cardio-respiratory and functional capacity of the individual it is possible to improve the prosthetic use. The patients’ psychological status, social situation, expectations and goals should be documented and taken into consideration when planning the amputee post-fitting. This should be done as a continuous process, regarding the objectives established in the previous acute post-operative (Michael & Bowker, 2004).

According to the British Association of Chartered Physiotherapists in Amputee Rehabilitation (BACPAR) (Rehabilitation, 2012), the goals of the acute post-operative phase are to prevent complications, manage the wound and stump, restore mobility and independence, manage pain, and start discharge planning (Broomhead et al., 2012). Patients need to start the rehabilitation early (the first day post-operatively if possible) to avoid complications such as pathological scars joint contractures, and to maintain psychological well-being. The earlier the start of rehabilitation, the greater the potential for success will be (Morvan et al., 2014).

2.2.3.3 Prosthetic prescription

Prosthetic prescription is a process done by the multidisciplinary team that contains in the minimum the user, physiotherapist, and prosthetist. An extended team can include a specialist physician, occupational therapist, social worker and mental health professionals. Through the prescription procedure, the team decides on the type of prostheses that should be fabricated and the socket design, the various types of components and the choice of suspension. All these decisions are extremely important for the rehabilitation process that will happen thereafter (Morvan et. al., 2014). Like in other stages of the rehabilitation process, the pre-prosthetic management is essential to achieve the functional independence of the amputee. By enhancing the capacity of the cardio-respiratory capacity and the functionality of the individual, it is likely to enhance the prosthetic use. The amputees' social situation, goals, psychological status and expectations should be documented and taken into consideration when planning the amputee post-fitting. This should be done as a continuously updated process, with regard to the objectives established in the previous acute post-operative stage (Michael & Bowker, 2004).

2.2.3.4 Prosthetic training

Amputees should have a full physical and functional assessment which allows rehabilitation to be based on personalized functional goals. Individualized exercise programs are developed through assessment to target specific required functional movements required for a fluid and functional gait. The knowledge of normal gait and the underlying biomechanical reasons for this normality helps the therapist to formulate a treatment plan that facilitates wholistic and task focused rehabilitation of the individual. There are many procedures and techniques that can be used through rehabilitation and not all of them will be suitable for everyone (Gailey & Clark, 1992).

The amputee's level of activity before the amputation, general health and potential to improve needs to be taken into consideration when planning for a rehabilitation program and should aim at using the function gained in a controlled environment into their own home functional environment (Gailey & Clark, 1992).

During prosthetic training phase of rehabilitation, amputees are likely to have their prostheses agreed and fabricated for them. After the amputee receives a prosthesis, regular monitoring of the skin allows for timely modifications of socket-fit problems and avoids skin irritations and pressure problems (Manig, 2018).

The amputee should be reviewed regularly by the prosthetic rehabilitation team. Assessing if individual is still suitable for prosthetic use, checking that the prosthetic prescription is still the most appropriate option for the patient and any required changes they need to be made to the prosthesis as the patient gets older or if weight changes the fit and presentation of the person (Michael & Bowker, 2004).

As a long-term follow-up, the amputee who has effectively completed his rehabilitation program should be followed up by one of the rehabilitation team members at a minimum every 3 months for the first prostheses used. Regarding the physician, follow-up is recommended to be every 6 months. These recommended planned visits may need to be more frequent and contain other members of the rehabilitation team if the amputee is having problem or difficulties with the residual limb, prosthetic fitting, particular activities, or psychosocial changes (Esquenazi & DiGiacomo, 2001).

2.2.3.5 Community integration

As a core component of the rehabilitation of people with amputations is to resume the roles in family and community activities as well as achieving emotional equilibrium, development of healthy coping strategies, as well as being able to pursue recreational activities and leisure activities (Engstrom & Van de Ven, 1999).

Reintegration in the community and vocational rehabilitation are linked closely. On the origin of residual functional capacity, amputees may be able to return to their previous line of work (Esquenazi & Digiacomo, 2001).

Along with prescription and fitting of the prostheses, training is necessary and should include prosthetic management and functional training with the goal of achieving the plan of vocational activities for future. Achieving the plan of vocational activities need further education, training or job modification for amputees (Esquenazi, 2004).

It is significant to the successful reintegration of the amputee that the return to work is conducted gradually in terms of time and work capability increasing over some weeks and the rehabilitation staff being available for support. This could include staged increases in activities within the workplace as well as training in rehabilitation locations. Return to the work as soon as possible when this is safe and possible is advisable (Esquenazi & Digiacomo, 2001).

The increases of social integration is linked with both enhancing the function and QoL outcomes between amputees. Social support in a systemic way, should be provided to support amputees with weak social integration (Hawkins et al., 2016).

2.2.4 Effectiveness of Amputee Rehabilitation Program:

Amputee rehabilitation services after limb amputation, especially the loss of the lower limb can have a great impact on physical functional capacity, physiological status impact and quality of life. People with lower limb amputation receiving rehabilitation are expected to have better prosthetic weight-bearing and mobility, musculoskeletal durability and a more normal walking speed. Further they are more likely to have successful, prosthetic fitting and have been shown to have on average an increased 1-year survival rate, when compared with those who didn't receive amputee rehabilitation (Madsen et al., 2019).

The mobility ability for lower limb amputees can be used to guide exercise design for limb amputated persons and to guide prosthetic rehabilitation. Each mobility task is planned based on assessment of the amputee's ability to achieve specific physical skills at the movement level; also, each mobility task is also include some components of neuro-musculoskeletal and movement-related functions in the body function criteria as specified by the International Classification of Functioning (Kohler, Silva-Withmory, and Arockiam, 2011).

An accurate prescription for the right prosthetic limb can result from adapting the functional aspects of a prosthesis to the functional desires of the prosthetic user. For

adequate corresponding, the functional abilities of the amputees are of main value, in addition to the technical and functional aspects of the various prosthetic components (Safaeepour, Eshraghi & Geil 2017).

This matching of the prosthesis to the requirements of the person can use simple frameworks such as enquiring as to the importance of different domains such as cosmetic, comfort and function and determining which of these is the priority for an individual. With this information in mind the prosthetist and the rehabilitations team can make decisions regarding things such as the tightness of the prosthetic socket fitting, the type of suspension and the safety of the alignment of joints such as the prosthetic knee (Krajbich et al., 2018).

2.2.5 Amputee rehabilitation in GG

The only place in the GG where prostheses can be fitted is the ALPC, it was established as an NGO in 1976. It has been providing orthotic and prosthetic services to amputees and patients since 1978 and is the first provider of these services in the GG. It is registered as a non-profit organization and now it managed under the umbrella of the Municipality of Gaza since 1999 (ALPC, 2018). In addition, in 2019 Hamad Hospital for rehabilitation and Artificial Limbs started functioning with full cooperation with the ALPC to avoid the duplication.

In addition, having prostheses fitted, amputees need a clear rehabilitation pathway process that includes various services, such as physiotherapy and psychological treatment. There are some centers and clinics in the GG offering rehabilitation services, such as Al-Wafa rehabilitation hospital and Al-Amal Hospital. In addition to these 55 rehabilitation centers that registered with the Palestinian Ministries of Health and Welfare operating in the Gaza Strip (Abu Arisheh & Efrat, 2016).

2.2.6 Referral system

An effective referral system confirms that a close relationship among all levels of the care health providers and supports to ensure people receive the best health care. It also helps in making cost-effective use of health care services. A good referral system can help to

ensure patients receiving access to quality health care across health institutions and medical services specialties (WHO, 2013).

Referral system described as the processes of the patient's pathway to have touch with different individual profession or health care centers about his/her case and how professional and health care providers communicate to provide his/her with comprehensive support. Some of the community-based rehabilitation programs in GG are trying to improve channels of coordination & communication amongst related actors, facilitate the training of new human resources, implement rehabilitation projects at the community level, encourage activities aiming at the prevention of disabilities and promote public awareness towards the PwDs in GG (Abu Hamad, 2009).

2.2.7 Amputee quality of life

QoL is increasingly being recognized as an important outcome for rehabilitation programs and has mainly been used to compare the efficacy of interventions. Amputation leads to a permanent disability and brings a dramatic change in the life and function of the individual which has been shown to negatively impact upon the quality of life of people who experience it.

Rehabilitation is the improvement of an individual to the completest psychological, social, physical, educational potential, and avocational, which is consistent with the person's environmental limitations & physiological or anatomical impairment. The main goal of rehabilitation for all PwDs is to attain or reach the maximum possible QoL and life satisfaction, and full community contributions. As well as gaining maximal functional independence is not always sufficient for community involvement, which is the endpoint of the rehabilitation process (Yazicioglu, Goktepe & Tan, 2012).

Lower limb amputees consistently report worse QoL as compared to the general population. Use of a prosthesis, comorbidities, phantom-limb pain and residual stump pain were found to be other important factors affecting peoples QoL. All these factors should be addressed during the treatment phase of the rehabilitation program and after the discharge of amputees, in order to ensure their holistic reintegration and participation and to enable them to regain or maintain QoL (Sinha, Van Den Heuvel, & Arokiasamy, 2011).

In addition, a study conducted by Lam, Tang, Chau, Law, & Chan (Effect of Age and Gender) shows younger amputees and female amputees possess significantly higher self-esteem, body image perception and quality of life, indicating that they may have better psychological health and mental wellbeing than the older and male counterparts (Lam, Tang, Chau, Law, & Chan, 2018).

There are other factors that influence QoL which are fixed by the level of amputation and co-morbidities, but many factors can be modified such as prosthetic rehabilitation, social support and activity levels. It is vital to consider a more holistic approach, which targets factors that can be influenced by amputee rehabilitation in order to optimize the QoL in those group (Davie-Smith, Kennon, Wyke, & Paul, 2015).

An evaluation study of the effect of sports on QoL and life satisfaction in sport participants and non-sport participants with PwDs which carried out by Yazicioglu, Goktepe & Tan (2012) showed that PwDs who participated in sports had significantly better QoL and life satisfaction scores compared to PwDs not involved in any sports.

2.2.8 Health services evaluation

Health systems are complex entities with many different stakeholders, including patients, clinicians, health care providers, regulators and the government. Those stakeholders are linked by a series of accountability relationships. Evaluation is an essential tool which provides information that plays an important role in the ability of a health system to improve health effectively and efficiently for population. As well as perform measurement, it is important to guide the decisions of the various stakeholders; such as patients, clinicians, managers, governments and the public. These decisions taken can direct the health system towards better outcomes. Accordingly, health system performance has a number of aspects to be measured; including population health, health outcomes, clinical quality and the appropriateness of care, responsiveness to people receiving care, equity and productivity (Smith, Mossialos, Papanicolas, & Leatherman, 2010).

2.2.9 Satisfaction with amputation services

There are no differences in satisfaction by prosthesis type or movable degrees of the device. Satisfaction is linked with receiving of training to use the prosthesis, the level of amputation and the age of amputee. Also, worse satisfaction is linked with further proximal amputation level and younger age. The association between receiving the prosthetic training and prostheses satisfaction, points to the critical aspects of occupational therapy and physiotherapy in the early phases of prosthetic care (Resnik, Borgia, Heinemann & Clark, 2020).

The people with upper limb amputations, particularly the hands, are in a very complicated part of the human body with numerous different motor and sensory functions. The person can accomplish sophisticated movements, from complicated to simple tasks, and is therefore an important tool of physical and social interaction. With a comparison to the people with lower limb amputations, the people with upper limb amputations are in a very different condition with respect to body image and social interaction. Upper limb amputation results in more severe body image annoyance and social distress than lower limb amputation. The loss of a hand can affect greatly the level of self-sufficiency and results in a wide range of activity restrictions and participation limitations and, accordingly, change the QoL (Sosteric, Burger & Vidmar, 2020).

2.2.10 Barriers to Healthcare Services for People with Disabilities

In the sector of health care, the people with disabilities percentage, or the people who will soon have disabilities is far higher. Regardless of this fact, health care professionals' education and training are often insufficient in the concerning disability and dealing with patients with disabilities (Mayer, Shah, DeLateur & Durso, 2008).

Although it is unconscionable to expect health care services providers to have experience in different field of disability, there are procedures that anyone working in health care can take to improve the health service outcomes of disabled people and ensure they receive access quality health care across health institutions and medical services specialties (Reynolds, 2019).

Even though PwDs, like individuals without disabilities, have needs of the different healthcare services, including primary prevention, illnesses treatment and referral to the

different health services where needed - there are still several barriers that prevent them from having easy access to the majority of the healthcare services. To ensure PwDs have successfully access to the different health care services PwDs need, the barriers preventing access require close attention and remedial action on the part of PwDs, also the barriers that are part of the healthcare system itself should be addressed to ensure improved access and equity (Baart & Taaka, 2017).

Regarding the lack of information on the availability of services, PwDs do often not have easy and available access to information by themselves, so they are dependent on the assistance from their family and friends for the needed health information (Ormsby et al., 2012).

The cost related to travel to and out of pocket expenses for healthcare services were often mentioned as one of the main difficulties in accessing healthcare services by PwDs, a factor which is exacerbated by the general low socioeconomic conditions that PwDs experience (Ahumuza et al., 2014).

PwDs have a high demand for healthcare services because of their impairments, and accordingly more costs than others. On the other hand, PwDs are suffering from high public and private transportation costs to reach the health service facility. Because usually they have to pay extra transport costs for another person to accompany them and/or have to hire specific needs for transport to accommodate their wheelchairs or other assistive devices such as walkers. This additional cost is not easily absorbed by people without disabilities. Therefore, this expense is notable as an additional barrier for PwDs to access needed healthcare. (Mavuso & Maharaj, 2015).

Stigmatization is an important barrier in accessing the services of healthcare. Shyness, low self-esteem and shame can lead the PwDs to exclude themselves from health care services. The impact of affected negative feelings about their disability and themselves can mean that are ashamed to leave their house, be seen in public including to attend for required health care services.

The healthcare service providers staff attitude can act as barriers from the supply-side. The negative attitude of healthcare provider staff has been widely reported, with many participants in the study by Ormsby and Colleagues (2012) reporting negative attitudes as a barrier. Healthcare service providers can be insensitive, whether on purpose or because of

a lack of knowledge about the needs of people with disabilities (Kritzinger et al., 2014; Gaihre et al., 2016).

Besides, a bad way of communication between healthcare staff and clients with PwDs is a barrier and a big challenge. In addition to that the difficulty in maintaining confidentiality for the PwDs who come to the health care center with the support of a family member or assistant can result in an incomplete clinical picture being formed of the personal circumstances (Tun et al., 2016). Barriers not only occur in direct communication between PwDs and healthcare staff but also in indirect communication such as the provision of brochures, awareness activities, or the lack thereof.

As well, inaccessible buildings and equipment at the health premises can be one of the major physical barriers to access healthcare services (Burke et al., 2017). Specific barriers mentioned include: healthcare provider buildings have no ramps, inaccessible toilets and doorways, the absence of sidewalks and, elevators which are non-existent or non-functional.

Chapter Three

Methodology

This Chapter describes the study methodology. It highlights study design, study settings, Study period, and the response rate, study population, sample selection, and sampling methods and process, data collection and analyzed process, piloting process, and data cleaning. Additionally, the Chapter describes the instruments used to collect the data. Finally, the reliability and validity are disclosed and concluded by the study limitations.

3.1 Study design

The design of this study is a descriptive, analytic and cross-sectional study, using a mixed method that involves utilizing both quantitative and qualitative data. Triangulation as an approach that is commonly used to evaluation health services; it implies the use of different data collection methods and tools with overall collecting rich comprehensive data that a single method could not achieve. This methodology allows collecting richer data, more detailed and balanced picture of the situation (Creswell & Creswell, 2017). It also provides opportunity to validate findings from one method to another or to enhance understanding of the facts on the ground (Donovan & Sanders, 2005).

3.2 Study settings

This study was conducted at the main hospital in GG (Al Shifa hospital) that provide pre and post amputation rehabilitation, ALPC as the main provider of the prostheses, 2 sports club for PwDs (Al Salam club & Al Basma club) and Erada project as a main vocational training center for PwDs. The above locations were the main ones that provide services to amputees in GG.

3.3 Study period

The study was lasted for 12 months; that started at late August 2019 and completed by August 2020.

3.4 Study population

The study population consisted of two parts:

3.4.1 Quantitative part

This part consisted of people with amputations who have received services from the ALPC. There is a total of 1,547 people with amputations registered in the Patient Management System (PMS) at ALPC. A representative sample was drawn from those registered beneficiaries, taking into account gender, as specified below.

3.4.2 Qualitative part

It is composed of two parts; the first part involved conducting three-focus group discussions with services providers, healthcare and rehabilitation. While the second part involved conducting eight in-depth interviews with key informants; namely the Orthopedic consultants at ALPC, the Head of Disability Networking, the Head of Al Basma Club, the Director of ALPC, Director of Hamad Hospital, Director of Physiotherapy department at MoH, Head of Wheelchair basketball federation and the Head of Prosthetic and Orthotic workshop at the ALPC. This enrichened the collected data and helped in providing more accurate rich data about the provided services.

3.5 Study sample

3.5.1 For quantitative data

Using Raosoft website, online sample size calculator (Annex 3), the sample size was estimated to be 308 amputees, at 95% confidence interval and 80% power. The Researcher has increased the sample size to 370 amputees, in order to compensate any possible non-respondents and to increase the statistical power of the study. The sample was drawn from ALPC registration system using systematic Random sampling technique.

3.5.2 For qualitative data:

- In-depth interviews with eight participants; with the Orthopedic consultants at ALPC, the Head of Disability Networking, the Head of Al Basma Club, the Director of ALPC, Director of Hamad Hospital, Director of Physiotherapy department at MoH, Head of Wheelchair basketball federation and the Head of Prosthetic and Orthotic workshop at the ALPC.

- Three focus group discussions were conducted with healthcare and rehabilitation services' providers. In order to have a diversity and homogeneity of participants, the participants of focus groups were selected taking into consideration different professions, according to gender and age.

3.6 Sampling process

3.6.1 Quantitative part

The sample of the 370 amputees was divided by gender to make sure of having a representative sample of both genders. Then, a probability systematic selection technique was applied to select the sample size from the database of the ALPC (PMS). The first case was selected randomly, then every 10^{th} case was selected.

Table (3.1): Distribution of study sample by gender.

Gender	Number of People with amputation	Percentage (%)	Proportionate sample size
Female	291	18.7	70
Male	1262	81.3	300

3.6.2 Qualitative part

A non-probability purposive sample of eight participants for in-depth interviews was selected. The in-depth interview sample included rehabilitation centers' managers from different rehabilitation aspects to reflect amputees' concerns and opinions. Moreover, the focus group discussions with healthcare and rehabilitation services providers purposively selected in a way that ensures they represent all providers involved in the amputee's rehabilitation phases.

The qualitative component

It was carried out after the quantitative part in order to explore issues that emerge from the quantitative study.

3.7 Eligibility criteria

3.7.1 Inclusion criteria

3.7.1.1 For quantitative data

1. Amputees who received prosthesis from ALPC:
   - For new users (received only one prosthesis from ALPC) over the past 12 months from the date of data collection.
   - For old users (received more than one prosthesis from the ALPC): all cases
2. Aged 18 years and more
3. Cooperative amputees

3.7.1.2 For qualitative data

1. Participants of in-depth interviews should have at least one-year experience, working at their current positions.

2. Service providers, healthcare and rehabilitation, participants in the focus group discussions should have more than six months' experience working in their current job.

3.7.2 Exclusion criteria

3.7.2.1 For quantitative data

1. Participants aged less than 18 years' old

2. Participants received prosthetic services from abroad

3. Uncooperative amputees

3.7.2.2 For qualitative data

1. For the in-depth interview, service providers who have less than one-year experience, working at their current positions.

2. For the Focus Groups Discussions, healthcare and rehabilitation providers' who have less than six months' experience working at their current positions.

3.8 Study instruments

This study utilized several instruments; namely a self-developed well-structured questionnaire and three internationally validated questionnaires, as below, and guiding questions for in-depth interviews and the focus group discussions.

3.8.1 Quantitative instrument:

3.8.1.1 A well-structured questionnaire was developed and utilized to collect data from participants receiving amputee rehabilitation services at GG (Annex 5). The main items that the questionnaire covered include but not limited to:

- General demographic variables
- Amputee rehabilitation services and facility
- Satisfaction with provided services
- Access and affordability of services
- Participation in treatment program
- Expectation from delivered services
- Outcome and community inclusion
- Information and communication

3.8.1.2 The Prosthesis Evaluation Questionnaire (PEQ) was used to collect data to assess the effectiveness of using the prosthesis (Annex 5). The PEQ has10 validated scales to cover different domains.

- Physical domain: within the physical domain, four scales addressed aspects of prosthesis function scales; usefulness/utility, residual limb health, appearance, and sounds. Also, there are two scales concerned mobility; ambulation and transfers.
- Psychologic and social domains: in the psychologic and social domains, three scales were present; perceived responses, frustration, and social burden.
- Overall well-being: the general wellbeing scale of the PEQ includes two questions, assessing the overall well-being of the amputee life.

The scales have been validated for internal consistency and temporal stability and are scored as a unit. Each question measures the amputee experience over the past four weeks and is rated from 0 to 10 and is always measured from the left (0 = worst possible and 10 = best possible).

3.8.1.3 The WHO Quality-of-Life Scale (WHOQOL-BREF) (see annex 5).

self-administration questionnaire (Annex 5): It is a comprehensive questioner containing 26 items rated on a 5-point Likert scale. A maximum score of 5 indicates a perception of high quality of life, while a minimum score of 1 indicates a perception of poor quality of life. 24 of which are grouped in Four domains comprise the following items: Physical Health (7 items); Psychological Health (6 items); Social Relationships (3 items) & Environment (8 items), and two global items related to overall QoL and satisfaction with health. The time base relating to the previous 2 weeks.

3.8.1.4 WHOQOL-DIS (Disability Module) (see annex 5).

A supplementary module comprising 12 items function as a group in three domains comprise the following items: (Discrimination (3 items); Autonomy (3 items); Inclusion (6 items)), which measure the disability impact on QoL plus one general item which assesses the overall impact of disability. These items have a 5-point Likert response scale also; scores range from 4 to 20, with higher scores representing higher QoL, and a time base relating to the previous 2 weeks.

3.8.2 Qualitative instrument:

Guiding questions for interviews and focus group discussions were developed to cover different areas of the amputee rehabilitation services cycle and management in terms of relevance, effectiveness, efficiency, impact, and sustainability, challenges that face providers during services provision, and areas of future improvement. (see annex 6 &7).

3.9 Administration and Ethical Considerations

An official letter of administration approval to conduct the study was obtained from School of Public Health at Al-Quds University and Helsinki Committee in the GG (see annex 4). An administration approval was obtained from the ALPC (annex 4), Assalama Charitable Society and MoH (annex 4). To guarantee participants` rights, a cover letter indicating that the participation is voluntary (informed consent), and confidentiality was obtained for all the participants who selected from the ALPC (Annex 8). All the study participants were asked for their approval to participate in the study. Transparency, honesty, and truth respect were maintained. Neither personal data nor identities was revealed by the researcher.

3.10 Pilot study

A pilot study was carried out through collecting data from 30 amputees to assess the appropriateness of the study instruments as well as to assess the validity of the study instruments. As a result of piloting, no major modifications were introduced into the questionnaire. Thus, the 30 piloting cases were included in the study sample.

3.11 Methods of data collection

For quantitative data, the data collected by the Researcher and eight well-trained data collectors; all of them are physiotherapists. The interviews conducted at the ALPC in a non-threating atmosphere that allows participants to express their views freely. The second component of the data collection was the qualitative data; the Researcher ran the in-depth interviews himself. The participants were informed about their right to not answer any question. The interviews and the focus group discussions were recorded, and notes were taken, after taking a written approval from all participants. All materials of discussions were kept in safe place and be accessible only for the Researcher. An assigned time and place were identified for the three focus group discussions. Each focus discussions had 10 participants; were select in a way that ensured they represent all healthcare service providers.

3.12 Scientific rigor

3.12.1 Quantitative part : questionnaire

3.12.1.1 Validity

The questionnaire was validated by ten experts to ensure the appropriateness and relevance of the questions. This group included experts of public health, researchers, statisticians, and experts of evaluation and quality fields (Annex 9). The aim of the questionnaire validation was to check if the content of the questionnaire is appropriate to its intended purpose and achieve the overall aim. All comments, advices, and feedback of the experts were considered in the finalization of the questionnaire.

Also, a pilot study conducted before the beginning of actual data collection, to examine clients' responses to the questionnaire and how they understand it, and to determine the

items that gave data about effectiveness of services. This was enhanced the validity of the questionnaire and record review- check list after modifying it to be better understood.

Data collectors were physiotherapists and trained very well by the researcher to ensure the standardization of data collection.

3.12.1.2 Reliability

The researcher used Cronbach`s alpha to assess the reliability of the questionnaire items, where applicable. Moreover, to ensure instruments reliability, training of data collectors was done to ensure collecting reliable data. Data collectors trained on how to select the participant according to the determined criteria, and how to fill in the questionnaire. All collected questionnaire checked by the Researcher. Data entered in the same day of data collection which lead to easily checked the data quality or to re-fill the questionnaire when required.

Table (3:2): Reliability estimates tool (Cronbach's Alpha) for Perceived Quality and Satisfaction post amputation services.

Domain	Cronbach's Alpha
From respondent perspective	0.929
Satisfaction	0.899
Total scale reliability	0.946

Table (3:3): Reliability estimates tool (Cronbach's Alpha) for Perceived Quality and Satisfaction at ALPC

Domain	Cronbach's Alpha
Tangibles	0.903
Empathy	0.934
Reliability	0.892
Responsiveness	0.904
Assurance	0.949
Satisfaction	0.948
Total scale reliability	0.976

3.12.2 Qualitative part (FGD & in-depth interviews)

To assure the trustworthiness of the qualitative part of the study, the following actions were carried out; the researcher has ensured compatibility between research question, objectives, and methods of data collection and develop tools of data collection. Peer check to questions to ensure that they cover all the required dimensions, then a member check will be done to ensure the credibility of the instruments.

The Researcher has to inform the participants that the participation in the interview is voluntary, and they have the right to accept or reject to answer any question. The interviews were recorded, and transcripts of the data were produced. In addition, data coding and analysis of the qualitative data were done immediately after the completion of the collection of every interview.

3.13 Response rate

All sample members were called on the telephone first then set an appointment for voluntary participation based on informed consent from each one of them before the administration of any tool. The response rate was 100% (370 responded out of 370). Also, all interviewees who were invited to participate in the FGD and KII have had positively responded.

3.14 Data entry and analysis

3.14.1 Quantitative part

The Researcher used the Statistical Package of Social Science (SPSS) program version 25 for data entry and analysis. Data entry and data cleaning were done. After that, frequency tables that show sample characteristics and plot differences between various amputee rehabilitation service providers and amputees' characteristics variables were obtained. Moreover, cross-tabulation for main findings and advanced statistical tests such as the Chi-square test to compare categorical variables, and T-test or One-way ANOVA test to compare means of numeric variables were done when required to analyze questionnaire data.

3.14.2 Qualitative part

The open coding thematic analysis method was used to analyze the collected data through interviews. The Researcher did take notes and made a summarization for the findings immediately after each interview. Then, the categorization of related ideas and comparison and integration between the quantitative and the qualitative findings were done to enrich information and validate findings. Debriefing reports of the FGDs was done immediately after the end of each focus group discussion.

3.15 Limitations of the study

1. The study included a sample from ALPC and there are other amputees received their prostheses from abroad will not be included.
2. The study included only amputees who have prostheses for at least 12 months within the study period.
3. The study was included only adult amputees, excluding children amputees, less than 18 years' old

Chapter Four

Finding and Discussion

4.1 Introduction

This Chapter presents the main findings of the quantitative and qualitative data. First, the quantitative data shows the results of statistical analysis, including descriptive and inferential analysis. This analysis presents the socio-demographic characteristics of the study sample and the answers to the questions of the study which reflected the services they received. The researcher used inferential analysis statistical tests including frequencies, mean, median and standard deviation, as well as focuses on examining the relationship between certain variables and other certain covariates to analyze the quantitative data where possible. The second part of this Chapter underlines the main qualitative data findings that were used to clarify, support and argue with or complement the quantitative data through the FGDs and KII. Throughout this Chapter, findings were presented to achieve the study objectives.

4.2 Descriptive statistics

4.2.1 Socio-demographic characteristics of the study participants:

As a reminder, the total number of participants in the study was 370 people with amputations. As shown in Figure (4.1), 25.4% of the study participants were from Gaza governorate; 18.4% of the study participants were from North Gaza governorate; 20% of the study participants were from Deir El-Balah governorate; 20% of the study participants were from Khan Younis, and finally, 16.2% of the study participants were from Rafah.

That is consistent with the findings of the PMS 2019 at the ALPC in terms of distribution of amputees across the GG. As well, this percentage distribution of amputees is consistent with the distribution of population in the GG, as report by PCBS (2019).

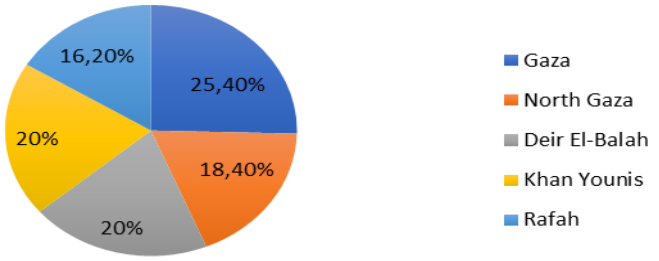


Figure (4.1): Distribution of study participants by governorates

Figure (4.2) shows that more than two-thirds (79%) of the study participants were male and about one third were females (21%). This was consistent with the findings of an annual PMS report at the ALPC 2019, in which male amputees constitute 81.3 % of all amputees utilizing ALPC prosthetic rehabilitation services. Consistently, several studies conducted in the Gaza strip have shown a similar distribution to the study participants. In an evaluation of the outreach physiotherapy services carried out by Al-Farra (2017), a total of 185 PWDs participated in that study, 70.3% were males and 29.7% were females. Another study conducted by Matar (2016) included 350 participants, of them 53.4% were males and 46.6% were females, and the study conducted by Al-Farra (2018), it included 263 participants, 64.3% were males and 35.7% of them were females.

This result could be explained by two reasons, the first, males have a higher risk to be exposed to injuries from participation in political actions, such as Great March of Return, that could lead to amputations, thus, use amputee rehabilitation services more than females. Second, with a conservative context like Gaza, female clients might be stigmatized of using such service so there prefer to go without it, finally, as part of gender inequality, some families may prefer to provide such services to males than females.

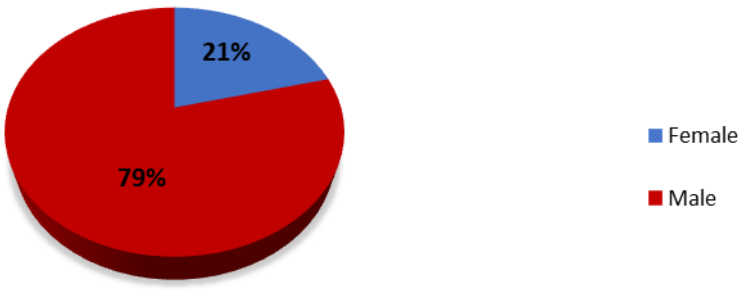


Figure (4.2): Distribution of study participants according to gender

Table (4.1): Distribution of the study participants according to their demographic characteristics (Sample size= 370)

Items	Number	%
Age		
25 years and less	62	16.7
From 26 to 35 years	146	39.5
From 36 to 45 years	64	17.3
More than 45 years	98	26.5
Total	**370**	**100.0**
Mean= 37.86, SD= 13.48		
Total household family members		
Six members and less	248	67.0
More than Six member	122	33.0
Total	**370**	**100.0**
Mean= 5.53, SD= 2.18		
Type of family you live in		
Nuclear family	230	62.2
Extended family	140	37.8
Total	**370**	**100.0**
House is made from		
Concrete	311	84.1
Asbestosis	43	11.6
Other	16	4.3
Total	**370**	**100.0**
The house is		
Owned	309	83.5
Rented	23	6.2
Other	38	10.3
Total	**370**	**100.0**
Kind of house where family live in		
House	110	29.7
Apartment	233	63.0
Separate Room	19	5.1
Other (Villa, Slum)	8	2.2
Total	**370**	**100.0**
The number of rooms in your home		
One room	34	9.2
Two rooms	89	24.0
Three rooms	162	43.8
More than 3 rooms	85	23.0
Total	**370**	**100.0**
Mean 2.84, SD = 0.96		
Home adapted to meet the needs		
Yes	276	74.6
No	94	25.4
Total	**370**	**100.0**

As demonstrated in Table (4.1), the mean age of the study participants in general was 37.86 years. Table (4.1) revealed that more than half of the study participants were between 26 years old and 45 years old (56.8%), while 16.8% of them were aged 25 years old and less, and 26.5% were aged 45 years and more. The study findings were to a large extent consistent with the results of Al-Farra (2018) study, who found that the mean age for 350 study participants was 42.62 years, the findings also consistent with the findings of Matar (2016) study, included 350 participants. The mean age was 43.97 years.

Table (4.1) also shows that the overall average of household family members was 5.53. The study findings were consistent with the findings of PCBS (2019) as the average household's family members were 5.6 persons per household.

Table (4.1) indicates that the nuclear family represented 62.2% of the study sample while the rest were represented by extended families, and 63% lived in an apartment, 84.1% in a house made from concrete owned for them. Also, around one-third of participants seeking home adaptation to meet their needs for more accessibility.

Table (4.2): Distribution of the study participants by selected demographic health & socio-economic variables

Items	Number	%
Marital status at the time of amputation		
Not Married (single, widowed, divorced)	201	54.3
Married	169	45.7
Total	**370**	**100.0**
Current marital status		
Single	70	18.9
Married	295	79.7
Divorced	3	0.80
Widow	2	0.60
Total	**370**	**100.0**
Years of schooling		
Preparatory or less	147	39.7
Secondary	122	33.0
Diploma or more	101	27.3
Total	**370**	**100.0**
Have any health problems other than the amputation		
Yes	66	17.8
No	304	82.2
Total	**370**	**100.0**
If Yes, please specify the disease you have (n = 66) *		
Hypertension	28	42.4
Diabetes Mellitus	40	78.8
Renal disease	4	6.1
Respiratory disease	4	6.1
Cancer	0	0.0
Other	14	21.2
Have any other disabilities (apart from amputation)?		
Yes	31	8.4
No	339	91.6
Total	**370**	**100.0**
Smoking cigarettes		
Yes	92	24.9
No	278	75.1
Total	**370**	**100.0**
If yes, number of daily cigarettes		
Mean = 12.10, SD = 7.59		
Family monthly income (all sources by ILS)		
Under poverty line	219	63.1
Above poverty line	128	36.9
Total	**347**	**100.0**
Mean = 1285.46 ILS, SD = 782.76		

* Having more than one disability

At the time of data collection, Table (4.2) showed that the majority of the study participants (79.7%) were married, while 18.9% of them were single, and the rest of the participants (1.4%) were either divorced or widowed as shown in Figure (4.3). The study findings were in line with Matar study (2016) that revealed 72.3% of the participants were married, and 22.6% were single (Matar, 2016). The study findings were also consistent with the study results of Al-Farra (2018) study, which also reflected that 58% of the participants were married, and 16% were single.

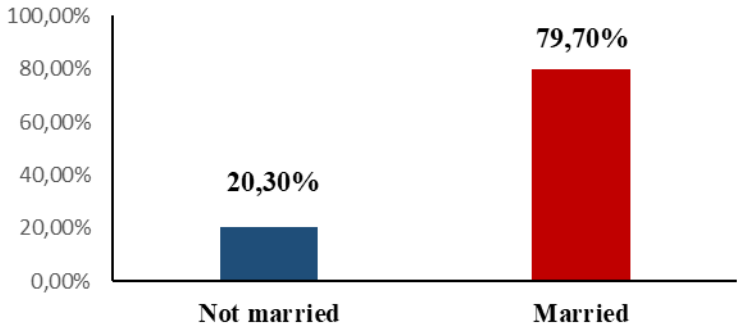


Figure (4.3): Distribution of participations according to marital status

Regarding educational level, the study results showed that about one-third of participants completed the secondary school education (33%), 27.3% had a diploma or more degree, and 39.7% of the participants were less educated as they attained preparatory school degree or less. The study findings are consistent with the results of Mohanna (2020) study, as the study included 400 participants, more than two-thirds of them were less educated as they attained secondary school degree or less, and 23.75% of the participants attained diploma or university. The high percentage of participants that did not complete their compulsory education could reflect the difficulties that people with disabilities face in accessing education services. In general, disability mainstreaming is highly needed within all the academic institutions in the Gaza Strip.

As shown in Table (4.2), about 82.2% of the study participants indicated that they have no chronic diseases, while about 17.8% of the study participants indicated that they have chronic diseases (About one third of 66, have multiple comorbidities) among the study

participants who indicated that they have chronic diseases, more than two-third of them (78.8%) have Diabetes Mellitus, 42.4% of them have Hypertension, 6.1% of them have

Renal disease, 6.1% of them have Respiratory disease, and 21.2% of them have another different type of diseases, as shown in Figure (4.4).

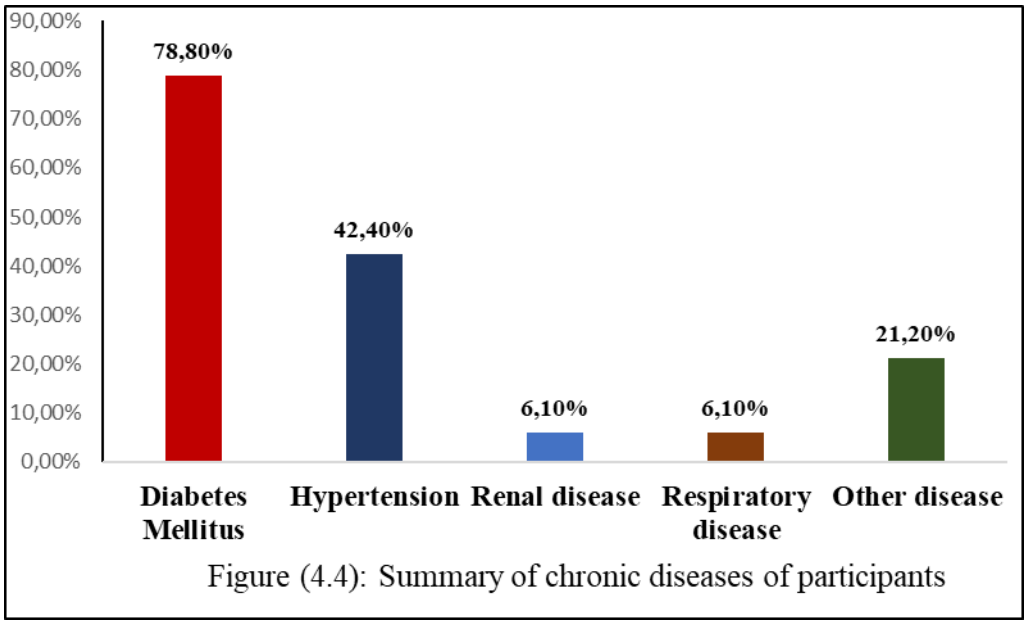


Figure (4.4): Summary of chronic diseases of participants

Regarding the other disabilities other than amputation, as shown in Table (4.2), 91.6% of the study participants indicated that they have no any other disabilities, while 8.4% of the participants indicated that they have other type of disabilities.

As shown by Figure (4.5), only 24.9% of the study participants at the time of data collection were smokers; the mean number of smoked cigarettes was 12.10%. The breakdown of smoking status by gender shows that 30.1% of males were smokers and only 5.1% of females were smokers at the time of data collection.

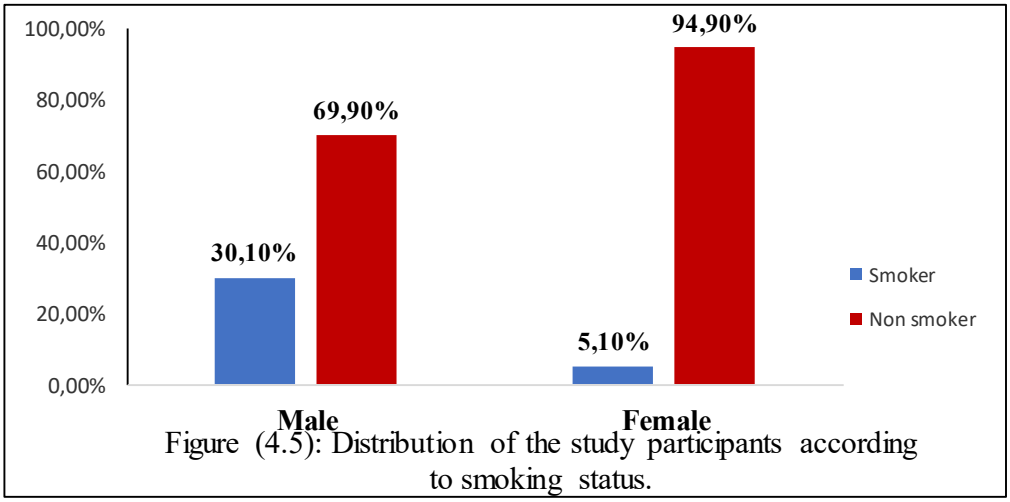


Figure (4.5): Distribution of the study participants according to smoking status.

Concerning the family monthly income of participants, the mean monthly income was 1285 New Israeli Shekels (NIS). The poverty line for a reference family of five individuals (two adults and three children) was 2470 NIS (PCBS, 2017). In our study finding, 63.1% of the participant have average monthly income under the poverty line. On the other hand, 36.9% have average monthly income above the poverty line. The study findings were consistent with findings aimed to assess the demographic changes for Palestine 2030, which indicated that 67.1% of the Gazan population is below the poverty line (Courbage et. al., 2016). This reflects the importance of providing amputee with financial assistance that is enough to meet their basic life needs without being dignified.

Figure (4.6) shows that before amputation, 56.9% of the participants were working, and after amputation, the percentage decreased to 11.6%. This result explained that the complex economic problem experienced by people with amputation because of their disability and it might reflect discrimination in the labour market against PwDs. As well as due to the poor economic situation experienced by all people living in Gaza Governorates as showed by market saturation, thus, limited availability of jobs. Also, this result explains our finding the high number of a study participant with low income as 63.1% which have average monthly income under the poverty line.

These results are consistent with a study carried out by Al-Farra (2018) which found that 32.4% of study participants were working before disability, and after disability, the percentage decreased to 14.5%. Moreover, Jawad and Colleagues (2019) indicated that the ongoing political situation, extended occupation by Israel, repeated conflicts and chronic severe restriction on the movement of both goods and people have left Palestine with both high rates of unemployment and poverty (Jawad et al., 2019).

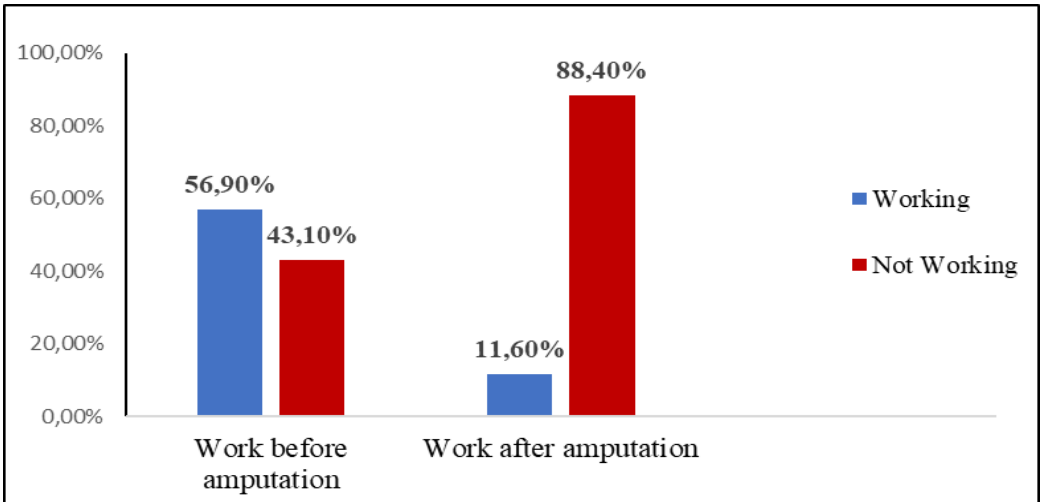


Figure (4.6): work status before and after amputation.

4.2.2 Pre-operative amputation surgery:

Table (4.3): Distribution of the study participants according to their pre - amputation-related data

Items	Number	%
Being hospitalized before the last amputation		
Yes	215	58.1
No	155	41.9
Total	**370**	**100.0**
If yes, number of hospitalization days before amputation		
7 days and less	72	33.5
From 8 to 14 days	35	16.3
From 15 to 30 days	81	37.6
More than 30 days	27	12.6
Total	**215**	**100.0**
If yes, at which hospital		
Kamal Edwan Hospital	6	2.8
Al Shifa Hospital	112	52.1
Al Aqsa Hospital	3	1.4
Nasir Hospital	15	7.0
EGH	28	13.0
Al Najar Hospital	1	0.5
Outside Gaza Strip	24	11.2
Others	26	12
Total	**215**	**100.0**
Type of rehabilitation services received during hospitalization		
Physiotherapy	53	24.7
Psychological social support	30	14.0
Medical care	215	100.0

Table (4.3), shows that more than half of the study participants were have been hospitalized before the amputation (58.1%), while about 41.9% of the study participants didn't hospitalize before amputation, which where they lost their limbs in the place of injured or accident or the amputation did happen at the same day of hospital admission.

Consistent with ALPC report, the second major cause of lower limb amputations in GG is uncontrolled Diabetes Mellitus, in which the patients hospitalized before amputation for medical care to avoid the last resort which is amputation. In 2018, a total of 57% of ALPC's amputees were done due to diabetic/vascular related causes which represents more than half of the ALPC beneficiaries (ALPC, 2018).

Regarding the hospitalization period before the amputation, 37.6% of participants stayed from 15 to 30 days. Most of the study participants (52.1%) were hospitalized at Al Shifa Hospital, as Al Shifa Hospital is the main hospital in the Gaza Governorates Also, AL Shifa hospital receives referrals from smaller hospitals due to their large capacity and specialist departments.

As shown in Table (4.3), and Figure (4.7), all the study participants received medical care, 24.70% received physiotherapy and 14% received psychological support (therapy). The study findings were congruent with the results of Bowring (2008), that individuals facing amputation surgery would have a full interdisciplinary assessment pre-operatively. But in the real practice, this is not always possible for several reasons, including the urgency of the surgery, patient level of consciousness, quality of provided health services, including presence of qualified surgeons.

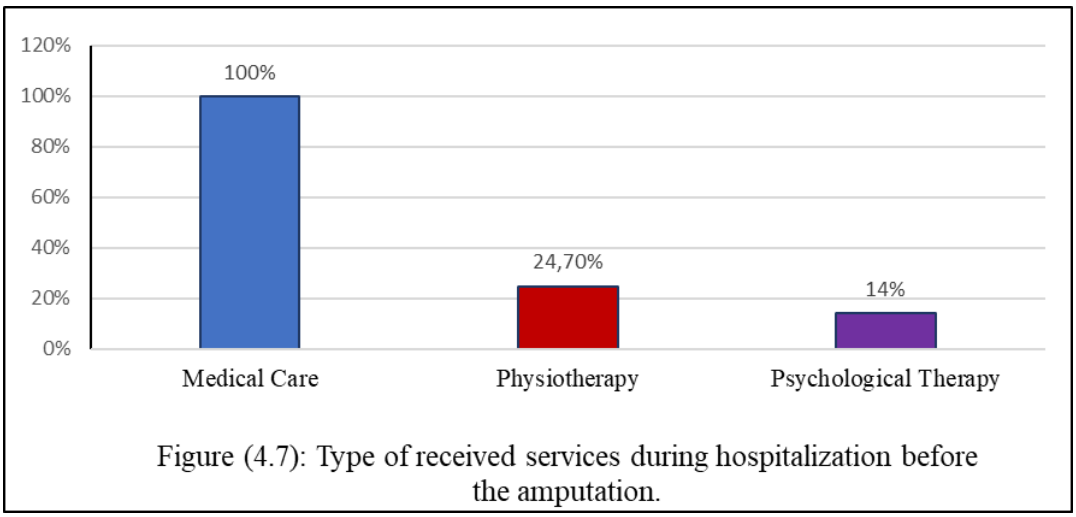


Figure (4.7): Type of received services during hospitalization before the amputation.

4.2.3 Acute post-operative (hospitalization period)

Table (4.4): Distribution of the study participants according to their post-operative care

Items	**Number.**		**%**	
Amputation since				
4 years and less	30		21.2	
From 5 to 10 years	57		40.1	
From 11 to 15 years	29		20.4	
More than 15 years	26		18.3	
Total	**142**		**100.0**	
Mean = 11.32, SD = 11.012				
Amputation place				
Kamal Edwan Hospital	18		4.9	
Al Shifa Hospital	180		48.8	
Al Aqsa Hospital	3		0.8	
Nasir Hospital	21		5.7	
EGH	44		11.9	
Al Najar Hospital	2		0.5	
Outside Gaza Strip	45		12.2	
Others	56		15.2	
Total	**369**		**100.0**	
Cause of amputation				
Conflict related	278		75.1	
Work accident	7		1.9	
Road traffic accident	16		4.3	
Domestic accident	5		1.4	
Vascular disease such as DM	64		17.3	
Total	**370**		**100.0**	
Level and side of Amputation-Upper Limb	**Right Side**		**Left Side**	
	No.	**%**	**No.**	**%**
Shoulder Disarticulation	3	0.8	3	0.8
Trans Humeral	5	1.4	4	1.1
Elbow Disarticulation	0	0.0	3	0.8
Trans Radial	11	3.0	9	2.4
Wrist Disarticulation	12	3.2	3	0.8
Partial Hand	7	1.9	5	1.4
Level and side of amputation -Lower Limb	**Right Side**		**Left Side**	
	No.	**%**	**No.**	**%**
Hemipelvectomy	0	0.0	1	0.3
Hip Disarticulation	2	0.5	3	0.8
Trans Femoral	66	17.8	32	8.6
Trans Condylar	12	3.2	18	4.9
Knee Disarticulation	31	8.4	19	5.1
Trans Tibial	84	22.7	66	17.8
Trans Malleolar	2	0.5	5	1.4
Ankle Disarticulation	4	1.1	3	0.8
Partial Foot	7	1.9	7	1.9

The mean period of time since amputation surgery was11.32 years (SD11.012). Of them, more than half of the study participants (60.5%) had experienced their amputation 5 to 15 years ago. About half of the study participants (48.8%) were amputated at Al Shifa Hospital. With concern to the level of amputation, the most common level of amputation (40.5%) was Trans Tibial (below the knee), although 26.4% were Trans Femoral (above the knee), as shown in Table (4.4).

Regarding these findings, the Researcher noted that each study participant in this research was living with a functional prosthesis because they had either lost partially or completely their limbs. The study findings were consistent with the results of Legro and Colleagues study (1999), which reported that the most common level of amputation (63%) was transtibial & 25% of them was Transfemoral level. Among all of them, 38% had experienced amputation for more than 5 years (Legeo et al.,1999).

As shown in Table (4.4) and Figure (4.8), concerning the causes of participants' amputation, the main cause of amputation is the conflict-related injures which left wounded people with physical disabilities due to injuries by live Gun shot, bomb, shelling, landmine & other (75.1 %), followed by 17.3% vascular disease, 4.3% road traffic accident, 1.9% work accident and 1.4% domestic accident.

There were numerous factors that contribute to a growing number of people with physical disabilities in the GG due to continuous political conflict in Gaza. The epidemiological transition in Gaza related to changes in life style, behavior, and poverty has resulted in a growing prevalence of Non-Communicable Diseases (NCDs) such as diabetes, which is now one of the major cause of disability and limb loss.

Road traffic accidents and other traumas were also common causes of amputation. These results were consistent with the results obtained by Radwan (2011) and Al-Farra (2017) which showed that the cause of disability for 66.7% of study participants due to wars including accidents, and non-communicable diseases constituted 16.7% of causes.

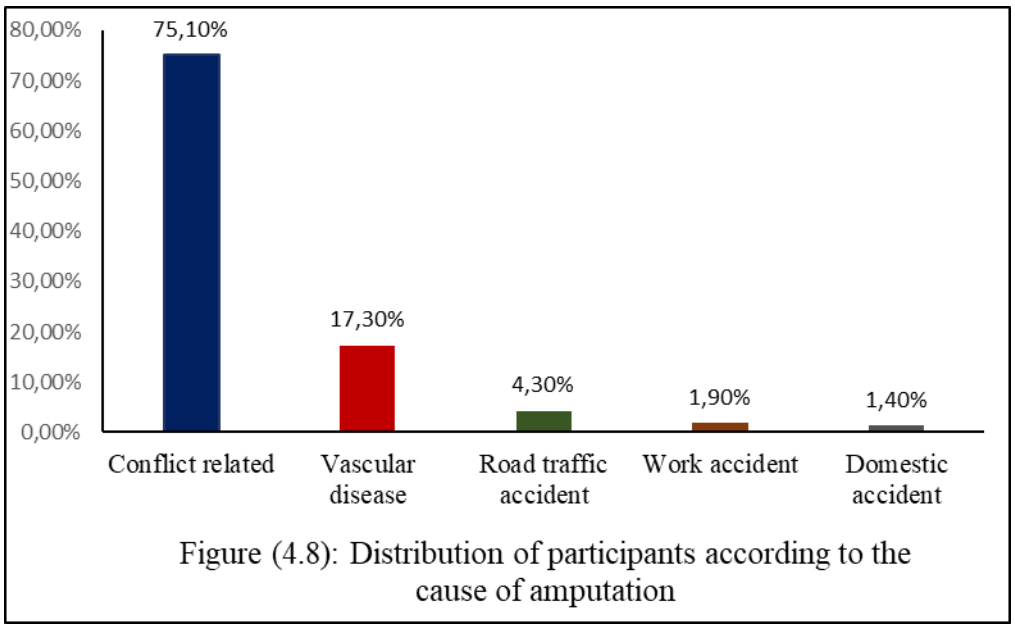


Figure (4.8): Distribution of participants according to the cause of amputation

Table (4.5): Distribution of the study participants according to their acute post–operative -hospitalization period- services

Items	No.	%
Length of hospitalization after the amputation		
7 days and less	72	19.5
From 8 to 14 Days	56	15.1
From 15 to 30 Days	139	37.6
More than 30 days	103	27.8
Mean = 26.54, SD=21.031		
Rehabilitation services received during hospitalization, immediately after the amputation		
Physiotherapy	169	45.7
Psychological support (therapy)	89	24.1
Medical care	370	100.0
Other	4	1.1

Table (4.5), shows that the mean hospitalization period after the amputation was 26.54 days, with (SD 21). The highest percentage of participants (37.6%) stayed from 15 to 30 Days. More than half of the study participants (52.1%) were hospitalized at Al Shifa Hospital. All of them received medical care at the period of hospitalization, 45.70% received physiotherapy and 24.1% received psychological support (therapy) during the same period.

The study findings reflect that the provided services of both physiotherapy and psychological support are suboptimal and did not match with the clinical guidelines for the

pre and post-operative rehabilitation management of British Association of Chartered Physiotherapists in Amputee Rehabilitation (Rehabilitation, 2012) in term of covering and providing these rehabilitation services to all amputees' post-operative.

According to the BACPAR (Rehabilitation, 2012), goals of the acute post-operative phase are to (prevent complications, manage the wound and stump, restore mobility and independence, manage pain, and start discharge planning). Patients need to start the rehabilitation early (the first day post-operation if possible) to avoid complications such as pathological scars joint contractures, and to maintain psychological well-being. The earlier the start of rehabilitation, the greater the potential for success will be (Morvan et al., 2014).

4.2.4 Post – Amputation (after discharge from the hospital)

Table (4.6): Distribution of the study participants according to their post – amputation-related data: after discharge from the hospital

Items	No.	%
Referred to other health provider to continue or to start rehabilitation program? (after your discharge from the hospital)		
Yes	313	84.6
No	57	15.4
Total	**370**	**100.0**
If yes, Referred to		
NGOs	142	45.4
MOH clinics	32	10.2
UNRWA clinics	31	9.9
Private Clinics	15	4.8
ALPC	175	55.9
MSF	128	40.9
Others	32	10.2
Rehabilitation services have received		
Physiotherapy	271	73.2
Occupational Therapy	60	16.2
Psychological support	148	40.0
Medical Care	11	3.0

The findings in Table (4.6), shows that more than two-thirds of study participants (84.6%) were referred to another health provider after the discharged from the hospital to continue and/or to start their rehabilitation program. The study found that most of the participants received rehabilitation services at more than one place, where more than half of the study participants (55.9%) discharged from hospital and received their amputee rehabilitation program through the ALPC, 45.4% through NGOs, 40.9% from MSF, 10.2% of them by MoH clinic, 9.9% of the participants by UNRWA clinics and 4.8% by private clinics.

As shown in Table (4.6) and Figure (4.9), the majority (73.2%) of study participants received physiotherapy, 40% received psychological support (therapy), 16.2 received occupational therapy and 3% received medical care.

The study findings reflect that the provided services of physiotherapy, psychological support and occupational therapy are not the best and did not match the clinical guidelines for the pre and post-operative rehabilitation management comparing to BACPAR (Rehabilitation, 2012) standard in term of covering and providing these rehabilitation services to all amputees' Post – Amputation (after discharge from the hospital).

Like in other stages of the rehabilitation process, the pre-prosthetic management is essential to achieve the functional independence of the amputee. By improving the functional and cardio-respiratory capacity of the individual, it is possible to enhance the prosthetic use. The patients' social situation, psychological status, goals and expectations should be documented and taken into consideration when planning the amputee post-fitting. This should be done as a continuous process regarding the objectives established in the previous acute post-operative (Michael & Bowker, 2004).

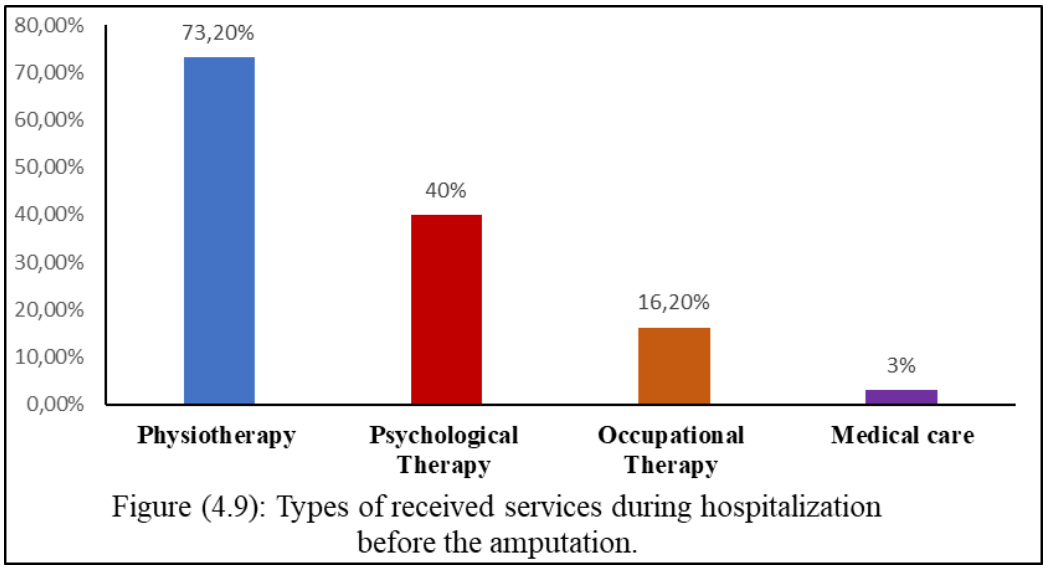


Figure (4.9): Types of received services during hospitalization before the amputation.

4.2.4.1 Receiving specialized rehabilitation services post – amputation-related data (after discharge from the hospital).

I. Physiotherapy:

Regarding physiotherapy services after amputation, Table (4.7) shows that, about two-thirds of the study participants (73.2%) received physiotherapy services - in which, the majority of them (91.6%) have received mobilization and/or strengthening exercises, 81.2% of the amputees received services aiming to prevent joint stiffness & contracture, 80.8% of the participants got bandaging, 75.6% received hygiene education, 73.4% received stump desensitization & scar massage, 67.5% had aerobic fitness, 55% got balance training, and 49.1% of the study participants received gait training with using walking aids. Concerning the overall physiotherapy satisfaction about the services received by participants, the highest percentage (88.2%) of the participants were satisfied with the services provided. Moreover, 60.2 % still need physiotherapy support.

The study findings were consistent with clinical guidelines for the pre and post-operative rehabilitation management BACPAR (Rehabilitation, 2012), as these results indicated that there was good use of different specific modalities for amputee post-operative rehabilitation management. Additionally, the results indicated that most participants were satisfied with received physiotherapy services as post-operative rehabilitation management.

Table (4.7): Distribution of study participant's responses according to the received physiotherapy services

Variables	**Yes**	**%**
Number of participants who received Physiotherapy service	271	73.2
Physiotherapy services received		
Hygiene education	205	75.6
Stump desensitization & scar massage	199	73.4
Bandaging	219	80.8
Prevent joint stiffness & contracture	220	81.2
Mobilization and/or strengthening exercises	247	91.6
Aerobic fitness	181	67.5
Balance training	149	55.0
Gait training with the given walking aids	133	49.1
Overall satisfaction with physiotherapy the services received		
Satisfied to high degree	239	88.2
Moderately satisfied	32	11.8
Unsatisfied	0	0.0
Total	**271**	**100.0**
Still in need physiotherapy support		
Yes, to large extent	163	60.1
No	108	39.9
Total	**271**	**100.0**

II Occupational therapy

Table (4.8): Distribution of participants' responses according to the received Occupational therapy

Variables	Yes	%
Number of participants received Occupational Therapy service	60	16.2
Occupational Therapy services received		
Functional activity training such as bed mobility, balance and transfer	52	86.7
Active daily living training such as Eating and wearing clothes	49	81.7
Using suitable assistive / mobility devices such as wheel chair and crutches	47	78.3
Recommendation for adaptive equipment or modifications to the environment (at home, at work) to maximize your safety	37	61.7
Overall satisfaction with occupational therapy services received		
Satisfied to high degree	54	90.0
Moderately satisfied	6	10.0
Unsatisfied	0	0.0
Total	**60**	**100.0**
Still in need occupational therapy support		
Yes	36	60
No	24	40
Total	**60**	**100.0**

Regarding occupational therapy services after amputation, Table (4.8) shows that less than one-third of the study participants (16.2%) received occupational therapy services in which the highest percentage (86.7%) of participants received training on functional activity such as bed mobility, balance, and transfer. A total of 81.7% of the study participants received training on Active Daily Living (ADL) such as eating and wearing clothes, a total of 78.3% of participants received training on using suitable assistive/mobility devices such as wheelchairs / crutches, and about two-thirds of the study participants (61.7%) received recommendations for adaptive equipment or modifications to the environment (at home, at work) to maximize their safety**.** Those results were supported by a study carried out by Al-Farra (2018) who reported a little higher percentage of participants (94.6%) received training on ADL and on functional activities, 90.3% of the participants received training on assistive device, and 90.3% received recommendations meet patients' needs.

Concerning the overall occupational therapy services received by participants, most of the participants (90%) were satisfied with the services provided. Moreover, 60 % still need occupational therapy support.

III Psychological support services:

Table (4.9): Distribution of participants' responses according to the received psychosocial support services

Variables	**Yes.**	**%**
Number of participants who received Psychological support service	148	40.0
Psychological support services received		
Counselling	112	75.7
Family therapy	67	45.3
Individual session	101	68.2
Peer support group	49	33.1
Referral to more specialized services	6	4.1
Other	2	1.4
How do describe your overall psychological support satisfaction about the services you received		
Satisfied to high degree	120	81.1
Moderately satisfied	25	16.9
Unsatisfied	3	2.0
Total	**148**	**100.0**
Do you still in need physiotherapy support?		
Yes	77	52.1
No	71	48
Total	**148**	**100.0**

Regarding psychological services post amputation, Table (4.9) above shows that 40% of the study participants received psychological support. Most of them (75.7%) received counselling sessions, and more than half of the participants (68.2%) received individual sessions, 45.3% of them received family therapy, one-third (33.1%) of them received peer support group, and few of them (5.5%) were referred to more specialized services. The

majority of the study participants (81.1%) were satisfied with the psychological support services they received, and still half of them (52.1%) need further psychological support services.

4.2.4.2 Patient perceptions: satisfaction with quality of provided services

As shown in Table (4.10), most participants expressed satisfaction with the post-amputation services. It was reflected by the weighted mean percentage of 83.54% with (SD =12.50); as 85.8% of participants expressed positively satisfaction with the services, they received post amputation. Booking an appointment for follow up visits was suitable; as most participants expressed satisfaction (84%) with a making an appointment for follow up visits. With regard to waiting time and time spent with rehabilitation providers, more than two-thirds of participants (82.8%) indicated that the time spent with the services providers was enough. Additionally, most participants (82.2%) showed that the waiting time to receive the rehabilitation services was acceptable and not lengthy. Moreover, the services' providers have provided the amputees with good explanations about amputee rehabilitation services; this was indicated by most participants (83.4%). To conclude, most of the study participants (84.4%) indicated that the rehabilitation services provided to the amputees had good quality.

Table (4.10): Satisfaction and perceived quality of the Post – Amputation-related variables: after discharge from the hospital

Items	Strongly dissatisfied		Dissatisfied		Neutral		Satisfied		Strongly Satisfied		Weighted Mean
	No.	%	No.	%	No.	%	N0.	%	No.	%	
Making an appointment for follow up visits	0	0.0	5	1.9	36	13.4	127	47.4	100	37.3	84.0
Waiting time	1	0.4	9	3.4	41	15.3	126	47.0	91	34.0	82.2
The time the rehabilitation providers spent with you	1	0.4	12	4.5	28	10.5	133	50.0	92	34.6	82.8
The service providers 'explanations about amputee rehabilitation services	1	0.3	12	4.5	28	10.4	127	47.4	100	37.7	83.4
The quality of provided services	1	0.3	5	1.4	26	9.7	138	51.7	97	36.3	84.4
Your general satisfaction about the amputee rehabilitation services that have received	0	0.0	2	0.7	27	10.1	129	48.3	109	40.8	85.8
Mean = 83.54, SD= 12.50											

4.2.5 ALPC Service

4.2.5.1 Referral to the ALPC

As shown in Figure (4.10), regarding the referral sites, the results indicated that most common referral pathway to ALPC were through personal connection; as 40.5% of the study participants said that they know ALPC and referred to it through their family members or friends, 23.8% was through governmental hospital/clinic, 20% by international NGO, 11.6% through local NGOs and 4.1% by private clinics.

The findings of focus group discussions and in-depth interviews revealed that there was limited coordination between rehabilitation service providers (INGOs and NGOs) and MoH as well as among themselves, from the researcher's point of view, this is the main reason for the not clear patients' referral pathway to the ALPC.

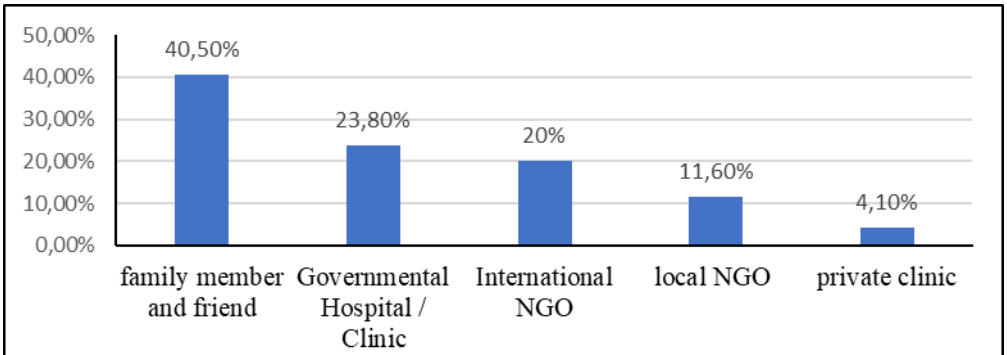


Figure (4.10): Referral sites to the ALPC

4.2.5.2 Number of prostheses received by study participants from the ALPC

As shown in figure (4.11), regarding the number of prostheses received, about half of the study participants (44.3%) received one prosthesis from ALPC, one-third of them (30.8%) received two prostheses, 12.2% received three prostheses and 12.7% received more than three prostheses.

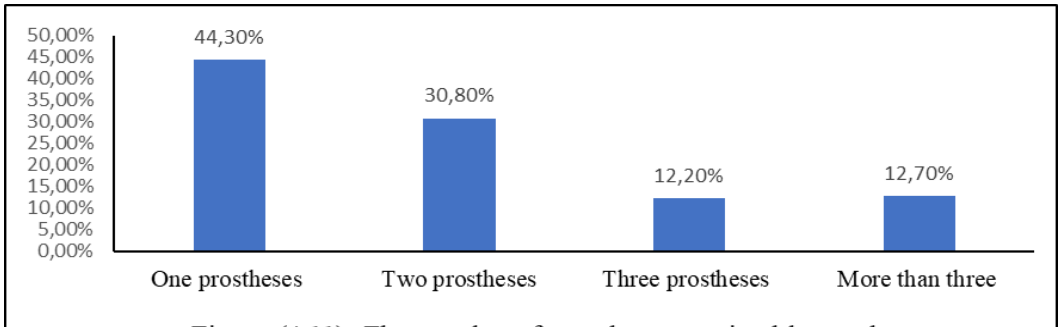


Figure (4.11): The number of prostheses received by study participants from the ALPC.

4.2.5.3. Receiving specialized rehabilitation services at ALPC

I Physiotherapy:

Table (4.11): Distribution of participants' responses according the received physiotherapy care

Variables	Yes	%
Number of participants who received Physiotherapy service	299	80.8%
Physiotherapy services received		
Hygiene education	18	6.0
Skin hardening	18	6.0
Bandaging	45	15.1
Prevent joint stiffness & contracture.	33	11.0
Mobilization and/or strengthening exercises	57	15.4
Stump desensitization & scar massage	19	6.4
Aerobic fitness	17	5.7
Balance training	18	6.0
Gait training with the given walking aids	40	13.4
Post fitting gait training	44	14.7
Functional gait training	30	10.0
All that apply	227	75.9
Quality of care		
Providers spent enough time with you	287	97
Having clear schedule for your session appointments	288	97.3
Session were done on time	288	97

As shown in Table (4.11), 80.8% of the study participants received physiotherapy. The highest percentage (75.9%) of participants benefited from all the physiotherapy amputee rehabilitation techniques. 65.6% of participants received pre-prosthetic rehabilitation which includes hygiene education, skin hardening, bandaging, prevention of joint stiffness & contracture, mobilization and/or strengthening exercises, stump desensitization & scar

massage and aerobic fitness. Then 14.7% of participants received post fitting gait training and 10% of the participant received functional gait training.

Moreover, 97% of participants said that physiotherapist spent enough time with them. The highest percentage (62.2) of participants received three sessions per week (mean 2.83). A total of 97.3% of the participants' clear schedule for their session appointments, 97% of participants reported that the session was done on time with a mean 9.49 minutes for waiting time before the session start.

These results were consistent with the results obtained by the qualitative part which was shown that the physiotherapy services at ALPC have good quality, it has been assessed by using physiotherapy standard tools, the gap analysis tool as well as situation analysis tool with some identified gaps which has then led the team to develop an action plan which is closely supported by ICRC as well as the management of the ALPC.

II Psychosocial Therapy services:

Table (4.12): Distribution of participants' responses according to received psychosocial support services

Variables	**Yes**	**%**
Number of participants who received psychosocial support	164	44.3%
psychosocial support services received		
Counselling	125	76.8
Family therapy	69	42.1
Individual session	123	75.0
Peer support group	70	42.7
Referral to more specialized services	18	11.0
Quality of care		
Providers spent enough time with you	149	92.5

The Table above (4.12), shows that 44.3% of the study participants received psychological support. The highest percentage (76.8%) of participants received counseling sessions, then results show that 75% of participants received individual counseling sessions, then 42.7%

received peer support group, then 42.1% received family therapy, finally, 11% referred to more specialized services.

Moreover, 92.5% of participants said that psychologist spent enough time with them. The mean of wait before the session was 17.03 minutes before the session start.

Too sum-up, the study showed that there were moderate patient providers interfaced in psychosocial therapy services. However, there was a need to increase the number of service recipients through a comprehensive psychological evaluation of all cases that were registered at the ALPC.

4.2.5.4 Perceived quality and satisfaction

The services should be in a good quality to motivate the people with amputations to recommend the services to others who were also in need of similar services. As shown in Table (4.13), the results showed that the prosthetic services offered by ALPC have a good quality, this is indicated by the weighted mean of patients' satisfaction with all domains included in this study (86.62%). This perceived satisfied percentage was higher than the result reported by El-Sultan and Colleagues (2015) about the satisfaction feedback of ALPC amputees' beneficiaries which was 72.5% (El-Sultan, 2015).

Most of the study participants (87.24%) expressed their satisfaction with the rehabilitation services provided by ALPC. The higher percentage was reported on the reliability domain with a weighted mean of 88.58%, (SD 11.78), which can be explained by the continuous development of the center during the previous decade through the strategic partner with ICRC. The lower percentage of satisfaction was reported on the tangible's domain with a weighted mean of 83.86%, (SD 16.65), which may be related to non-health services like ALPC operating hours and booking an appointment.

Table (4.13): Distribution of the study participants according to their perceived quality and satisfaction

	Domain	Weighted Mean %	Median	SD
1.	**Tangibles**	83.86%	84	16.65
2.	**Empathy**	88.27%	88	11.88
3.	**Reliability**	88.58%	90	11.78
4.	**Responsiveness**	84.82%	83.33	13.82
5.	**Assurance**	86.99%	88	13.84
6.	**Satisfaction**	87.24%	86	12.07
	Overall	86.62%	86.55	13.34

4.2.5.4.1 Perceived quality domains

Perceived Tangibles

As shown in Table (4.14), most participants expressed their agreement and satisfaction that prosthetic services provided by ALPC are tangibles with a mean of 83.86% and SD 16.65.

The higher weighted mean percentage (90%) was reported to the service providers were well dressed and appear neat. On the other hand, the lowest weighted mean percentage (78.8%) was reported to the physical appearance of the ALPC is visually appealing and attractable.

The results reflect that ALPC center is clean, contains adequate infrastructure, and appropriately equipped. Additionally, the clients expressed their satisfaction with the appointment system as it has an easy booking appointment system

That didn't exclude that supplying ALPC with needed maintenance and infrastructure to new and advanced line of services were always needed.

Table (4.14): Distribution of the study participants according to their perceived tangibles

Items	Strongly disagree		Disagree		Neutral		Agree		Strongly Agree		Weighted Mean %
	No.	%	No	%	No	%	No.	%	No.	%	
The service providers are well dressed and appear neat	0	0.0	5	1.4	20	5.4	128	34.7	216	58.5	90.0
The ALPC is clean	9	2.4	24	6.5	27	7.3	126	34.1	183	49.6	84.4
The physical appearance of the ALPC is visually appealing and attractable	23	6.3	28	7.6	44	12.0	125	34.0	148	40.2	78.8
The ALPC operating hours are convenient to you	12	3.3	21	5.7	42	11.4	128	34.7	166	45.0	82.4
Booking an appointment is easy	7	1.9	19	5.1	37	10.0	142	38.5	164	44.4	83.6
Weighted Mean % =83.86, SD= 16.65											

Perceived Empathy

As shown in Table (4.15), most participants expressed their agreement that prosthetic services provided by ALPC are empathetic with the weighted mean of 88.27 % (SD 11.88). The ALPC staff is polite and deal with clients in a friendly way, that was indicated by the overall weighted mean with a 90.2%. On the other hand, the lowest mean of satisfaction was reported to the staff considering the clients interest with 87.4% weighted mean.

The study findings indicated that the staff pay an attention to their patients, pay an attention to amputees' beliefs and emotions, and understand the patients' needs, these were reflected by the means of 88.6%, 88% and 87.6%, respectively.

Table (4.15): Distribution of the study participants according to their perceived empathy

Items	Strongly disagree		Disagree		Neutral		Agree		Strongly Agree		Weighted Mean %
	No	%	No	%	No	%	No	%	No	%	
ALPC staff is polite and deal with clients in a friendly way	1	0.3	1	0.3	19	5.1	135	36.6	213	57.7	90.2
ALPC staff pays attention to their patients	1	0.3	2	0.5	19	5.2	161	43.8	185	50.3	88.6
ALPC staff pays attention to the patient's beliefs and emotions	1	0.3	2	0.5	26	7.0	159	43.1	181	49.1	88.0
ALPC staff takes into account their clients interest	1	0.3	2	0.5	34	9.2	154	41.8	177	48.1	87.4
ALPC staff understands the needs of their patients	1	0.3	2	0.5	30	8.1	160	43.2	176	47.7	87.6
Weighted Mean % = 88.27, SD= 11.88											

Perceived Reliability

As shown in Table (4.16), most participants expressed satisfaction with the reliability of prosthetic services provided by ALPC, it was reflected by the weighted mean of 88.58 and SD 11.78.

The higher mean of reliability was reported to staff respects patients' appointments with a weighted mean of 89.9%, followed by the availability of appropriate timely services with 89.2% and then prompt response of health provider to patient inquiries and requests (88%). On the other hand, the lowest mean of reliability was reported to the staff addresses all amputees concerns with 87.4%.

Table (4.16): Distribution of the study participants according to their perception of ALPC staff reliability

Items	Strongly disagree		Disagree		Neutral		Agree		Strongly Agree		Weighted Mean %
	No	%	No	%	No	%	No	%	No	%	
ALPC staff respects patients' appointments	1	0.3	2	0.5	17	4.6	146	39.6	203	55.0	89.9
ALPC staff provides clients with the appropriate timely services	1	0.3	1	0.3	20	5.4	152	41.2	195	52.8	89.2
ALPC staff addresses all your concerns	1	0.3	6	1.6	35	9.5	142	38.5	185	50.1	87.4
ALPC staff responses to your questions and requests	1	0.3	2	0.5	30	8.1	150	40.7	186	50.4	88.0
Weighted Mean %= 88.58, SD= 11.78											

Perceived Responsiveness

As shown in Table (4.17), the prosthetic services provided to the beneficiaries by ALPC are responsive to clients' needs, this indicated by the high weighted mean percentage of 84.82% with (SD 13.82).

The higher mean of responsiveness was the willingness of health provider to help amputee people with a weighted mean of 87.7%. On the other hand, the lowest mean of responsiveness was reported the prompt response of ALPC staff to amputee people non-health needs with a weighted mean of 80%.

Although the results were good, it didn't mean that the center does not need to be continuously developed and improved, with changes to services and systems to meet patients' needs, including the non-health ones.

Table (4.17): Distribution of the study participants according to their perceived responsiveness

Items	Strongly disagree		Disagree		Neutral		Agree		Strongly Agree		Weighted Mean %
	No	%	No	%	No	%	No	%	No	%	
ALPC staff promptly responds to your health needs	3	0.8	4	1.1	44	11.9	159	43.1	159	43.1	85.4
ALPC staff promptly responds to your non-health needs	7	1.9	21	5.7	74	20.1	131	35.5	136	36.9	80.0
ALPC staff is always willing to help you	3	0.8	5	1.4	19	5.1	160	43.4	182	49.3	87.7
ALPC staff understands the specific needs of their clients	2	0.5	8	2.2	30	8.1	151	40.9	178	48.2	86.8
ALPC staff is never too busy to respond to your questions	2	0.5	5	1.4	42	11.4	150	40.7	170	46.1	86.0
ALPC staff treats all clients equally	11	3.0	16	4.3	45	12.2	127	34.5	169	45.9	83.2
Weighted Mean %= 84.82, SD= 13.82											

Perceived Assurance

As shown in Table (4.18), most participants expressed their agreement that prosthetic services provided by ALPC were assuring to them, with a weighted mean percentage of 86.99% with (SD 13.84).

The higher mean of assuring was the provision of services that promotes people with amputation self-confidence with a weighted mean of 88%. On the other hand, the lowest mean of assurance was reported on the prompt of "ALPC staff to provides amputee people with services that alleviate their symptoms" with a weighted mean of 86.2% this percentage was high also.

This higher mean of assurance may reflect the main goal of the multidisciplinary amputee rehabilitation team which lead to the comprehensive rehabilitation approach.

Table (4.18): Distribution of the study participants according to their perceived assurance

Items	Strongly disagree		Disagree		Neutral		Agree		Strongly Agree		Weighted Mean %
	No	%	No	%	No	%	No	%	No	%	
ALPC staff promotes your self-confidence	2	0.5	2	0.5	26	7.1	154	42.0	183	49.5	88.0
ALPC staff makes you feel safe	3	0.8	4	1.1	27	7.3	150	40.5	183	49.5	87.6
ALPC staff is consistently considerate with you	3	0.8	6	1.6	36	9.7	147	39.7	175	47.7	86.4
ALPC staff provides you with services that improve the activity of your daily living	4	1.1	5	1.4	37	10.1	137	37.3	184	50.1	86.8
ALPC staff provides you with services that alleviate your symptoms	2	0.5	4	1.1	47	12.8	140	38.1	174	47.4	86.2
Weighted Mean %= 86.99, SD= 13.84											

4.2.5.4.2 Perceived Satisfaction

As shown in Table (4.19), the ALPC prosthetic rehabilitation services were satisfactory to most participants, with a weighted mean percentage of 86.00 (SD 12.07).

In the satisfaction domain, the most satisfying issue for study participants was the welcoming and greeting of service providers with a weighted mean of 89%, and the lowest level of satisfaction was reported on waiting time, with a weighted mean of 84.8%, which may reflect the long time in which the patient spent waiting for the services.

It is important to mention that service providers interact with amputees during rehabilitation sessions and spend enough time in the therapeutic sessions, that indicated by the mean of 88.6% and 88.4%, respectively. The beneficiaries expressed their satisfaction

with overall ALPC rehabilitation services and overall performance of ALPC staff, this was reflected by 88% for each.

A total of 85.4% the convenience of the waiting area which may reflect the adequate expanding the waiting area recently in the ALPC.

One of the interesting results that the ALPC teaches the amputees about improving their physical health and explanations about amputee rehabilitation with a weighted mean of 87.2% for each, which reflects that ALPC encourages the service providers to improve their physical ability.

Table (4.19): Distribution of participants according to their perceived satisfaction with the ALPC services

Items	Strongly disagree		Disagree		Neutral		Agree		Strongly Agree		Weighted Mean %
	No	%	No	%	No	%	No	%	No	%	
Making appointment for follow up visits	2	0.5	7	1.9	31	8.4	151	40.9	178	48.2	86.8
Waiting time	6	1.6	16	4.3	31	8.4	145	39.4	170	46.2	84.8
Convenience of the waiting area	3	0.8	10	2.7	38	10.3	152	41.1	165	44.8	85.4
Welcoming and greeting of service providers	2	0.5	1	0.3	19	5.1	153	41.5	194	52.6	89.0
The time that the ALPC staff spent with you	2	0.5	3	0.8	24	6.5	145	39.4	194	52.7	88.6
The ALPC staff explanations about amputee rehabilitation	2	0.5	3	0.8	27	7.3	165	44.7	172	46.6	87.2
The ALPC staff respects of your privacy	2	0.5	4	1.1	19	5.1	157	42.5	187	50.7	88.4
The way ALPC staff tough you about improving your physical heath	2	0.5	5	1.4	28	7.6	159	43.1	175	47.4	87.2
The overall rehabilitation services you received from your providers	2	0.5	2	0.5	19	5.2	168	45.7	177	48.1	88.0
The overall performance of ALPC staff	2	0.5	1	0.3	22	6.0	167	45.3	177	48.0	88.0
Weighted Mean % = 86.00, SD= 12.07											

Table (4.20): Distribution of the study participants according to other satisfaction with the ALPC services

Items	No.	%
Would you recommend ALPC services to any of your relatives and friends?		
Yes	357	96.7
No	12	3.3
Total	**369**	**100.0**
Do you intend to continue receiving the services from ALPC?		
Yes	333	90.2
No	36	9.8
Total	**369**	**100.0**

As shown in Table (4.20), most of the study participants (96.7%) will recommend utilizing the ALPC amputee rehabilitation services to their relatives and friends. Furthermore, 90.2% of the study participants will continue to receive prostheses services and rehabilitation from the ALPC.

4.2.6 Prosthesis Evaluation

This part focused on examining the satisfaction of people with amputation getting the provided service, including satisfaction with the prosthesis, as in the study objectives. As a reminder, to evaluate the prosthesis; the researcher used the PEQ to collect data from the study participants. The PEQ has10 validated scales to cover different domains, as will be discussed below.

4.2.6.1 Physical domain

Within the physical domain, four scales addressed the aspects of prosthesis function scales; usefulness/utility, residual limb health, appearance, and sounds. Also, there were two scales concerned mobility; ambulation and transfers. It is worth mentioning that all means reported below ranges from 0 as the lowest score to 10 as the highest one.

I Prosthesis functional scales

Usefulness / Utility

The PEQ Utility Scale includes questions about satisfaction with the fit, weight, and comfort of the prosthesis, as well as other questions about physical abilities such as balance and energy required to use the prosthesis; as important individual factors affecting the usefulness/utility of the prostheses (Baars, 2018).

As shown in Table (4.21), the study revealed that the prostheses used by people with amputations were of a good benefit. It was indicated by the overall mean of usefulness and utility was 6.17 (SD 2.15). The study participants felt comfort while sitting when using prosthesis; as indicated by a mean of 6.66 which was the higher than the reported mean among all the scales under this domain. Many participants indicated that the prosthesis has acceptable weight; it was reflected by the lowest mean of 5.76 that reported to the weight of the prosthesis.

The results reflect that other items that received moderate importance rating included the fit of the prosthesis with a mean of 5.89. The comfort while standing when using a prosthesis with a mean of 6.50, the balance while using a prosthesis with a mean of 6.01, the energy it took to use a prosthesis for as long as needed with a mean of 6.09, the feel (such as the temperature and texture) of the prosthesis (sock, liner, socket) on the residual limb (stump) with a mean of 5.88, and the ability to put on the prosthesis with a mean of

6.59. The finding of the utility function is linked with the purpose of using the prosthesis, for instance it could be for cosmetic use or functional. It was also highly correlated with the level of amputation. Thus, from the Researcher's perspectives, the 6.17 is relatively acceptable. Further studies are needed to assess the level of utility based on the above-mentioned factors.

The findings of Saradjian and colleagues (2008) found that the utility of prostheses varies from person to person, depends on the use of it. As indicated by the study, the overall mean of usefulness and utility was 6.17 (SD 2.15) which accepted by the researcher including the fit, weight, and comfort, as well as the physical abilities such as balance and energy required to use the prosthesis.

Table (4.21): Responses of the study participants according to usefulness / utility of the prosthesis

Sn	Items	Mean	MD	SD
1.	Fit of prosthesis	5.89	6.00	3.26
2.	The weight of prosthesis	5.76	6.00	3.27
3.	The comfort while standing when using prosthesis	6.50	7.00	3.04
4.	The comfort while sitting when using prosthesis.	6.66	7.00	2.95
5.	The balance while using prosthesis	6.01	6.00	2.97
6.	How much energy it took to use your prosthesis for as long as you needed it.	6.09	6.00	2.96
7.	The feel (such as the temperature and texture) of the prosthesis (sock, liner, socket) on residual limb (stump).	5.88	6.00	2.83
8.	The ability to put on the prosthesis	6.59	7.00	2.92
Overall mean = 6.17, MD= 6.13, SD = 2.15				

Residual Limb Health:

The health of the residual limbs is one of the most important aspects that the people with amputations rely on to compensate for the lost part of the rest of the limb by using the prosthesis. The researcher paid great attention to following up the extent of the prosthetic limb's impact on the rest of the limb's health when the person uses the prosthesis. As shown in Table (4.22), scores for each question related to residual limb health are ranked by degree of importance. Participants showed the greatest importance was given to the residual limb swelling, to the point that it might alter the fit of the prosthesis, as the mean value of avoidance residual limb swollen to the point of changing the fit of the prosthesis

was 6.80. Avoidance of ingrown hair on the residual limb was less important than swelling of the rest of the limb, as the overall average of ingrown hair avoidance was 6.39, just like avoiding blisters or sores on a residual limb; it's mean was 6.35. The mean value of the ability to keep prosthesis from smelling was 6.23, followed by avoidance of rashes on a residual limb with a mean of 5.94 and sweat inside the prosthesis (in the sock, liner, socket) with a mean of 5.57.

The study findings were in line with Legro (1999) study that showed that the residual limb health affects the fit of the prosthesis, it was also a high priority for all participants, as indicated by the importance assigned to avoiding blisters, sores, and rashes, changes in body weight, the method of suspending the prosthesis, and controlling skin irritations, especially in warm weather (Legro,1999).

Thus, from the Researcher's perspective, (6.21%) should be raised is relatively not acceptable. Further studies are needed to dig more to assess the residual limb health level based on the above-mentioned factors. In order to have some measures could be implemented to improve the residual limb health level which affect positively on the Utility of the prostheses and improve the quality of life for the amputees.

Table (4.22): Responses of the study participants according to residual limb health

Sn	Items	Mean	MD	SD
1.	Sweat inside the prosthesis (in the sock, liner, socket).	5.57	6.00	3.18
2.	Ability to keep prosthesis from smelling	6.23	7.00	3.22
3.	Residual limb was swollen to the point of changing the fit of prosthesis.	6.80	8.00	3.22
4.	Avoidance of rashes on residual limb	5.94	6.00	3.14
5.	Avoidance of ingrown hairs on residual limb	6.39	7.00	2.76
6.	Avoidance of blisters or sores on residual limb	6.35	6.00	2.89
Over all mean = 6.21, MD= 6.50, SD = 1.94				

Appearance:

The role of the prosthesis varied in terms of both function and / or appearance for persons depending on what was of more personal importance to them, but for most, it fulfilled a role in both areas. As a result, the prosthesis plays an important role in showing a sort of normal appearance (Saradjian et al., 2008). As shown in Table (4.23), the study results showed that the prostheses used by amputees providing moderate acceptable appearance

for them, which was indicated by the overall mean of appearance of 6.48, with (SD 2.04). The overall prosthesis appearance-related items have slightly different results, such as the prosthesis didn't damage clothing with a mean of 7.05, the cover of Prosthesis was durable with a mean of 7.03, the ability clothing limitations with a mean of 6.43, the appearance of the prosthesis with a mean of 6.12 and the ability to wear preferred shoes with a mean of 5.79.

Thus, from the Researcher's perspective, (6.21%) is relatively not acceptable. Furthermore, studies were needed to assess the residual limb health level based on the above-mentioned factors. In order to have some measures could be implemented to improve the residual limb health level which will affect positively on the Utility of the prostheses and improve the quality of life for the amputees.

From the researcher's point of view, the prosthesis would not completely replace the limb that has been lost, but there was still room for improvement that have the effect of the general factors on acceptance of the appearance of the prosthesis, as well as increase the awareness of amputees on the capabilities of the prosthesis compared to their limb that has been lost to increase their awareness and satisfaction.

Table (4.23): Responses of the study participants according to appearance of the prosthesis

Sn	Items	Mean	MD	SD
1.	Appearance of prosthesis.	6.12	7.00	3.16
2.	Prosthesis does not damage clothing	7.05	8.00	3.11
3.	Cover of prosthesis is durable	7.03	8.00	2.97
4.	Ability to wear preferred shoes types	5.79	6.00	2.97
5.	Prosthesis does not limit your choice of clothing	6.43	7.00	3.10
Over all mean = 6.48, MD= 6.60, SD = 2.04				

Sounds:

It is very important for the prosthesis to move smoothly and not does make sounds that disturb or make people with amputation to feel discomfort, shy, or embarrassed. Therefore, the PEQ includes a question about satisfaction with properties of the prosthesis. This question assesses the patients' rating of "squeaking, clicking or belching sounds" made by the prosthesis. As shown in Table (4.24), participants rated the importance of the prosthesis does not produce noise with a mean of 6.72, and that sound annoyed them with a mean of 5.65.

Barrs and his colleague (2018) reported a decrease in satisfaction with the sounds made by the prosthesis. Which is consistent with our study that the overall mean of satisfaction with the sounds made by prosthesis was 6.17(SD 2.15) which reflect that there is still good room for improvement in the properties of the prosthesis, in order to decrease the "squeaking, belching or clicking sounds" made by the prosthesis to increase the satisfaction with the properties of the prosthesis. In addition to activate the regular follow-up for the prosthesis to do the maintenance on time when required.

Table (4.24): Responses of study participants according to prosthesis sounds

Sn	Items	Mean	MD	SD
1.	Prosthesis does not produced noise	6.72	7.00	3.03
2.	The rate annoyed these sounds to you	5.65	5.65	2.53
Over all mean = 6.18, MD= 7.00, SD = 2.49				

II Mobility scales:

Ambulation:

The ambulation scale of the PEQ includes eight questions, which assesses satisfaction with prosthesis use in different circumstances. The study findings revealed that the ability of ambulation using prosthetic limb affected by many individual factors as the level of the amputation and general physical health and ability of the individual which was indicated by the overall mean ability of ambulation which was 5.65 (SD 2.38), which reflect a relatively low level of ambulation.

The overall ambulation with using the prosthesis varies in the ability weighted means such as the ability to walk on sidewalks and streets with a prosthesis with a mean of 6.74, the ability to walk with a prosthesis with a mean of 6.56, the ability to walk in close spaces with a mean of 6.48, the ability to walk downstairs with a prosthesis with a mean of 5.69, the ability to walk upstairs with a prosthesis with a mean of 5.53, the ability to walk on slippery surfaces with a prosthesis with a mean of 5.15, the ability to walk down a steep hill with a mean of 4.48 and the ability to walk up a steep hill with a mean of 4.28.

The study findings were in line with Webster and his colleagues (2012) study which showed that transfemoral amputation and increased age, were significantly associated with less prosthetic ambulation. Another study carried out by Kark & Simmons (2011) found that satisfaction with walking using prosthesis was higher in Transtibial amputee patients than in Transfemoral amputee patients (Kark, 2011).

Thus, from the Researcher's perspective further studies were needed to more assess the factors affect the ability of using the prostheses on ambulation, in order to have some measures could be implemented to improve the ability to walk with using the prostheses in different environmental situations.

Table (4.25): Responses of the study participants according to ambulation

Sn	Items	Mean	MD	SD
1.	Ability to walk with prosthesis	6.56	7.00	2.79
2.	Ability to walk in close spaces	6.48	7.00	2.95
3.	Ability to walk upstairs with prosthesis	5.53	5.00	3.01
4.	Ability to walk down stairs with prosthesis	5.69	6.00	3.09
5.	Ability to walk up a steep hill	4.28	4.00	3.18
6.	Ability to walk down a steep hill	4.48	4.00	3.35
7.	Ability to walk on sidewalks and streets with prosthesis	6.74	7.00	2.80
8.	Ability to walk on slippery surfaces with prosthesis	5.15	5.00	3.34
Over all mean = 5.65, MD= 5.90, SD = 2.38				

Transfer:

The transfer scale of the PEQ includes 5 questions, which assesses satisfaction with prosthesis used in transfers in different circumstances. As one of the factors that associated with satisfaction about ability to transfer using prosthesis (Harness and Pinzur, 2001).

As shown in Table (4.26), scores for each question related to transfering while using the prosthesis were ranked by degree of ability. The study results indicated that the use of prosthesis eases the transfer of the amputees which is indicated by the overall mean of the ability to transfer with using prosthesis which was 6.64, with (SD 2.25).

The ability to transfer using prosthesis varies in mean weight such as the ability to sit down and get up from the toilet with a mean of 7.04, the ability to shower or bathe safely with a mean of 6.91, the ability to sit down and get up from a chair with a high seat (e.g., a dining chair, a kitchen chair, an office chair) with a mean of 6.68, the ability to sit down and get up from a low or soft chair (e.g. an easy chair or deep sofa) with a mean of 6.52 and the

ability to get in and out of a car when using the prosthesis with a mean of 6.06.

From the Researcher's perspective, (6.64%) was relatively moderately accepted, as one of the important benefits from the prostheses to facilitate the way of transfer for amputees. Further studies were needed to more assess the reasons affect the ability to use the prostheses on transfer, to have some measures could be implemented to improve the ability to transfer with using the prostheses in different activity of life.

Table (4.26): Response of the study participants according to transfer

Sn	Items	Mean	MD	SD
1.	Ability to get in and out of a car when using your prosthesis.	6.06	6.00	2.98
2.	Ability to sit down and get up from a chair with a high seat (e.g., a dining chair, a kitchen chair, an office chair).	6.68	7.00	3.07
3.	Ability to sit down and get up from a low or soft chair (e.g. an easy chair or deep sofa	6.52	7.00	3.00
4.	Ability to sit down and get up from the toilet	7.04	8.00	2.82
5.	Ability to shower or bathe safely	6.91	8.00	2.94
Overall mean = 6.64, MD= 6.64, SD = 2.25				

4.2.6.2 Psychologic and social domains

In the psychologic and social domains, three scales were presented; perceived responses, social burden, and frustration.

Perceived Response

The PEQ perceived response scale includes 4 questions, which assess the response to the amputee prosthesis and how that reaction affect life activity.

As shown in Table (4.27), scores for each question related to perceived response using the prosthesis ware ranked by degree of acceptance. The findings found out that the prosthesis was highly accepted by amputees and their family, which was indicated by the overall mean of perceived response to the prosthesis from the participants' views which was 8.19, with (SD 2.27).

The perceived general response to prosthesis from the participants' views has almost close acceptance mean weights such as the partner's acceptance of prosthesis with a mean of 8.26, the response has affected your relationship with a mean of 8.40, the family member

accepts prosthesis with a mean of 8.14 and the second family member accepts prosthesis with a mean of 7.98.

From the researcher's point of view, this result may be due to the family and community bonding relationship in Gaza, and perhaps also because society considers that the people who lost their limbs due to the Israeli attacks were heroes and they must care of them.

Table (4.27): Responses of the study participants according to perceived response

Sn	Items	Mean	MD	SD
1.	Partner's acceptance of prosthesis	8.26	9.00	2.30
2.	how partner's response affected your relationship	8.40	9.00	2.16
3.	Family member accepts prosthesis	8.14	9.00	2.28
4.	How a second family member accepts prosthesis	7.98	9.00	2.34
Over all mean = 8.19, MD= 9, SD = 2.27				

Frustration:

The PEQ frustration scale includes two questions, which assess the response to the amputee's frustration and how this frustration affects life activities.

As shown in Table (4.28), scores for each question related to frustration with the prosthesis were ranked by degree of frustration, which is indicated by the overall mean of frustration to the prosthesis which was 5.79 with SD 2.81.

The overall frustration to the prosthesis reflected in the answer to the two questions which were frustrated with your prosthesis with a mean of 6.51 and the most frustrating event from your prosthesis and rate how you felt at that tune with a mean of 5.07.

Table (4.28): Responses of the study participants according to frustration

Sn	Items	Mean	MD	SD
1.	Frustrated with your prosthesis	6.51	8.00	3.50
2.	The most frustrating event from your prosthesis and rate how you felt at that tune	5.07	5.00	3.26
Over all mean = 5.79, MD= 7.00, SD = 2.81				

Social Burden

The social burden scale of the PEQ includes three questions, which assess the response of the amputee's ability to do social life activities.

As shown in Table (4.29), scores for each question related to social burden with the use of prostheses are ranked by the degree of ability. which was indicated by the overall mean of social burden to the use of a prosthesis which was 7.62, with (SD 2.10).

The total ability doing social activity with using the prosthesis showed almost no difference in the weights of the ability means such as the prosthesis was not a burden to partner or family with a mean of 7.73, the ability to having an active social life with a mean of 7.12 and the ability to take care of someone else, (e.g. your partner, a child, or a friend with a mean of 8.00.

To sum up, the study showed that there was a good ability of amputees with the prosthesis that enable them to be socially active, engaged, and not isolated.

Table (4.29): Responses of the study participants according to social burden

Sn	Items	Mean	MD	SD
1.	Prosthesis is not a burden to partner or Family	7.73	9.00	2.74
2.	Having an active social life	7.12	8.00	2.97
3.	Ability to take care of someone else	8.00	9.00	2.46
Over all mean = 7.62, MD= 8.00, SD = 2.10				

4.2.6.3 Overall Well-being

The general wellbeing scale of the PEQ includes two questions, assessing the overall well-being of the amputee life.

As shown in Table (4.30), the study revealed that the study participants were generally healthy. That was indicated by the overall mean of wellbeing of amputees which was 7.06, with (SD 2.29). Which was explained by amputees who are satisfied with how things worked out since their amputation with an average of 7.25 and an amputee quality of life with an average of 6.88.

The level of satisfaction had the potential to influence the amount of time that a person wears and uses a prosthesis. It might also influence other outcomes such as self-confidence and self-image, so that individuals were more comfortable performing activities in the community and the workplace with their prostheses and may ultimately affect quality and

life satisfaction (Webster et al., 2012). As a result, earning a better understanding of the variables that influence the use and satisfaction with the prosthetic device were important.

Table (4.30): Responses of the study participants according to wellbeing

Sn	Items	Mean	MD	SD
1.	How satisfied you have been with how things have worked out since your amputation.	7.25	8.00	2.53
2.	How would you rate your quality of life?	6.88	7.00	2.55
Mean = 7.06, MD= 7.50, SD = 2.29				

4.2.6.4 PEQ Importance Scores and Correlations between prosthetic importance ratings and respondent characteristics.

As demonstrated in Table (4.31), The scores for each question were ranked by degree of importance. The high importance ratings (scores averaging from 8 to 10) were: Partner's response affected relationship (mean =8.40), Partner's acceptance of prosthesis (mean =8.26), the family member accepts prosthesis (mean =8.14), and ability to take care of someone else (mean =8.00) as the most important factors associated with the use of a prosthesis.

Other items with importance ratings (scores averaging from 7-7.9) included: Prosthesis is not a burden to partner or family (mean =7.73), amputee satisfaction since your amputation (mean =7.25), having an active social life (mean =7.12), prosthesis does not damage clothing (mean =7.05), ability to sit down and get up from the toilet (mean =7.04), and durability of the prosthesis cover (mean =7.03).

Other items that received moderate importance ratings (scores ranging from 6.5 to 6.9) included: the ability to shower or bathe safely (mean =6.91), your quality of life (mean =6.88), Residual limb was swollen to the point of changing the fit of the prosthesis (mean =6.80), Ability to walk on sidewalks and streets with prosthesis does not produce noise (mean =6.72), the ability to sit down and get up from a chair with a high seat (e.g., a dining chair, a kitchen chair, an office chair) (mean =6.68), The comfort while sitting when using a prosthesis (mean =6.66), The ability to put on the prosthesis (mean =6.59), the ability to walk with a prosthesis(mean =6.56), Frustrated with your prosthesis(mean =6.51), and the comfort while standing when using a prosthesis (mean =6.50). Items receiving the lowest importance scores were ambulation-related items such as the ability to walk up a steep hill

(mean =4.28), the ability to walk down a steep hill (mean =4.48), and the ability to walk on slippery surfaces with a prosthesis (mean =5.15).

Items in the Perceived Response and Social Burden categories had the highest importance ratings. The lack of steep hills in GG might be a cause for the low score for these domains.

Table (4.31): Participants responses according to PEQ

Sn	Items	Mean	MD	SD
1.	How this response has affected your relationship	8.40	9.00	2.16
2.	Partner's acceptance of prosthesis	8.26	9.00	2.30
3.	How a family member accepts Prosthesis?	8.14	9.00	2.28
4.	Ability to take care of someone else	8.00	9.00	2.46
5.	Prosthesis is not a burden to partner or Family	7.73	9.00	2.74
6.	How satisfied you have been with how things have worked out since your amputation.	7.25	8.00	2.53
7.	Having an active social life	7.12	8.00	2.97
8.	Prosthesis does not damage clothing	7.05	8.00	3.11
9.	Ability to sit down and get up from the toilet	7.04	8.00	2.82
10.	Cover of Prosthesis is durable	7.03	8.00	2.97
11.	Ability to shower or bath safely	6.91	8.00	2.94
12.	How would you rate your quality of life?	6.88	7.00	2.55
13.	Residual limb was swollen to the point of changing the fit of prosthesis.	6.80	8.00	3.22
14.	Ability to walk on sidewalks and streets with prosthesis	6.74	7.00	2.80
15.	Prosthesis does not produced noise	6.72	7.00	3.03
16.	Ability to sit down and get up from a chair with a high seat (e.g., a dining chair, a kitchen chair, an office chair).	6.68	7.00	3.07
17.	The comfort while sitting when using prosthesis.	6.66	7.00	2.95
18.	The ability to put on the prosthesis	6.59	7.00	2.92
19.	Ability to walk with prosthesis	6.56	7.00	2.79
20.	Frustrated with your prosthesis	6.51	8.00	3.50
21.	The comfort while standing when using prosthesis	6.50	7.00	3.04
22.	Ability to walk up a steep hill	4.28	4.00	3.18
23.	Ability to walk down a steep hill	4.48	4.00	3.35
24.	Ability to walk on slippery surfaces with prosthesis	5.15	5.00	3.34

An independent sample t-test was used to explore the relationship between selected respondent variables and prosthesis evaluation domains. As demonstrated in Table (4.32), The results of T tests revealed no statistically significant differences between males and females with regard to all prosthesis evaluation domains.

The study findings not consistent with Legro (1999) study that have showed several significant differences in the gender contrasts, with females score nearly forty percent of the importance items significantly higher than male. Items relating to utility and appearance of the prosthesis were more likely to receive significantly higher ratings from females.

Table (4.32): Differences in the mean scores of the prosthesis evaluation domains by gender

Prosthesis Evaluation	Gender	No	Mean	SD	T-value	Sig.
Ambulation	Male	292	5.66	2.38	0.097	0.923
	Female	78	5.63	2.38		
Appearance	Male	292	6.48	2.05	0.126	0.900
	Female	78	6.51	2.02		
Frustration	Male	292	5.70	2.90	1.181	0.238
	Female	78	6.12	2.44		
Perceived Response	Male	292	7.92	1.75	0.313	0.755
	Female	78	7.99	1.50		
Residual Limb Health	Male	292	6.15	2.07	1.238	0.216
	Female	78	6.45	1.38		
Social Burden	Male	292	7.60	2.12	0.269	0.788
	Female	78	7.67	2.02		
Sounds	Male	292	6.08	2.58	1.480	0.140
	Female	78	6.55	2.10		
Utility	Male	292	6.10	2.20	1.301	0.194
	Female	78	6.45	1.90		
Well Being	Male	292	6.97	2.30	1.444	0.149
	Female	78	7.39	2.25		
Transfer	Male	292	6.72	2.26	1.222	0.223
	Female	78	6.37	2.23		

(* signifies significance <0.05)

Table (4.33): Differences in the mean score of the prosthesis evaluation domains by amputees age groups

Prosthesis Evaluation	Age group	No	Mean	SD	F-value	Sig.
Ambulation (AM)	25 years and less	62	6.21	2.43	1.929	0.124
	From 25 to 35	146	5.62	2.22		
	From 36 to 45	64	5.21	2.16		
	More than 45	98	5.63	2.66		
	Total	370	5.65	2.38		
Appearance	25 years and less	62	6.53	2.18	4.895	0.002*
	From 25 to 35	146	6.15	2.09		
	From 36 to 45	64	6.23	1.81		
	More than 45	98	7.11	1.90		
	Total	370	6.48	2.04		
Frustration	25 years and less	62	5.10	3.12	5.777	0.001*
	From 25 to 35	146	5.64	2.90		
	From 36 to 45	64	5.36	2.55		
	More than 45	98	6.73	2.40		
	Total	370	5.79	2.81		
Perceived Response	25 years and less	62	7.39	2.24	6.675	0.000*
	From 25 to 35	146	7.81	1.60		
	From 36 to 45	64	7.83	1.51		
	More than 45	98	8.52	1.40		
	Total	370	7.93	1.70		
Residual Limb Health	25 years and less	62	6.29	1.81	10.330	0.000*
	From 25 to 35	146	5.72	2.02		
	From 36 to 45	64	5.96	1.95		
	More than 45	98	7.05	1.62		
	Total	370	6.21	1.94		
Social Burden	25 years and less	62	7.36	2.28	2.664	0.048*
	From 25 to 35	146	7.47	2.04		
	From 36 to 45	64	7.42	2.13		
	More than 45	98	8.12	1.98		
	Total	370	7.62	2.10		
Utility	25 years and less	62	6.23	2.18	2.446	0.064
	From 25 to 35	146	5.98	2.06		
	From 36 to 45	64	5.85	1.93		
	More than 45	98	6.64	2.32		
	Total	370	6.17	2.15		

(* signifies significance <0.05)

As shown in Table (4.33), a one-way ANOVA test was conducted to examine whether there were statistically significant differences among beneficiaries age groups in relation to prosthesis evaluation domains. The results revealed a statistically significant difference between overall score of satisfaction with appearance and age groups, with (F= 4.895, P value= 0.002). Scheffe post hoc tests revealed that there was a statistically significant difference in the total satisfaction with appearance between participants of age group from 25 to 35 years, with a score of (mean difference .379) and with participants of age group more than 45 years, with a score of (mean difference .885).

A one-way ANOVA test was conducted to examine whether there were statistically significant differences among beneficiaries in different age groups in relation to the overall level of frustration. The results revealed a statistically significant difference between overall score of frustration and age groups, with (F= 5.777, P value= 0.001). Scheffe post hoc test revealed that there was a statistically significant difference in the overall level of frustration and between participants of age group less than 25 years and with participants age group more than 45 years with a score of (mean difference -1.632).), as well as between participants with age group from 25 to 35 years with age more than 45 years with a score of (mean difference -1.095) and between age group from 36 to 45 years and age group more than 45 years with a score of (mean difference -1.371).

Additionally, the results revealed a statistically significant difference between overall score of satisfaction with perceived response and age groups, with (F= 6.675, P value= 0.000), A Scheffe post hoc test revealed that there is a statistically significant difference in overall perceived response score between participants of age group less than 25 years and with participants age group more than 45 years with a score of (mean difference -1.136)., as well as between participants with age group from 25 to 35 years, with age more than 45 years with a score of (mean difference -.708). There were statistical differences in relation to the total score of social burden domain, with (F =2.664, p value = 0.048). The differences between and within groups did not each significance levels.

Finally, the results of one-way away ANOVA revealed a statistically significant difference between overall score of satisfaction with residual limb health and age groups, with (F= 10.330, P value= 0.000). The Scheffe post hoc test revealed that there is a statistically significant difference in residual limb health between participants of age group from 25 to 35 years and with participants age group more than 45 years with a score of (mean

difference -1.331), as well as between participants with age group from 36 to 45 years with age more than 45 years with a score of (mean difference -1.090).

Table (4.34): Differences in the mean scores of prosthesis evaluation domains and years since using prosthesis

Prosthesis Evaluation	Years since imputation	No	Mean	SD	F-value	Sig.
Ambulation (AM)	4 Years and less	30	5.72	2.32	3.408	0.019*
	From 5 to 10	57	5.39	2.23		
	From 11 to 15	29	5.60	2.17		
	Above 15	26	7.03	2.08		
	Total	142	5.80	2.27		
Perceived Response	4 Years and less	30	7.72	1.75	1.627	0.186
	From 5 to 10	57	8.06	1.44		
	From 11 to 15	29	8.07	1.33		
	Above 15	26	8.57	1.18		
	Total	142	8.08	1.46		
Residual Limb Health	4 Years and less	30	6.61	1.46	2.317	0.078
	From 5 to 10	57	6.20	1.95		
	From 11 to 15	29	5.94	1.73		
	Above 15	26	7.05	1.41		
	Total	142	6.39	1.74		
Sounds	4 Years and less	30	6.15	2.58	2.301	0.080
	From 5 to 10	57	6.10	2.51		
	From 11 to 15	29	5.85	1.90		
	Above 15	26	7.32	1.63		
	Total	142	6.28	2.31		
Utility	4 Years and less	30	5.93	2.11	3.945	0.010*
	From 5 to 10	57	6.29	1.86		
	From 11 to 15	29	6.17	1.56		
	Above 15	26	7.51	1.82		
	Total	142	6.41	1.91		
Well Being	4 Years and less	30	7.13	2.16	3.496	0.017*
	From 5 to 10	57	6.59	2.45		
	From 11 to 15	29	7.16	2.04		
	Above 15	26	8.29	1.90		
	Total	142	7.13	2.27		
Transfer	4 Years and less	30	6.32	2.25	2.062	0.108
	From 5 to 10	57	6.52	2.14		
	From 11 to 15	29	6.77	2.235		
	Above 15	26	7.63	1.938		
	Total	142	6.73	2.172		

(* signifies significance <0.05)

As shown in Table (4.34), a one-way ANOVA was conducted to examine whether there were statistically significant differences between ambulation in relation to beneficiaries with different years of amputation. The study found out that there were statistically significant differences among the beneficiaries with different years of amputation and ambulation, with (F= 3.408, P value= 0.019). The Scheffe post hoc test revealed that there was a statistically significant difference in ambulation between participants experienced amputation from 5 to 10 years and participants experienced amputation more than 15 years with a score of (mean difference -1.635).

The study results revealed that there were statistically significant differences among the beneficiaries with different years of amputation and utility, with (F= 3.945, P value= 0.010). Scheffe post hoc test revealed that there was a statistically significant difference in ambulation between participants experienced amputation less than 4 years and participants experienced amputation more than 15 years with a score of (mean difference -1.575).

The study found out that there were statistically significant differences among the beneficiaries with different years of amputation and well-being, with (F= 3.496, P value= 0.017). Scheffe post hoc test revealed that there was a statistically significant difference in ambulation between participants experienced amputation less than 4 years and participants experienced amputation more than 15 years with a score of (mean difference -1.697).

As demonstrated in Table (4.35), an independent samples t-test was applied to examine whether there was a significant difference between prosthesis evaluation and beneficiaries having health problems (chronic diseases) other than amputation. The mean of overall satisfaction of ambulation was higher among participants who do not have health problems (5.82) compared to clients who do have health problems (4.85). The differences were statistically significant, with (t- 3.059, p 0.002).

With regard to perceived response, the mean of overall satisfaction with perceived response was higher among participants who have health problems (8.33) than clients who do not have health problems (7.85). The differences are statistically significant, with (t- 2.105, p 0. 036). From the researcher's point of view, perhaps this indicates that participants who have health problems (chronic diseases) have more ability to accept their condition and the response to the prosthesis than people clients who do not have health problems.

Finally, Overall satisfaction with perceived residual limb health was higher among clients who have health problems (6.95) compared to clients who do not (6.05). The differences were statistically significant, with (t 3.452, p 0.001).

Table (4.35): Differences in mean scores of prosthesis evaluation domains and having health problems other than the amputation

Prosthesis Evaluation	Having health problems (chronic diseases)	No	Mean	SD	T-value	Sig.
Ambulation	Yes	66	4.85	2.45	3.059	0.002*
	No	304	5.82	2.332		
Appearance	Yes	66	6.72	2.083	1.05	0.295
	No	304	6.43	2.034		
Frustration	Yes	66	6.23	2.58	1.415	0.158
	No	304	5.69	2.852		
Perceived response	Yes	66	8.33	1.358	2.105	0.036*
	No	304	7.85	1.756		
Residual Limb Health	Yes	66	6.95	1.667	3.452	0.001*
	No	304	6.05	1.963		
Social Burden	Yes	66	7.59	2.22	-0.099	0.922
	No	304	7.62	2.075		
Sounds	Yes	66	6.49	2.425	1.102	0.271
	No	304	6.12	2.502		
Utility	Yes	66	6.25	2.34	0.343	0.732
	No	304	6.15	2.105		
Well Being	Yes	66	7.14	2.537	0.291	0.771
	No	66	4.85	2.45		
Transfer	Yes	66	6.23	2.57	-1.658	0.098
	No	304	6.73	2.17		

(* signifies significance <0.05)

An independent samples t-test was applied to examine whether there was a significant difference between transfer domain and level of amputation level. As demonstrated in Table (4.36), The tests revealed statistically significant differences between beneficiaries having transfemoral amputation and transfer domains (t 3.789, p 0.000). Beneficiaries having other than transfemoral amputation level (M = 6.89, SD = 2.23) reported

significantly higher levels of transfer than did beneficiaries with transfemoral amputation (M = 5.86, SD= 2.17).

Table (4.36): Mean differences of transfer domain score by amputation level

Amputation level	Transfer domains	No	Mean	SD	T-value	Sig.
Trans Femoral	Yes	88	5.86	2.17	3.789	0.000*
	No	282	6.89	2.23		
Trans Condylar	Yes	28	6.74	2.35	0.245	0.806
	No	342	6.63	2.25		
Knee Disarticulation	Yes	41	6.17	2.40	1.424	0.155
	No	329	6.70	2.23		
Trans Tibial	Yes	143	6.86	3.094	1.345	0.179
	No	227	6.52	2.343		
Partial Foot	Yes	11	7.11	2.56	0.703	0.483
	No	359	6.63	2.25		

(* signifies significance <0.05)

As demonstrated in Table (4.36), to explore the correlation across the prosthesis evaluation domains, the researcher has used the Pearson's Correlation test. The below correlational matrix reflects a positive correlation between most of the prosthesis evaluation domains. And from the researcher's point of view, these results reflect the high correlation across all domains. Which means any improvement in one domain can affect the other domains and vice versa.

4.2.7 Quality of life of people with amputations

This part aims to assess the quality of life of people with amputations. In order to do so, WHOQOL- BREF self-administration questionnaire was used. WHO defines quality of life as an individual's perception of their position in life in the context of the value & culture systems in which they live and in relation to their goals, expectations, standards, and concerns. The primary importance of this questionnaire is to assess individual's perceptions. Perception is a broad-ranging concept affected in complex ways by the person's physical health, psychological state, personal beliefs, social relationships, and relationships to salient features of their environment (Deans, 2008).

As shown in Table (4.37), the study revealed that more than half of the amputees living at home with support from unpaid careers (partner, friends, family members) which was (68.6%), while 24.9% of them were living at home with no support required, and 5.6% living at home with support from paid careers (partner, friends, family members).

Regarding the general health for the participants the study results shewed that about two-thirds of participants evaluated and perceived their health as good health (75.7%), 24.3% had a health problem. That was consistent with the WHO definition of disability, which considers the loss of a limb was an impairment in a person's body structure or function, not a problem in their health. As shown in Table (4.37), 71.9% of the study participants indicated that they believe that they have a disability, while about 28.1% of the study participants indicated that they do not have disability also that consistent with the WHO definition of disability, which was a detrimental effect on the functionality of the person.

Moreover, 30.6% of participants said that their disability was totally visible, 26.3% mostly visible, 15.4% moderately visible, 15.2% not at all visible and 12.5% a little visible, indicating variability in peoples lived experience of amputation.

About one -third of the study participants (36.2%) reported that the amputation affected moderately their life, 21.4% severely affected their life, 17.8% mildly affected their life, 14.3% profoundly affected their life, and 10.3% not at all effects in their life. These findings highlight that people differently interpret their amputation in relation to its effect upon them.

Table (4.37): Distribution of the study participants by selected variables of the WHOQOL-BREF

Items	Number	%
Participants living circumstances & support		
Living at home - no support requires	92	24.9
Living at home with support from unpaid careers	254	68.6
Living at home with support from paid careers	24	6.5
Total	**370**	**100.0**
Are you currently ill or in poor health?		
Yes	90	24.3
No	280	75.7
Total	**370**	**100.0**
Do you believe you have a disability?		
Yes	266	71.9
No	104	28.1
Total	**370**	**100.0**
How visible is this disability?		
Not at all	56	15.2
A Little	46	12.5
Moderately	57	15.4
Mostly	97	26.3
Totally	113	30.6
Total	**369**	**100.0**
How much does this disability affect your life?		
Not at all	38	10.3
Mildly	66	17.8
Moderately	134	36.2
Severely	79	21.4
Profoundly	53	14.3
Total	**370**	**100.0**

The WHOQOL-BREF is a comprehensive questioner containing 26 items rated on a 5-point Likert scale. A maximum score of 5 indicates a perception of high quality of life, while a minimum score of 1 indicates a perception of poor quality of life. Of the total 26 items, 24 items are grouped in four domains comprise the following items: Physical Health 7 items; Psychological Health 6 items; Social Relationships 3 items & Environment 8 items, and two global items related to overall QoL and satisfaction with health.

As shown in Figure (4.12), based on the viewpoint of the study participants', the mean percentage of the quality of life was 74.4%, distributed as 45.3% of clients reported having a good quality of life, 25.7% they mentioned that their QoL neither good neither poor, 19% they have very good QoL, 8.4% reported that they have poor QoL, and 1.6% they have very poor QoL.

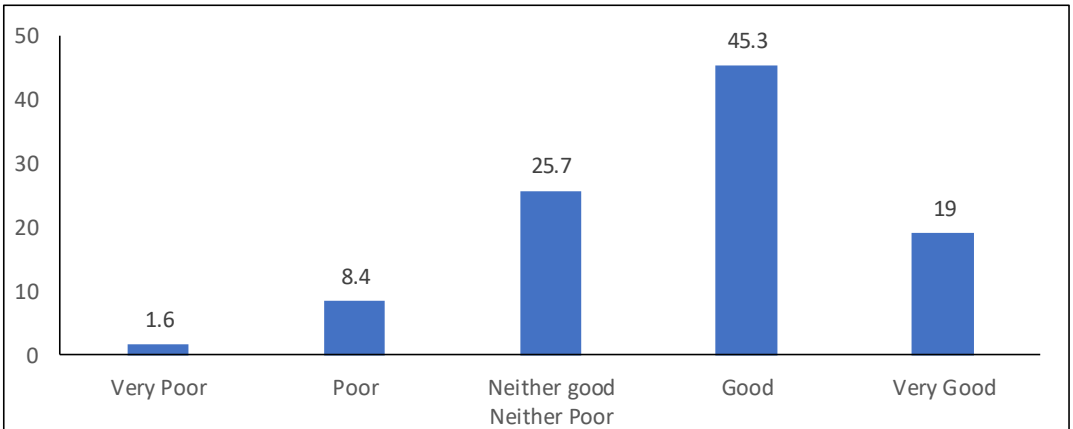


Figure (4.12): Percentage distribution of study participants according to Quality of life

Regarding the participants' point of view on their satisfaction about health, as shown in Figure (4.13), about 46.2% of the study participants indicated that they satisfied with their health, while about 26.2% of the participants indicated that they were very satisfied with their health, 15.7% they were neither satisfied nor dissatisfied, 11.4% that they are dissatisfied.

The results of the participants regarding satisfaction on their health were consistent with the study demographic finding, as the main cause (75.1 %) of amputation in study was conflict-related, which has left wounded people with physical disabilities due to injuries by

live ammunition, bomb, shelling, landmine & other. As well as the study showed that 82.2% of the study participants indicated that they have no chronic diseases, while about 17.8% of the study participants indicated that they have chronic diseases.

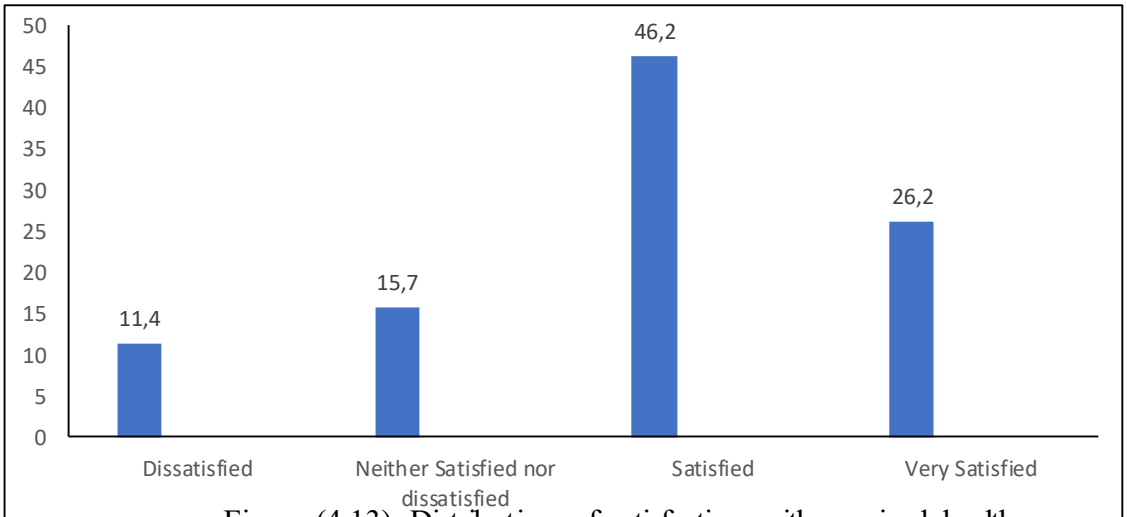


Figure (4.13): Distribution of satisfaction with received health serivces

Physical Health:

As shown in Table (4.38), scores for each question related to Physical Health were ranked by degree affected the quality of life. The overall mean percentage was 66.93%, with (SD 10.52). 76.2% of participants expressed positively regarding their sleep satisfaction. Having enough energy for everyday life was suitable; as more than two-thirds of participants expressed satisfaction (73.6%) where 32.8% of participants indicated that they were mostly having enough energy for everyday life and 25.2% indicated that they were have completely enough energy for everyday life. With regard to the ability to do life activities, about two-thirds of participants (72.8%) indicated that they were satisfied with their ability to do daily activities. Additionally, 72% of participants reported that their mobility to get around was acceptable. Moreover, more than half of the participants didn't have physical pain that stops them from doing what they need to do; this was indicated by 59.6% of participants where 11.4% of participants indicated that they had not physical pain at all and 17.8% they had little physical pain. Regarding participants' satisfaction with their ability to work, more than half of them expressed that they were able to work; this was indicated by 59.4%. Finally, 54.4% of the participant indicated they were still need medical treatment where 23.8% of participants indicated that they were moderately need

for medical treatment, 20.1% mostly need for medical treatment and 9.5% they were completely in need for medical treatment.

Table (4.38): Distribution of the study participants according to their physical health

Items	Not at all		A Little		Moderately		Mostly		Completely		Weighted Mean %
	No	%	No	%	No	%	No	%	No	%	
Have physical pain stop them from doing what they need to do	42	11.4	66	17.8	152	17.8	77	20.8	33	8.9	59.60
Medical Treatment need	74	20.1	98	26.6	88	23.8	74	20.1	35	9.5	54.40
Having enough energy for everyday life was suitable	8	2.2	40	10.8	107	29.0	121	32.8	93	25.2	73.60
The mobility of the participants to be able to get around was acceptable	10	2.7	46	12.5	93	25.3	152	41.3	67	18.2	72.00
Sleep satisfaction	11	3.0	44	12.0	55	14.9	152	41.3	106	28.8	76.20
Ability to do life activities	9	2.4	39	10.6	88	23.9	172	46.7	60	16.3	72.80
Ability to work	50	14.5	86	24.9	72	20.9	99	28.7	38	11.0	59.40
Weighted mean % = 66.93 , MD = 68.57, SD= 10.52											

Psychological Health

As shown in Table (4.39), about two-thirds of participants expressed their satisfaction on the psychological status. The amputees who participated in this study were relatively psychologically satisfied with a mean of 72.14% (SD 10.93).

The highest weighted mean (79.6%) was reported under satisfaction with the self-esteem and the lowest level of satisfaction on the psychological status was reported on bad feeling as unhappy, sad, worried, or depressed, as 55.6% of participants indicated that they were moderately to completely having negative feelings.

The results reflected that the majority of the participants expressed their good psychological wellbeing which reflected enjoying their life (69.2%), feel their life has a meaning / purpose (74.8%) whereas only 30.7% of participants indicated that they moderately feel their life is important and has a purpose, 38.6% mostly they feel their life is important and has a purpose and 22.6% they had completely feeling that their life is

important and has a purpose, (24.5% able to think clearly whereas 42.9% mostly that they had the ability to pay attention and think carefully about things and 24.2% they were completely able to think carefully about things. and the weighted mean (78.2%) accept their body image appearance whereas 34.6% indicated that they mostly accepted their body looks and 35.1% completely accepted their body looks.

Perhaps that was consistent with the impact of religion (the majority of context in GG are Muslim) on the acceptance of physical disability; As PwDs believed that disability was an affliction from God and must be accepted, and the concept of affliction for the Muslim people was not bad; as the Holy Messenger of Allah (ﷺ) said: "*The greatest reward comes with the greatest trial. When Allah loves a people, He examines them. Whoever accepts that wins His gladness but whoever is discontent with that earns His wrath*."

Table (4.39): Distribution of the study participants according to their psychological status

Items	Not at all		A Little		Moderately		Mostly		Completely		Weighted Mean %
	No	%	No	%	No	%	No	%	No	%	
Positive feelings (enjoy life)	7	1.9	41	11.4	139	38.6	126	35.0	47	13.1	69.20
Spirituality (you feel your life is important and has a purpose)	6	1.6	24	6.5	113	30.7	142	38.6	83	22.6	74.80
Thinking (you able to pay attention, and think carefully about things)	4	1.1	27	7.4	89	24.5	156	42.9	88	24.2	76.40
Body image (you able to accept the way your body looks)	11	3.0	29	7.9	71	19.2	127	34.6	129	35.1	78.20
Self-esteem (you satisfied with yourselves as a person)	8	2.2	22	6.0	46	12.5	184	50.1	107	29.2	79.60
Negative feelings (as unhappy, sad, worried, or depressed)	62	16.9	100	27.2	90	24.5	88	24.0	27	7.4	55.6
Weighted mean % = 72.14, MD = 73.33, SD= 10.93											

Social Relationships

It is very important for amputees to have good social relationships, which of course would be affecting positively in their quality of life. Therefore, the WHOQOL-BREF includes a

question about satisfaction with social relationships. As shown in Table (4.40), participants rated their overall satisfaction about the personal relationships with a mean of 81.6% where 48.4% indicated that they were mostly satisfied with their personal relationship and 33.2% they completely satisfied with their personal relationship, satisfaction with their sexual life the relationship with their partner with a mean of 73.8%, where 23% there were not satisfied with their sexual life the relationship with their partner, 10.3% they had a little satisfied with their sexual life the relationship with their partner and 12.7% they moderately satisfied with their sexual life the relationship with their partner, and the satisfaction with the support they get from their friends with mean 70.6%. To conclude, about two-third of the study participants (75.1%) indicated that they are satisfied with their social relationship activities.

To sum up, the social relationship results showed that there a consistency with result of the social burden scale of the PEQ, which assesses the response to the amputee's ability to perform social life activities. From the researcher's point of view, this reflects the nature of culture relations and the family connection that strengthens social relationships, something that was considered strong within Palestinian communities.

Table (4.40): Distribution of the study participants according to their social relationships as in the WHOQOL-BREF

Items	Not at all		A Little		Moderately		Mostly		Completely		Weighted Mean %
	No	%	No	%	No	%	No	%	No	%	
Personal relationship	3	0.8	19	5.2	46	12.5	178	48.4	122	33.2	81.60
Sex satisfaction	23	6.8	35	10.3	43	12.7	160	47.2	78	23.0	73.80
Friends support	18	4.9	62	16.8	77	20.9	130	35.3	81	22.0	70.60
Weight mean % = 75.10 , MD = 80.0, SD= 15.41											

Environment:

As shown in Table (4.41), more than half of the participants expressed satisfaction with their Environment. It was reflected by the weighted mean percentage of 75.10%; as 70.8% of participants expressed positively satisfactions with a safe feeling in their daily life, physical environment was considered healthy with a mean of 68.4% where 2.2% of participants indicated that they did not consider themselves to have a healthy physical

environment in which they live, 15.1% they had little satisfaction with the a healthy physical environment in which they live in and 37% were moderately satisfied with the healthy physical environment in which they live in. Reported available information for which they need in day-to-day life with a mean of 67.6%, conditions of their living place with mean 67.2%, accessibility to health services with mean 67%, the extent to the opportunity for leisure activities with mean 61.6%, accessibility of transportation with mean 57.6%, and finally having enough money to meet their needs 50.6%, where 13.9% of participants indicated that they mostly having enough money to meet their needs and 5.2% they completely have enough money to meet their needs.

Table (4.41): Distribution of the study participants according to their environment variables as in the WHOQOL-BREF

Items	Not at all		A Little		Moderately		Mostly		Completely		Weighted Mean %
	No	%	No	%	No	%	No	%	No	%	
Safety feeling (you feel safe in your daily life)	10	2.7	43	11.8	117	32.1	131	35.9	64	17.5	70.80
Physical Environment (you feel the local area you live in is healthy, ex: the noise, the traffic, the pollution, the weather)	8	2.2	55	15.1	135	37.0	110	30.1	57	15.6	68.40
Have you enough money to meet your needs?	75	20.3	113	30.7	110	29.9	51	13.9	19	5.2	50.60
How available to you is the information that you need in your day-to-day life	6	1.6	69	18.8	127	34.5	110	29.9	56	15.2	67.60
To what extent do you have the opportunity for leisure activities	44	12.0	72	19.6	107	29.1	99	26.9	46	12.5	61.60
Living place	26	7.1	60	16.3	93	25.3	132	36.0	56	15.3	67.20
Access to health services	9	2.4	69	18.8	108	29.3	147	39.9	35	9.5	67.00
Transportation	71	20.8	71	20.8	60	17.5	109	31.9	31	9.1	57.60
Weight mean % = 75.10 , MD = 80.0, SD= 15.41											

The WHOQOL-DIS for Disability Module. A supplementary module comprising 12 items function as a group in three domains comprise the following items: (Discrimination (3 items); Autonomy (3 items); Inclusion (6 items)), which measure the disability impact on QoL plus one general item which assesses the overall impact of disability.

These items have a 5-point Likert response scale also; scores range from 4 to 20, with higher scores representing higher QoL, and a time base relating to the previous 2 weeks.

As shown in Figure (4.14), based on the viewpoint of the participant's responses about disability which have a negative (bad) effect on your day-to-day, 29.3% report a moderately negative effect, 23.1% mentioned that their disability mostly has a bad effect on their day to day, 20.4 % the disability didn't have a negative effect on their daily life, 20.1% reported that they have a little negative effect on their daily life, and 7.1% they have a completely negative effect on their daily life. Overall study participants indicated that their disability had a negative (bad) effect on their day to day with weighted mean (55.2%).

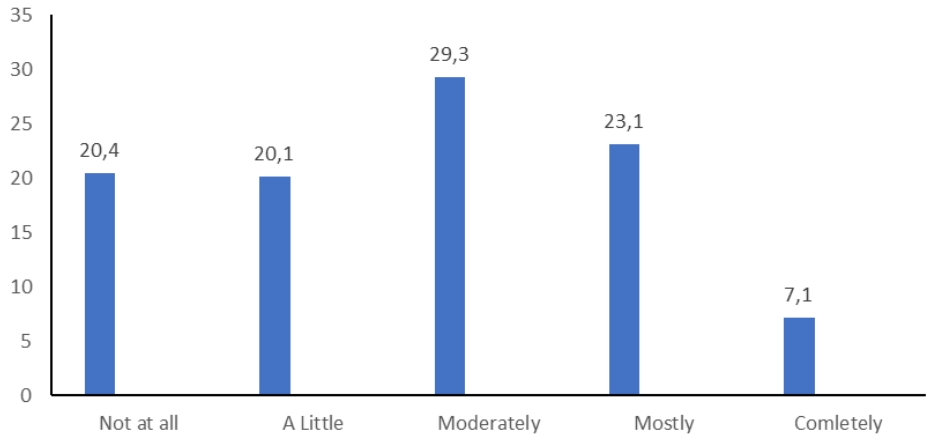


Figure (4.14): Distribution of study participants by the impact of disability on their daily life.

Discrimination

The WHOQOL- DIS includes a question about the discrimination which will be a bad impact on the daily life of the amputated people. As shown in Table (4.42), Participants rated their worry about what might happen to them in the future with a mean of (58.4%) where 14.4% of participants indicated that they mostly worry about what might happen to them in the future and no person reported that they completely worry about what might happen to them in the future. Being treated unfairly from some people with a mean of

47.6% where 23.2% of participants indicated that they were moderately treated unfairly from some people, 15% were mostly treated unfairly from some people and 5.7% were completely treated unfairly from some people, and their need for someone to stand up and support them when they have problems with a mean of 43.6%. To conclude, the study participants indicated that they feel discrimination as a negative effect due to their amputation with an overall mean percentage of 49.84%.

To sum up, the result of the discrimination part was very high which explained the participants worry about what might happen to them in the future, treat unfairly, and need someone to stand up for them when they have problems. This reflected the only partially implemented legal framework Law No.4 (1999), which upholds the rights of the PwDs based on equity principles.

Table (4.42) Distribution of study participant according to discrimination and Autonomy in their daily life

Items	Not at all		A Little		Moderately		Mostly		Completely		Weighted Mean %
	No	%	No	%	No	%	No	%	No	%	
Treat unfairly (you feel that some people treat you unfairly)	120	32.7	86	23.4	85	23.2	55	15.0	21	5.7	47.60
Advocacy (you need someone to stand up for you when you have problems)	166	45.5	70	19.1	51	13.9	56	15.3	23	6.3	43.60
Future prospects (you worry about what might happen to you in the future)	76	20.7	56	15.2	111	30.2	53	14.4	0	0.0	58.40
Weight mean %= 49.84 , MD = 56.67, SD= 17.77											

As shown in Table (4.43), the amputee participants expressed their satisfaction with their autonomy in their daily life. The amputees who participated in this study mostly have autonomy satisfied with a mean of 78.80% and SD 12.86.

The higher weighted mean percentage (79.6%) indicated people were largely satisfied with their ability to make their own choices about their day to day life whereas 9.8% of the participants were moderately satisfied with their ability to make their own choices about their day to day life, 29.6 they were mostly satisfied with their ability to make their own choices about their day to day life and 45.4% they were completely satisfied with the ability to make their own choices about their day to day life. 79.2% indicated they make their big decision in their life where 12% of the participants indicated that they moderately make their big decision in their life, 22.3% they were mostly feel control their life and 49.2% they were completely feel are control their life, and 77.8 they feel are control their life where 19% of the participants were moderately feel control their life, 27.2% they were mostly feel control their life and 40.5% they were completely feel control their life. These results indicated people with amputations felt they largely exercised autonomy freely which was a positive result.

Table (4.43) Distribution of study participant according to autonomy in their daily life

Items	Not at all		A Little		Moderately		Mostly		Completely		Weighted Mean %
	No	%	No	%	No	%	No	%	No	%	
Control (you feel in charge of your life)	20	5.4	29	7.9	70	19.0	100	27.2	149	40.5	77.80
Choice (you make your own choices about your day-to-day life. Ex: where to go, what to do, what to eat.	27	7.3	29	7.9	36	9.8	109	29.6	167	45.4	79.60
Autonomy (you get to make the big decisions in your life- ex: like deciding where to live, or who to live with, how to spend your money.	31	8.4	30	8.2	44	12.0	82	22.3	181	49.2	79.20
Weight mean % = 78.80 , MD = 76.76, SD= 12.86											

Social inclusion

As shown in Table (4.44), participants expressed their satisfaction with social inclusion. It was indicated by the general mean percentage of 76.28% with (SD 15.41).

The higher weighted mean percentage 83.4% was reported to their satisfaction with people's respect them as a person where 38.8% of the participants were mostly satisfied with people's respect them as a person and 42.6% they were completely satisfied with people's respect them as a person, and the lowest level of satisfaction on the inclusion things was reported on satisfied with their chances to be involved in local activities with a weighted mean of 70.2%% Where 6.3% they did not feel satisfied at all with their involvement in local activities and 17.7% they were a little satisfied with their involved in local activities

As well, the results reflect that the majority of the participants expressed their satisfaction with their ability to communicate with other people (81.60%) where 31.5% of participants indicated they were mostly satisfied with their ability to communicate with other people and 42.9% they were completely satisfied with their ability to communicate with other people, other people accepted them (82.8%) whereas 1.9% of participants did not at all feel that other people accepted them and 3.3% they had little feeling that other people accepted them. The majority of the participants felt their chances to contribute in social activities (68%) whereas 6.3% of participants felt they were not satisfied at all with their chances to contribute in social activities and 19.8% were a little satisfied with their chances to be contributed in social activities. For personal potential with a mean of 71.8% where 6.3% of participants felt they were not satisfied at all with their personal potential and 12.5% were a little satisfied with their personal potential and 21% were they moderately satisfied at all with their personal potential; which is linked with our quantitative finding that 56.9% of the participants were working, and after amputation, the percentage has decreased to 11.6%. This result as well is explained by the complex economic problem experienced by people with amputation because of their disability and their inability to find work.

Table (4.44): Distribution of study participant according to social inclusion as in the WHOQOL- DIS

Items	Not at all		A Little		Moderately		Mostly		Completely		Weighted Mean %
	No	%	No	%	No	%	No	%	No	%	
Communication ability	9	1.6	21	5.7	67	5.7	116	31.5	158	42.9	81.60
Social acceptance	7	1.9	12	3.3	60	16.3	132	36.0	156	42.5	82.80
Respect	3	0.8	19	5.2	46	12.6	142	38.8	156	42.6	83.40
involved in local activities (ex: meeting friends, going out for a meal, going to a party etc)	23	6.3	65	17.7	70	19.1	119	32.4	90	24.5	70.20
Social inclusion and contribution (ex: being part of what is happening in your local area or neighborhood.	23	6.3	73	19.8	82	22.3	112	30.4	78	21.2	68.00
Personal potential (you feel that your dreams, hopes and wishes will happen)	23	6.3	46	12.5	77	21.0	133	36.2	88	24.0	71.80
Weight mean %= 76.28, MD = 76.77, SD= 15.41											

To conclude, the amputee in GG is affected by many of the daily difficulties and obstacles that affect the quality of the amputee's lives. The surrounding community, as well as the amputee himself, have many responsibilities to overcome these obstacles, but from the point of view of the study participants, the society was not fair enough to them, as indicated by the study results. As shown in Table (4.45), despite what the study results showed that people with amputation were exposed to exposure to a high rate of discrimination where the overall average of discrimination they are subjected to was 49.84%, but these people bear a high responsibility towards themselves as the overall average of autonomy domain was 78.8%; that was perhaps the thing that helped them to be included into society as indicated by the mean of inclusion of 76.28%.This is what drives officials and stakeholders to direct their efforts and strategic plans towards society and work with to improve the quality of people's lives. That was in keeping with the social

model of disability is socially constructed and in which challenges are made to the physical, attitudinal, communication and social environment to accommodate impairments, as disability is an expected incident of human diversity. (PWDA, 2020).

Table (4.45) Distribution of study participant according to disable quality of life per the WHOQOL- DIS

	Items	Mean	Median	SD
1.	**Discrimination**	49.84	46.67	17.77
2.	**Autonomy in their daily life**	78.80	76.67	12.86
3.	**Social inclusion**	76.28	76.67	15.42
	Overall	69.17	70.77	8.78

Correlation between quality of life and age and gender

As shown in Table (4.46), to assess the relation between the quality of life domains and age groups of participants, the researcher used Pearson's correlation.

The results of Person's correlation test between physical domain and age has revealed that there was a weak negative correlation between total score of physical domain and age. As the age increases, the quality of physical status decreases ($r = - 0.203$, $P = 0.001$).

The results of Person's correlation test between social domain and age has revealed that there was a weak negative correlation between total score of social and age. As the age increases, the quality of social status decreases ($r = - 0. 127$, $P = 0.020$).

However, the correlation test reflected no relation between psychological and environment with participants age.

Table (4.46): Correlation between quality of life domains and age

Items	Age	
Physical Health	**r**	**Sig.**
	-0.203	0.001*
Psychological Health	0.080	0.136
Social Relationships	- 0.127	0.020*
Environment	-0.074	0.178

r= Pearson's correlation coefficient (* signifies significance <0.05)

An independent sample t-test was used to explore the relationship between quality of life domains and participants gender. As demonstrated in Table (4.47), he tests have revealed that there were statistically significant differences between gender and social domain, with (t = 2.843, P value = 0.005).

Table (4.47) Distribution of study participants according to WHOQOL- DIS **domains and gender**

Items	No.	Mean	SD	T-value	Sig.
Physical Health					
Male	272	67.37	9.81	1.553	0.121
Female	69	65.18	12.88		
Psychological Health					
Male	273	72.71	10.61	1.857	0.064
Female	76	70.09	11.84		
Social Relationships					
Male	272	76.25	14.91	2.843	0.005*
Female	66	70.30	16.59		
Environment					
Male	265	64.47	13.39	1.878	0.061
Female	69	61.01	14.48		

(* signifies significance <0.05)

4.3 Results from the Qualitative Study

The qualitative data explored the quality of amputee rehabilitation services, including accessibility and affordability of the services, infrastructure of the rehabilitation centers, and client satisfaction with the provided services from providers' perceptions. The results are presented according to the main themes that answered the objective of this study. Quotations from participants are included throughout this part; those quotations are presented in italics style.

This part presents results from three focus group discussions; with healthcare and amputee rehabilitation providers from ALPC and MoH. All focus groups participants have at least five years' experiences in the provision of rehabilitation services to people with amputation, this explains why the focus group discussions did not include providers from Hamad's hospital.

Also, this part showed that the result of in-depth interviews with eight key informants; namely the Orthopedic consultants at ALPC, the Head of Disability Networking, the Head of Al Basma Club, the Director of ALPC, Director of Hamad Hospital, Director of Physiotherapy department at MoH, Head of Wheelchair basketball federation and the Head of Prosthetic and Orthotic workshop at the ALPC. The data presented in this part are based on the participants' expressed views and perceptions.

4.3.1 Demographic information on participants

Thirty service providers (12 women and 18 men) from the study settings have participated in the focus group discussions. Half of the participants (15 persons) were from the Gaza Governorate, eight were from the Gaza North Governorate, five were from the Der Al Balah Governorate, and two from Khan Younis Governorate. The average age of participants was 35 years.

All of the eight key informants are male. Of them, five were from Gaza Governorate, two from the Gaza North Governorate, and one were from the Der Al Balah Governorate. The average age of participants was 43 years.

4.3.2 Themes

Themes specifically related to the study were identified during the analysis and represent areas of importance to the study. Different views were expressed by participants within each theme.

Theme 1: Amputee rehabilitation services provision and interaction among them:

The findings of the focus group discussions and in-depth interviews have revealed that the physical rehabilitation, in general, was delivered and administered by INGOs and NGOs who still need to enhance the currently limited coordination with the MoH and among themselves. A male 45 years old physiotherapist stated that " *You feel that each institution is working in the field of physical rehabilitation independently, like in an independent country that has no relationship with others".*

<u>Amputee rehabilitation services provisions:</u>

Regarding the prosthetic manufacturing & amputee rehabilitation, as mentioned by the Director of ALPC, the ALPC was established in 1976. Since then, the Municipality of Gaza supervises the provision of ALPC services (ICRC PRP partner in supporting the ALPC since 2007). In general, the ALPC center provides orthotic and prosthetic services, which is the only disability-related activity the municipality of Gaza is involved in. The medical consultant at the ALPC who has been worked in the center for more than 35 years stated that " *During the past ten years, there has been a noticeable development in the services provided through the center for people with amputation, through the good cooperation between the center and some local and external partners*".

On the other hand, recently, a new amputee rehabilitation department at Hamad Hospital was established in 2019, the General Director of Hamad Hospital stated that *" We are planning/have started to provide high quality of rehabilitation services that will support people with amputations, thus, increase the quality of their daily life activities"*.

Cooperation and coordination between the ALPC and Hamad Hospital was effectively established (Memorandum of Understanding was signed between them in 2019) to ensure the provision of services in a coordinated manner, without duplication of services, as

General Director of Hamad Hospital stated, *" We are here to complement each other, not to compete and that we need to share information to avoid the duplication of services."*

Theme 2: Accessibility and affordability of Amputee rehabilitation services

The findings of focus group discussions and in-depth interviews revealed that the accessibility for prosthetic services was relatively good across the Gaza Strip. The director of the ALPC stated that "*We try to overcome almost all accessibility concerns such as gender, transportation costs, lack of information, etc)*". As measures taken by the ALPC management to support an inclusive and accessible environment for women and children, two female bench-workers have received a three years training in P&O in India. It is worth mentioning that 40% of the physiotherapists are females, this percentage reflects the organizational commitment to gender equity, even though the number of females with amputations compromises 18.7% of the total.

In addition to the ALPC, Hamad Hospital provides P&O services which provided amputees with higher technological options than ALPC . Although the services of the prosthesis and orthosis are available in the Gaza Strip, it still needed some development, especially in the field of the upper artificial limbs (the limited features in the production of upper artificial limbs, which are only for cosmetic or small mechanical movement in the hand) , which force some amputees to try to get opportunities to leave Gaza and obtain services from Bethlehem Arab Society for Rehabilitation or outside the country despite the severe restrictions imposed on the movement of Gaza's people and the financial and emotional burden associated with such options.

<u>Affordability</u>

The findings of focus group discussions revealed that some of the amputees have cost implications while some patients cannot afford the transportation cost to reach rehabilitation services although the technical coordinator at ALPC stated that *"In recent years, this problem has been solved by covering the transportation cost for poor amputees from a generous fund from the ICRC".*

The ALPC covers the transportation cost only for clients from poor socioeconomic class only for 10 sessions. The transportation cost is covered by external donors, without a foreseen sustainability. Additionally, clients utilizing Hamad's hospital services cover their

transportation cost. According to a key informant, even though ALPC provides the prosthesis free of charge, clients might prefer not to receive the prosthesis as they cannot afford the transportation cost to attend the training sessions before fitting the prosthesis.

Privacy

Regarding amputees' privacy during treatment sessions and gait training rehabilitation exercises, it was noted that the ALPC takes into account all possible measures to maintain and respect the amputees' privacy. A 41 years old female physiotherapist stated that *"The center is divided in a way that maintains privacy as much as possible, and the presence of curtains and special treatments room for female in the place helps in this*".

Likewise, Hamad Hospital has sufficient space and good design, in which patients were given privacy.

The researcher shows that privacy is a crucial factor during examination and treatment. So, the therapists pay more attention to insure the patients and give him/her adequate privacy and treat him/her as human being according to Islamic values.

Availability of equipment, tools, and materials

The ALPC has good equipment, tools, and materials that meet the needs of the center. Interestingly, a 58 years old male technician stated, " *We have some machines that are over thirty years old, but they work well and are better than some modern machines".*

On the other hand, Hamad Hospital was equipped with the latest and modern equipment. A one key informant of Hamad Hospital said that " *The hospital's prosthetics department is equipped with the most modern and advanced equipments*".

Despite the availability of materials, it is not easy to have all needed materials needed to manufacture artificial limbs, due to the ongoing blockade imposed on Gaza for more than 14 years, in which the Israeli side prohibits the entry of more than 24 items of materials used in the manufacture of artificial limbs such as chemicals, hardening and carbon sheets. However, the ICRC intervention and its assistance to the ALPC to obtain these materials made it easy for the center to produce the artificial limbs. The ALPC director stated that *"The ICRC purchases and coordinates entry of these materials into the Gaza Strip through long and complicated mechanisms, which sometimes takes a long time, thus leads to a delay in the manufacturing and producing artificial limbs".*

Theme 3: Responsiveness to non-health needs

Regarding the ALPC, the qualitative results revealed that the workshop area was acceptable but needed to be expanded especially the modification area (process of manipulating plaster or foam into a desired shape by alteration to volume and shape of the positive cast) and molding room, due to the increase in the number of technicians in the place. A 30 years old female technician stated *"I don't feel comfortable during the work inside the modification room because the limited space inside the room which restricts my movement, especially when there are more than one colleague working inside the same room at the same time, which certainly affects work and production, this is because we have to wait sometime for some of us to finish working in the modification room so that we can do our work after them, which delays the process of production somehow"*.

Concerning the patient waiting area, the results have indicated that the waiting area of the ALPC is suitable to the clients as it has been newly expanded and furnished with suitable furniture.

It is worth mentioning that, all service providers expressed their satisfaction with the all necessary services at ALPC and Hamad Hospital like availability of safe drinking water, cleanliness of the toilets, etc.

Theme 4: Role of administration in supporting the working cadre

The MoH-PRU has an important role in providing oversight of physiotherapy services within MoH structures. This unit aims to improve the quality of service within the rehabilitation sector by placing policies for employees in the field of physical rehabilitation and improving general physiotherapy services provided within MoH structures. Self-initiated improvement limited due to a lack of financial resources for the departments, the head of the physiotherapy department at Shifa hospital said that "*We have limited financial resources and the available other logistic materials' resources, however we do our best efforts to provide the services*". The physical therapy providers at MoH, in total, the MoH in the Gaza strip employs 128 physiotherapists and physiotherapy assistant, attributed their dissatisfaction to the limited learning opportunities, low salary, and incentives, almost all service providers at MoH physiotherapy department agreed with the statement that *"We work with all our energy, but we only receive a small portion of our salaries due to the financial hardship the government is going through, in addition to our inability to*

participate in external conferences and advanced educational courses abroad due to the closure of crossings."

Concerning the Role of ALPC administration in supporting the provided physical rehabilitation for amputees, focus group discussions revealed that the ALPC in partnership with the ICRC PRP provided the support to ALPC to covers most areas of the organisation including technical support to specific P&O, PT and MHPSS services as well as logistics, management support, materials, training and education and improvement of processes.

Additionally, the in-depth interview with the General Director of Hamad Hospital agreed that they provide the desirable management support for all the team, as he said, "*We try to motivate our staff all the time, we share them the success stories, and the important thing that we do for our staff is the continues support we provide all the time*".

Availability of sufficient number of Prosthetic and Orthotic specialist.

Regarding the availability of sufficient number of Prosthetic technician in the GS, the qualitative results indicated that there was a sufficient number of P&O technicians, the director of ALPC stated that, "*We have enough number of technicians, we have 10 prosthetic and orthotic CAT-II technologists finished their training and study (8 full P&O and 2 prosthetic discipline)* ".

Theme 5: Providers perception on quality of services and satisfaction with the current rehabilitation services

Concerning the quality of the provided physical rehabilitation for amputees, focus group discussions revealed that the quality of the provided services ranges from moderate to good. Service providers at ALPC expressed that the quality of PR services at ALPC is good with ICRC PRP follow up and support.

A 34 years old male prosthetic technician stated, *" I have received training abroad and also visited many centers, but when I compare our center with them, I can tell our center is one of the most advanced centers in term of quality and system".*

The head of Physiotherapy department at ALPC stated that, *"physiotherapy services has shown good quality, it assessed by using Physiotherapy standard tools, the gap analysis tool as well as situation analysis tool with some identified gaps which has then led the*

team to put it together into action plan which is closely supported by ICRC as well as the management of the ALPC".

It is worth mentioning that all focus group discussions with service providers have expressed a moderate to low level of satisfaction with the quality of the amputees' rehabilitation services provided by physiotherapy departments at hospitals, outpatient rehabilitation centers, and outreach rehabilitation programs. Generally, the main reasons for their dissatisfaction are the shortage in human resources compared to the number of cases at MoH physiotherapy departments, small areas of physical therapy departments, limited training supports, and limited financial and logistical supports. As well as the main challenge at INGOs and NGOs was the short period of projects which affects the sustainability of the physical rehabilitation programs.

Waiting time

With regard to waiting time at the ALPC, most of the service providers expressed satisfaction with waiting time (15 minutes on average) even if the waiting time is longer, which happens in frequently (especially when the number of amputees increased suddenly due to the GRM. It is interesting to mention that some clients prefer to spend longer time at the center to get a chance to meet and socialize with their fellows. A 38 years old female psychologist stated, *" some client asks us to let them to stay longer time at the ALPC to talk with each other; this is good for social communication".*

Education material

Regarding amputee education material, almost all focus group discussions revealed that the amputees were satisfied with the available rehabilitation education materials, almost all the ALPC beneficiaries have received amputee rehabilitation education material. As well as service providers of focus groups discussions indicated that they orally instruct their clients and provide them with health education material.

Used of guideline and protocols

Service providers at ALPC indicated that they did not have written protocols in the amputee rehabilitation departments. In certain areas of rehabilitation, the team depends on their experience and guidelines that they have developed, the director of the ALPC stated "*We do not have written protocols. We have tried together with the MoH particularly the*

Unit of Physiotherapy and Rehabilitation to develop treatment protocols, but this has not yet been done". It is interesting to note that, the interviewed staff indicated that they would like to have treatment protocols to guide their performance, and they were looking to develop protocols.

On the contrary with Hamad Hospital, the General Director of Hamad Hospital stated that*" We have our protocols and guidelines which were linked with the hospital in Qatar, as well as we have quality check system".*

National Amputee rehabilitation protocols

The national treatment protocols were unavailable and in ALPC and Hamad Hospital used another protocol. In-depth interviews revealed that a committee was established last year 2019 which included the MoH, ICRC, ALPC and Hamad Hospital who drafted ‘’Clinical Guidelines for the Physical Therapy Management of Adults with Lower Limb Amputations’’, the guidelines draft consisted of eight chapters, which was also disseminated during the 2009 Rehabilitation conference in Gaza. Most participants were looking forward to this committee complete its work and that the developed guidelines applied. An inconsistent point of view expressed by a few participants about the effectiveness of such committee and the application of the guidelines A 35 years’ female physiotherapist stated that*" I am not optimistic about this committee because it is usually these committees are often held without benefit and without completing their work, and even when their work is done, it remains in the office of decision-makers waiting for accreditation for a long time".* In contrast, both directors of ALPC and the director of Hamad Hospital considered that committee was a good step in organizing the provision of amputee rehabilitation services in the highest coordination and quality by service providers, and hence they were willing to provide the help and support required to accomplish, succeed and activate that work.

It is interesting to note that, the interviewed staff indicated that they like to have treatment protocols to guide their performance as they always expressed interest to the MoH to develop national protocol.

Theme 6: Effects of amputee's rehabilitation services utilization

According to service providers, amputee rehabilitation has positively impacted amputee health and improved their physical functioning, overall well-being, and their quality of life.

That was demonstrated by what the service providers stated through the focus group discussion and in-depth interviews. An indicative comment was, "*the provided rehabilitation services improved the amputees' physical ability and function, reduced pain, and improved the physical look and fitness*". These benefits help the amputees to improve their psychological status and strengthen their personality. A 30 years old male stated that "*When we see a new amputee, s/he considered that their life had stopped, but when they started using a prosthesis and performing exercise, like playing wheelchair basketball, they became more motivated, have friends and they do not feel any kind of disability*".

According to the Orthopedic consultant at ALPC, it was a clear decrease of the number of the new amputee who comes to the ALPC with complications such as joint stiffness or muscle weakness, which indicated that the improvement in the amputee rehabilitation done during hospitalization period and when the amputee gets discharged from the hospital before s/he starts in the utilizing ALPC services.

Concerning amputee people, integration through sports activities which was considered as a cornerstone of social inclusion, focus group discussions revealed that good achievements were successful at empowering and integrating amputees through sports activities (wheelchair basketball and amputee football). A Head of Wheelchair basketball federation stated, "*As a result of the activities carried out in 2019 by PPC 275 people with disabilities were successfully empowered and integrated through sports activities (wheelchair basketball and amputee football) and 100 through micro-initiative projects* ".Additionally, the Head of Al Basma Club stated that" *one of the important achievement and for the first time that the wheelchair Basketball Gaza team (17 people) succeed to leave Gaza and participated in the 2nd edition of the Hanna Lahoud International Wheelchair Basketball Cup 2019 in Lebanon*".

Conclusion

To conclude, the findings presented in this chapter confirmed that various rehabilitation services were offered to amputees by several different providers in the Gaza Strip (NGOs, INGOs, MoH, and privet sectors) which cover all the phases of amputee rehabilitation. Although the results of the study showed that those services were provided with a good level of medical quality, they reflected that these services need to be developed and improved in some aspects.

Despite the results of the study, which indicates the weakness of the communication mechanisms between the rehabilitation service providers, the cooperation between the ALPC and Hamad Hospital represents a hopeful hub in establishing a communication bridge between all providers of that type of services.

The study results indicated good access to amputee rehabilitation services with some minor obstacles such as the inability of some poor amputees to bear the costs of transportation in addition to the lack of some upper prosthesis with specialized functions and the lack of some features in the lower prosthesis.

The centers that provide P&O have an acceptable privacy for their beneficiaries, in addition to the availability of other logistic and non-health needs, in addition to the availability of the necessary equipment to manufacture the artificial limb.

Moreover, there were a sufficient number of rehabilitation and P&O services providers available, from the qualitative study the researcher interpreted that every service provider has ways to perform the service without a written specific protocol. Management has an important role, and although there was some disagreement it should be aware that the written specific national guideline, protocol and implementation was the best way to evaluate healthcare providers' activity and the amputee rehabilitation improvement.

In view of the large needs of the field of rehabilitation and in order to improve the rehabilitation services, the limited coordination between the Ministry of Health and its rehabilitation departments and other rehabilitation departments; the researcher recommends that the Ministry of Health should be more proactive, address and play its role in that issue.

Finally, the results reflected that there were good general satisfaction and positive perceptions about amputee rehabilitation in GG. Despite that, to improve satisfaction about

amputee rehabilitation, the researcher recommends that healthcare providers need to invest more in teaching patients, continue capacity building for the rehabilitation providers and enhance the multidisciplinary team approach in amputee rehabilitation.

Chapter Five

Conclusion and recommendation

5.1 Conclusion

Gaza has experienced four major wars over the past 12 years; also the Great Return March Demonstrations; which resulted in a total 466 lower and upper limb amputations. As well as the general deterioration of the situation in the GG which is considered as a developing and conflict zone weakened the general health situation which contributed to increased numbers of people experiencing health problems and complications such as vascular complications, which were the second major contributors to amputations in GG, mainly from uncontrolled Diabetes Mellitus. Evaluation of amputee rehabilitation services was very important to promote health in general and enhance the mobility and functionality to people with amputation to make sure that services were provided effectively and efficiently.

This study was carried out for evaluating the amputee rehabilitation services in Gaza Governorates. In addition, the methods of that study followed a mixed-method cross-sectional approach. The quantitative component was administered on a randomly selected 370 people with amputation completed an interviewed questionnaire, with a response rate of 100%. Also, qualitative data collected through eight in-depth individual interviews and 3 focus group discussions with healthcare and rehabilitation providers. Quantitative data were analyzed using the SPSS software and the qualitative data were analyzed using the open coding thematic technique. The reliability test was very high.

The main results indicate that the main cause of amputations was conflict-related and the second major cause of lower-limb amputations in GG was uncontrolled Diabetes Mellitus. More than half of the study participants were having been hospitalized before the amputation (58.1%), while about 41.9% of the study participants didn't hospitalize before amputation, which where they lost their limbs in the place of injured or accident. The mean hospitalization period after the amputation was 26.54 days, all of them received medical care at the period of hospitalization, 45.70% received physiotherapy and 24.1% received psychological support during the same period.

After discharge from the hospital, more than two-thirds of study participants were referred to another health provider to continue and/or to start their rehabilitation program. The

study found that most of the participants received rehabilitation services at more than one place, which they received physiotherapy, psychological support, occupational therapy and medical care (73.2%), (40%), (16.2), and (3%) respectively. These results didn't match the clinical guidelines & standard in terms of covering and providing rehabilitation services to all amputees' Post – Amputation (after discharge from the hospital). However, most participants expressed satisfaction with post-amputation services. It was reflected by the weighted mean percentage of 83.54%.

Regarding the service provided by the ALPC, the most common referral pathway to ALPC was through a personal connection. The study revealed that there was limited coordination between rehabilitation service providers (INGOs and NGOs) and MoH as well as among themselves. Prosthetic services offered by ALPC have a good quality, that was indicated by the weighted mean of patients' satisfaction with all domains included in that study (86.62%). Most of the study participants (87.24%) expressed their satisfaction with the rehabilitation services provided by ALPC.

Moreover, the finding of the prosthesis evaluation which measured different domains regarding the responded of the study participants according to prosthesis Usefulness / Utility, Residual Limb Health, appearance, sound, ambulation, transfer, Perceived Response, frustration, Social Burden and overall Well-being with overall mean (6.17), (6.21),(6.48), (6.18), (5.65), (6.64), (8.19),(5.79), (7.62), (7.06) respectively.

Finally, the amputee is affected by many of the daily difficulties and obstacles that affect the quality of the amputee's lives. The surrounding community, as well as the amputee himself, have many responsibilities to overcome these obstacles, but from the point of view of the study participants, the society was not fair enough to them, as indicated by the study results. the measures of QoL for people with amputations showed that the overall mean for the different domains affect the QoL which were physical health, psychological health, social relationships, environment, discrimination, autonomy, and inclusion (66,93%), (72.14%), (75.1%), (63.76%), (49.48%), (78.8%), (76.28%) respectively.

In conclusion their study showed that almost good effectiveness and good satisfaction among amputee's rehabilitation services in GG; However, there was a room for further improvements in the interaction and dynamics across the providers of the phases of amputee rehabilitation services and referral pathway.

5.2 Recommendations

Based on the study results, analysis, and conclusions, the Researcher suggests the following recommendations: The study highlighted important findings that worth to be studied properly and responded by the different levels of decision-makers and management of the healthcare, rehabilitation, education, and social development sectors. The Researcher strongly recommends that the uptake of the study be considered in the future important improvement initiatives.

1. PwDs are not receiving comprehensive services by service providers, thus service provided need to adapt to meet the need of PwDs, including health and education services.
2. PwDs need to be financially supported to meet their basic life needs, as well as to meet the increase in their demand for services due to disability. The current financial support is not enough cover their basic needs of education, health, and transportation services.
3. Social inclusion of PwDs is a must. This could be done though investigating more efforts and allocating financial resources to organizations and ministries that have programmes to socially include PwDs.
4. More efforts need to be exerted to implement the legal framework Law No.4 (1999), which highlights the rights of PwDs to have work and upholds the rights of the PwDs based on equity principles.
5. All amputees should receive occupational therapy in order to prepare and integrate PwDs into the labour market.
6. Provision of structured psychosocial services to PwDs should be a core part of any rehabilitation program, with involvement of PwDs families
7. As part of responsiveness of services provided, amputees and their families should be actively engaged in the treatment and rehabilitation plan developed for them.
8. It is important to enhance the role of the Unit of physical therapy and rehabilitation MoH by playing the role of evaluation and monitoring the quality and slandered of rehabilitation provided by deferent sectors and organizations.
9. There is a need to develop national amputee rehabilitation treatment protocol and guidelines. This should be done with the involvement of the main service providers

10. It is important to conducting refresher training (on the job training program) or encourages continuous educational training programs of the medical staff who work in the amputee rehabilitation multidisciplinary team in order to improve their skills and make them more professional and more competent.
11. Investment in health promotion programmes to prevent and control NCDs are highly needed in order to reduce the chances of amputations due to such diseases
12. A national database that includes all the necessary information about PwDs, including amputees needs to be developed.
13. It is important to include the amputee rehabilitation topic in the curriculum of the related college as physiotherapy, social works, occupational therapy, nursing, and the psychosocial and mental health colleges. to improve the skill of fresh graduates and make them more professional and more competent.

5.3 Recommendations for further research

1. There is a need to conduct additional studies to explore the appropriateness of amputee rehabilitation providers' departments (in-patient and out-patient) at all governmental hospitals and NGOs that provide amputee rehabilitation services.
2. Conducting research studies using qualitative and quantitative methods to deeply explore providers' perspective with regard to available amputee rehabilitation services is also needed.
3. There is a need to conduct research studies to assess the amputee rehabilitation providers' satisfaction in the GG.
4. Study the effect of the quality of care on the outcome results of amputee rehabilitation satisfaction.
5. There is a need to conduct mixed methods research studies to accessibility of services for people with disabilities, including education, work, and health services.
6. There is also a dire need to conduct studies to assess the overall psychological status of people with prosthesis.
7. There is a need to conduct evaluation studies to assess the effectiveness of different amputee rehabilitation programs provided in the GG.

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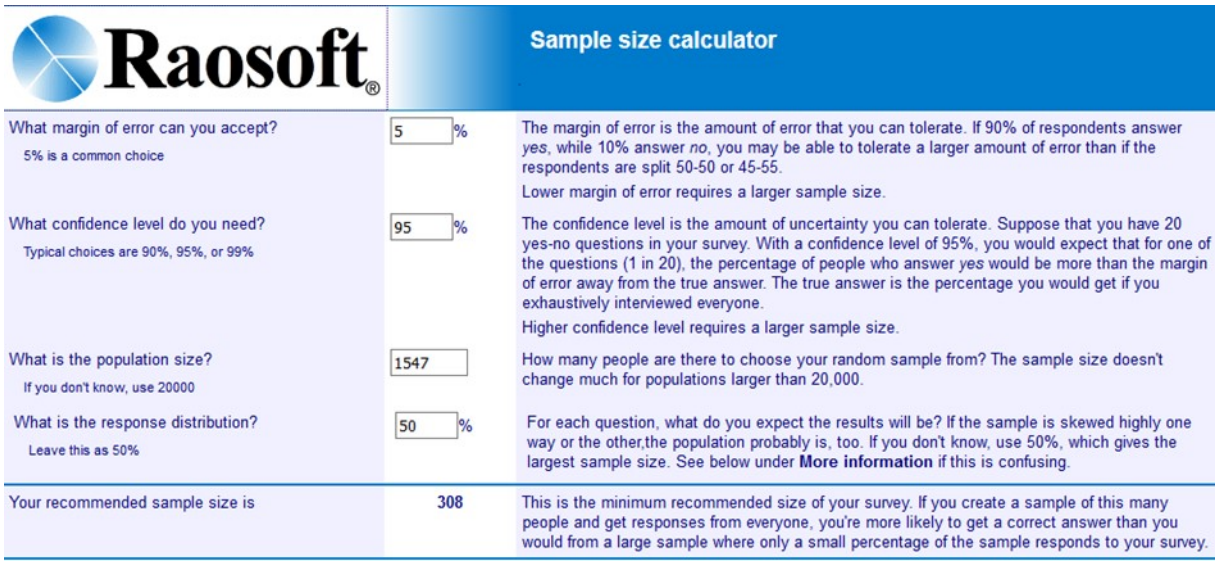
Annexes

Annex (1): Map of Palestine

Annex (2): Map of Gaza Governorates

http://www.jbcnews.net/mobile/article/126917

Annexes (3): Online sample size calculator



Raosoft®

Sample size calculator

What margin of error can you accept? 5% is a common choice	5 %	The margin of error is the amount of error that you can tolerate. If 90% of respondents answer *yes*, while 10% answer *no*, you may be able to tolerate a larger amount of error than if the respondents are split 50-50 or 45-55. Lower margin of error requires a larger sample size.
What confidence level do you need? Typical choices are 90%, 95%, or 99%	95 %	The confidence level is the amount of uncertainty you can tolerate. Suppose that you have 20 yes-no questions in your survey. With a confidence level of 95%, you would expect that for one of the questions (1 in 20), the percentage of people who answer *yes* would be more than the margin of error away from the true answer. The true answer is the percentage you would get if you exhaustively interviewed everyone. Higher confidence level requires a larger sample size.
What is the population size? If you don't know, use 20000	1547	How many people are there to choose your random sample from? The sample size doesn't change much for populations larger than 20,000.
What is the response distribution? Leave this as 50%	50 %	For each question, what do you expect the results will be? If the sample is skewed highly one way or the other,the population probably is, too. If you don't know, use 50%, which gives the largest sample size. See below under **More information** if this is confusing.
Your recommended sample size is	**308**	This is the minimum recommended size of your survey. If you create a sample of this many people and get responses from everyone, you're more likely to get a correct answer than you would from a large sample where only a small percentage of the sample responds to your survey.

Annexes (4): Helsinki Approval

المجلس الفلسطيني للبحث الصحي

Palestinian Health Research Council

تعزيز النظام الصحي الفلسطيني من خلال مأسسة استخدام المعلومات البحثية في صنع القرار

Developing the Palestinian health system through institutionalizing the use of information in decision making

Helsinki Committee

For Ethical Approval

Date: 2019/06/17 **Number:** PHRC/HC/580/19

Name: Ahmed Haider Mohammed Mousa الاسم:

We would like to inform you that the committee had discussed the proposal of your study about: نفيدكم علماً بأن اللجنة قد ناقشت مقترح دراستكم حول:

Evaluation of Amputee Rehabilitation Services in Gaza Governorates: Mixed Method Approach

The committee has decided to approve the above mentioned research. Approval number PHRC/HC/580/19 in its meeting on 2019/06/17 و قد قررت الموافقة على البحث المذكور عاليه بالرقم والتاريخ المذكوران عاليه

Dr. Yehia Abed

Signature

Member **Member**

17 06 2019

Chairman

Dr. Asad 6 2019

Genral Conditions:-

1. Valid for 2 years from the date of approval.
2. It is necessary to notify the committee of any change in the approved study protocol.
3. The committee appreciates receiving a copy of your final research when completed.

Specific Conditions:-

E-Mail:pal.phrc@gmail.com

Gaza - Palestine غزة - فلسطين

شارع النصر - مفترق العيون

Al-Quds University
Jerusalem
School of Public Health

جامعة القدس
القدس
كلية الصحة العامة

التاريخ:2019/12/18

حضرة الدكتور / محمد صنع الله المحترم
رئيس مجلس إدارة جمعية السلامة الخيرية/قطاع غزة
تحية طيبة وبعد،،،

الموضوع: مساعدة الطالب أحمد موسى

نشكر لكم دعمكم الدائم لمسيرة العلم والتعليم وخصوصاً دعم كلية الصحة العامة وطلابها، ونود أعلامكم بأن الطالب المذكور أعلاه يقوم بعمل بحث كمتطلب للحصول على درجة الماجستير في الصحة العامة-مسار إدارة صحية بعنوان:

"Evaluation of Amputee Rehabitation Services in Gaza Governorates: Mixed Method Approach"

وعليه نرجو من سيادتكم التكرم بالموافقة على تسهيل مهمة الطالب في إنجاز هذا البحث حيث أن الفئه المستهدفة هم الأشخاص ذوي البتر الذين تلقوا خدمات الاطراف الصناعية و التأهيل في جمعيتكم الموقرة حيث سيتم تعبئة استبانه معهم.

و اقبلوا فائق التحية و الاحترام،،،

د. بسام أبو حمد
منسق عام برامج الصحة العامة

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كلية الصحة العامة

التاريخ:2020/2/15

حضرة الدكتور/ رامي العبادلة المحترم
مدير عام تنمية القوى البشرية–وزارة الصحة

تحية طيبة وبعد،،،

الموضوع: مساعدة الطالب أحمد موسى

نشكر لكم دعمكم الدائم لمسيرة العلم والتعليم وخصوصاً دعم كلية الصحة العامة وطلابها، ونود أعلامكم بأن الطالب المذكور أعلاه يقوم بعمل بحث كمتطلب للحصول على درجة الماجستير في الصحة العامة–مسار إدارة صحية بعنوان:

"Evaluation of Amputee Rehabitation Services in Gaza Governorates: Mixed Method Approach"

وعليه نرجو من سيادتكم التكرم بالموافقة على تسهيل مهمة الطالب في إنجاز هذا البحث حيث أن الفئة المستهدفة هم الأشخاص ذوي البتر الذين تلقوا خدمات التأهيل. حيث سيتم إجراء مقابلات مع مقدمي خدمات التأهيل في وزارة الصحة.

و اقبلوا فائق التحية و الاحترام،،،

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Annexes (5): Beneficiaries Questionnaire (English and Arabic version)

Beneficiaries' questionnaire: Face-to- face

Serial number:

Interviewer Name: **Interview data**

Socio-demographic characteristics		
1	Governorate	□ Gaza □ North □ Der Al Balah □ Khan Younis □ Rafah
2	Gender	□ Male □ Female
3	Age in Years	…… Years
4	Total household family members	----------Members
5	Do you live in a	□ Nuclear family □ Extended family
6	Your house is made of	□ Concrete □ Asbestosis □ Other, indicate……..
7	Your house is	□ Owned □ Rented □ Other / specify:
8	Kind of house where family live in	□ Villa □ House □ Apartment □ Separate Room □Tent □ Slum □ Other / specify……..
9	What is the number of rooms in your home?	---------- rooms
10	Is your home adapted to meet your needs?	□ Yes □ No
11	If No, specify your need	……..
12	What is your marital status at the time of amputation?	□ Single □ Married □ Divorced □ Widow □ Separated
13	What is your current marital status?	□ Single □ Married □ Divorced □ Widow □ Separated
14	What was your work before the amputation?	□ Unemployed □ Professional (physician, lawyer, accountant, chemists) □ Managerial (manager, headmaster, teacher) □ Marcher □ Skilled worker (chief worker, chief, grocer, printer) □ Partly skilled (telephone worker, fruit worker) □ Unskilled worker (cleaner)

		□ Housewife
15	Have you changed your work after amputation?	□ Yes □ No □ Not working any more
16	If yes, what is your current work?	□ Professional (physician, lawyer, accountant, chemists) □ Managerial (manager, headmaster, teacher) □ Marcher □ Skilled worker (chief worker, chief, grocer, printer) □ Partly skilled (telephone worker, fruit worker) □ Unskilled worker (cleaner) □ Housewife
17	Years of schooling	……. Years
18	Family Monthly Income (all sources by)	…….. NIS
Past medical history		
19	Do you have any health problems other than the amputation?	□ Yes □ No
20	If Yes, please specify?	□ Hypertension □ Diabetes Mellitus □ Renal disease □ Respiratory disease □ Cancer □ Atherosclerosis □ Others, please specify……..
21	Do you smoke cigarettes?	□ Yes □ No
22	If yes, number of daily cigarettes?	……...cigarettes
23	Do you have any other disabilities (apart from amputation)?	□ Yes □ No
24	If Yes, please specify?	…… ….
Amputation-related data		
Pre - Amputation-related data		
25	Have you been hospitalization before the last amputation?	□ Yes □ No
26	If yes, how many days have you been hospitalization before amputation?	……Days
27	If yes, at which hospital?	□ Kamal Edwan Hospital □ Al Shifa Hospital □ Al Aqsa Hospital □ Nasir Hospital □ EGH □ Al Najar Hospital □ Outside Gaza Strip □ Others, specify …… ……

28	If yes, what type of rehabilitation services did you receive during your hospitalization, before the amputation?	□ Physiotherapy □ Psychological therapy □ Medical care □ Others, please specify	
Post – Amputation (hospitalization period) -related data			
29	Date of amputation?	…./…../…….	
30	Where was the amputation done? The last amputation, if more than once	□ Kamal Edwan Hospital □ Al Shifa Hospital □ Al Aqsa Hospital □ Naser Hospital □ EGH □ Al Najar Hospital □ Outside Gaza Strip □ Others, specify…… ……..	
31	What was the cause of amputation? The last amputation, if more than once	**Traumatic reasons** □ Conflict related (wars and escalation) □ Great Return of March □ Work accident □ Road traffic accident □ Domestic accident □ Other, specify…… **Non-traumatic reasons** □ Complications of burn □ Congenital malformation □ Vascular disease such as DM □ Infection □ Other, specify……	
32	Level and side of amputation:		
	Upper Limb	**Right Side** □ Shoulder Disarticulation □ Trans Humeral □ Elbow Disarticulation □ Trans Radial □ Wrist Disarticulation □ Partial Hand	**Left Side** □ Shoulder Disarticulation □ Trans Humeral □ Elbow Disarticulation □ Trans Radial □ Wrist Disarticulation □ Partial Hand
	Lower Limb	□ Hemipelvectomy □ Hip Disarticulation □ Trans Femoral □ Trans Condylar □ Knee Disarticulation □ Trans Tibial	□ Hemipelvectomy □ Hip Disarticulation □ Trans Femoral □ Trans Condylar □ Knee Disarticulation □ Trans Tibial □ Trans Malleolar □ Ankle Disarticulation □ Partial Foot

		□ Trans Malleolar □ Ankle Disarticulation □ Partial Foot	
33	Length of hospitalisation after the amputation?	…… Days	
34	What are the rehabilitation services that you have received during your hospitalization, immediately after the amputation?	□ Physiotherapy □ Psychological therapy □ Medical care □ Other, specify	
Post – Amputation-related data (after discharge from the hospital)			
35	Have you been referred to other health provider to continue or to start your rehabilitation program? (after your discharge from the hospital)	□ Yes □ No	
36	If yes, where have you been referred? (you can select more than one choice)	□ NGOs □ MOH clinic □ UNRWA clinic □ Private clinic □ ALPC □ INGOs □ MSF □ Others……..	
37	What type of rehabilitation services have you received?	□ Physiotherapy □ Yes □ No □ Occupational Therapy □ Yes □ No □ Psychological Therapy □ Yes □ No □ None □Others, specify …… …… …… …… .	
38	If you have received rehabilitation services, please mention the provider, except the ALPC	…….	
39	If you have received physiotherapy, please specify the services you received? (you can select more than one choice, read them all)	□ Hygiene education □ Skin hardening □ Bandaging □ Prevent joint stiffness & contracture □ Mobilisation and/or strengthening exercises □ Stump desensitisation & scar massage □ Aerobic fitness □ Balance training □ Gait training with the given walking aids □ Post fitting gait training □ Functional gait training □Others,specify…… …… ……	
40	How do describe your overall physiotherapy satisfaction about the services you received?	□ Good □ Moderate □ Bad	

41	Do you still need in need physiotherapy support?	□ Yes, to large extent □ Yes, to small extent □ No
42	If you have received occupational therapy, please specify the services you received?? (you can select more than one choice, read them all)	□ Functional activity training such as bed mobility, balance and transfer. □ Active daily living training such as Eating and wearing clothes □ Using suitable assistive / mobility devices such as wheel chair and crutches □ Recommendation for adaptive equipment or modifications to the environment (at home, at work) to maximize your safety □Others,specify…… …… …… ……..
43	How do describe your overall occupational therapy satisfaction about the services you received?	□ Good □ Moderate □ Bad
44	Do you still need in need occupational support?	□ Yes, to large extent □ Yes, to small extent □ No
45	If you received psychological, please specify the services you received? (you can select more than one choice, read them all)	□ Counselling □ Family therapy □ Individual session □ Peer support group □ Referral to more specialized services.
46	How do describe your overall psychological satisfaction about the services you received?	□ Good □ Moderate □ Bad
47	Do you still need in need psychological support?	□ Yes, to large extent □ Yes, to small extent □ No

Perceived Quality and Satisfaction post amputation services, all providers, except ALPC

Note: the term, Rehabilitation, is referred to amputee rehabilitation services provided at different physical rehabilitation providers except the ALPC.

For each of the below statement, please select one of the five options statements:
1= Strongly disagreed 2= Disagree 3= Neutral 4= Agree 5= Strongly agree

From your perspective		1	2	3	4	5
48	The rehabilitation facility was clean					
49	Booking an appointment was easy					
50	Rehabilitation providers were polite and dealt with you in a friendly way					
51	Rehabilitation providers paid attention to you and to the other clients					
52	Rehabilitation providers respect patients appointments					
53	Rehabilitation providers' responded					

	to your questions and concerns in a dignity manner					
54	Rehabilitation providers understand your specific needs					
55	Rehabilitation providers treated all their clients equally					
56	Rehabilitation providers promoted your self-confidence.					
57	Rehabilitation providers made you feel safe and comfortable					
Satisfaction For each of the below statement, please select one of the five options: 1= Strongly dissatisfied, 2= Dissatisfied 3= Neutral 4= Satisfied 5= Strongly satisfied						
How satisfied are you with (degree of satisfaction of)		1	2	3	4	5
58	Making an appointment for follow up visits					
59	Waiting time					
60	The time that the rehabilitation providers spent with you					
61	The services providers' explanations about amputee rehabilitation services					
62	The quality of provided services					
63	Your general satisfaction about the amputee rehabilitation services that have received					
ALPC Service-does the about also include ALPC						
64	From where have you been referred to the ALPC?	□ Governmental Hospital / Clinic □ International NGO □ Local NGO □ Private □ Other, specify……				
65	Number of prostheses received to date from the ALPC services	---------- prostheses				
66	Have you received physiotherapy services in the ALPC?	□ Yes □ No				
67	If you received physiotherapy in the ALPC, please specify services you have received? (you can select more than one choice, read all options)	□ Hygiene education □ Skin hardening □ Bandaging □ Prevent joint stiffness & contracture. □ Mobilisation and/or strengthening exercises □ Stump desensitisation & scar massage. □ Aerobic fitness □ Balance training □ Gait training with the given walking aids □ Post fitting gait training □ Functional gait training □ All that apply				
68	Do you feel that the physiotherapists have spent enough time with you?	□ Yes □ No				

69	What is the number of physiotherapy sessions you received per week?	……sessions				
70	Average time of physiotherapy session	……..…..minutes				
71	Do you have clear schedule for your session appointments?	□ Yes □ No				
72	Did the Physiotherapist commit to your appointments session?	□ Yes □ To some extent □ No				
73	Generally, how many minutes do you wait to receive your PT session from the physiotherapist?	……..…..minutes				
74	How many minutes it generally takes you to receive the PT services? (From the moment you enter the centre until you receive the Pt session)?	……..…..minutes				
75	Have you received psychological services in the ALPC?	□ Yes □ No				
76	If you received psychological in the ALPC what type of services received? (you can select more than one choice)	□ Counselling □ Family intervention □ Individual session □ Peer support group □ Referral to more advance services □ Others, specify				
77	Do you feel that the psychologists have spent enough time with you?	□ Yes □ No				
78	Generally, how many minutes do you wait to receive your session from the Psychologist?	……..…..minutes				
79	How many minutes it generally takes you to receive the Psychological session? (from the moment you enter the centre until you received the PSS session)?	……..…..minutes				
80	How do describe your overall satisfaction about the services you received from ALPC?	□ Good □ Moderate □ Bad				
81	Do you still need of rehabilitation services?	□ Yes, to large extent □ Yes, to small extent □ No				
Patient Perceived Quality and Satisfaction at ALPC						
For each of the below statement, please select one of the five options: 1= Strongly disagreed 2= Disagree 3= Natural 4= Agree 5= Strongly agree						
From your perspective		1	2	3		5
Tangibles						
82	The service providers are well dressed and appear neat					
83	The ALPC is clean					
84	The physical appearance of the ALPC is visually appealing and attractable					

85	The ALPC operating hours are convenient to you					
86	Booking an appointment is easy					
Empathy						
87	ALPC staff is polite and deal with clients in a friendly way					
88	ALPC staff pays attention to their patients					
89	ALPC staff pays attention to the patient's beliefs and emotions					
90	ALPC staff takes into account their clients interest					
91	ALPC staff understands the needs of their patients					
Reliability						
92	ALPC staff respects patients appointments					
93	ALPC staff provides clients with the appropriate timely services					
94	ALPC staff addresses all your concerns					
95	ALPC staff responses to your questions and requests					
Responsiveness						
96	ALPC staff promptly responds to your health needs					
97	ALPC staff promptly responds to your non-health needs					
98	ALPC staff is always willing to help you					
99	ALPC staff understands the specific needs of their clients					
100	ALPC staff is never too busy to respond to your questions					
101	ALPC staff treats all clients equally					
Assurance						
102	ALPC staff promotes your self-confidence					
103	ALPC staff makes you feel safe					
104	ALPC staff is consistently considerate with you					
105	ALPC staff provides you with services that improve the activity of your daily living					
106	ALPC staff provides you with services that alleviate your symptoms					

Satisfaction						
For each of the below statement, please select one of the five options: 1= Strongly dissatisfied 2= Dissatisfied 3= Neutral 4= Satisfied 5= Strongly satisfied						
How satisfied are with		1	2	3	4	5
107	Making appointment for follow up visits					
108	Waiting time					
109	Convenience of the waiting area					
110	Welcoming and greeting of service providers					
111	The time that the ALPC staff spent with you					
112	The ALPC staff explanations about amputee rehabilitation					
113	The ALPC staff respects of your privacy					
114	The way ALPC staff tough you about improving your physical heath					
115	The overall rehabilitation services you received from your providers					
116	The overall performance of ALPC staff					
117	Would you recommend ALPC services to any of your relatives and friends?	□ Yes □ No				
118	If no, please specify why?	……..				
119	Do you intend to continue receiving the services from ALPC?	□ Yes □ No				
120	What would you recommend improving the quality of services provided by ALPC staff	----------				

استبيان المستفيدين: وجهاً , لوجه

الرقم التسلسلي:

اسم الباحث: **تاريخ المقابلة:**

المعلومات الشخصية للمستفيدين		
1	المحافظة	□ غزة □ الشمال □ دير البلح □ خان يونس □ رفح
2	الجنس	□ ذكر □ أنثى
3	العمر (بالسنوات)	.....سنة
4	مجموع أفراد الأسرة	.....فرد
5	هل تعيش في أسرة	□ الأسرة النووية □ الأسرة الممتدة
6	البيت الذي تسكن فيه مصنوع من	□ باطون □ اسبست □ غير ذلك , حدد ....
7	البيت الذي تسكن فيه هو	□ تعود ملكيته لك □ ايجار □ غير ذلك , حدد ....
8	نوع المنزل الذي تعيش فيه العائلة	□ فيلا □ منزل مستقل □ شقة □ غرفة منفصلة □ خيمة □ عشوائيات □ غير ذلك , حدد ....
9	كم عدد الغرف في منزلك؟	.....غرفة
10	هل منزلك موائم لاحتياجاتك	□ نعم □ لا
11	اذا لا, حدد احتياجاتك	....
12	الحالة الاجتماعية قبل البتر؟	□ أعزب □ متزوج □ مطلق □ أرمل □ منفصل
13	الحالة الاجتماعية الحالية؟	□ أعزب □ متزوج □ مطلق □ أرمل □ منفصل
14	طبيعة العمل قبل البتر؟	□ عاطل عن العمل □ جامعي مهني (طبيب ، محام ، محاسب ، كيميائي) □ اداري (مدير، مسؤل) □ عامل ماهر (كبير عمال)

		□ عامل ماهر جزئي (الفكهاني) □ عامل غير ماهر (عامل النظافة) □ ربة منزل
15	هل تغير عملك بعد البتر؟	□ نعم □ لا □ أصبحت لا أعمل
16	اذا نعم ، ماهو عملك الان؟	□ عاطل عن العمل □ جامعي مهني (طبيب ، محام ، محاسب ، كيميائي) □ اداري (مدير، مسؤل) □ عامل ماهر (كبير عمال) □ عامل ماهر جزئي (الفكهاني) □ عامل غير ماهر (عامل النظافة) □ ربة منزل
17	عدد سنوات الدراسة	.....سنة
18	الدخل الشهري للأسرة (مجموع كل مصادر الدخل)	.....شيكل
التاريخ المرضي		
19	هل كنت تعاني من أي مشاكل صحية قبل البتر؟	□ نعم □ لا
20	اذا نعم ، ما هي المشكلة الصحية التي تعاني منها قبل البتر؟	□ ارتفاع ضغط الدم □ مرض السكري □ أمراض الكلى □ أمراض الجهاز التنفسي □ السرطان □ تصلب الشرايين □ غيرها ، يرجى تحديد ....
21	هل تتدخن؟	□ نعم □ لا
22	اذا نعم، أكم سيجارة تدخن في اليوم؟	.....سيجارة
23	هل تعاني من اي اعاقة (غير البتر)؟	□ نعم □ لا
24	اذا نعم، برجاء التحديد؟	....
معلومات متعلقة بالبتر		
معلومات ماقبل اجراء عملية البتر		
25	هل قمت بالمكوث في المستشفى قبل عملية البتر الأخير؟	□ نعم □ لا
26	اذا نعم ، كم يوم مكثت في في المستشفى قبل أن تتم عملية البتر لك؟	.....يوم
27	اذا نعم ، في أي مستشفى؟	□ مستشفى كمال عدوان □ مستشفى الشفاء □ مستشفى القدس □ مستشفى ناصر □ مستشفى غزة الاوروبي □ مستشفى ابو يوسف النجار □ خارج قطاع غزة □ أخرى برجاء التحديد..... .....
28	إذا كانت الإجابة بنعم ، فما نوع خدمات إعادة التأهيل التي تلقيتها أثناء دخولك إلى المستشفى ، قبل البتر؟	□ العلاج الطبيعي □ الدعم النفسي □ الرعاية الطبية □ غيرها ، يرجى التحديد .....

		.....
معلومات بعد اجراء عملية البتر (مرحلة المبيت في المستشفى)		
29	تاريخ اجراء البتر؟	.....
30	أين تمت عملية البتر؟ أخر عملية بتر ، اذا كنت تعرضت لأكثر من عملية بتر.	□ مستشفى كمال عدوان □ مستشفى الشفاء □ مستشفى القدس □ مستشفى ناصر □ مستشفى غزة الاوروبي □ مستشفى ابو يوسف النجار □ خارج قطاع غزة □ أخرى برجاء التحديد..... .....
31	ماهو سبب البتر؟ أخر عملية بتر ، اذا كنت تعرضت لأكثر من عملية بتر.	***أسباب جراء التعرض لحادث*** □ النزاعات المسلحة (حروب) □ مسيرات العودة □ حادث العمل □ حادث مروري على الطرقات □ حادث منزلي □ غير ذلك ، حدد ..... ***أسباب ليست متعلقة بالتعرض لحادث عرضي*** □ مضاعفات الحرق □ التشوه الخلقي □ أمراض الأوعية الدموية مثل مرض السكري □ العدوى و الالتهابات □ غير ذلك ، حدد .....
32	مستوى و جهة البتر:	

الأطراف العلوية	***الجهة اليمنى*** □ مستوى مفصل الكتف □ خلال عظمة العضد □ مستوى مفصل المرفق (الكوع) □ خلال عظمة الساعد □ مستوى مفصل الرسغ □ جزء من كفة اليد	***الجهة اليسرى*** □ مستوى مفصل الكتف □ خلال عظمة العضد □ مستوى مفصل المرفق (الكوع) □ خلال عظمة الساعد □ مستوى مفصل الرسغ □ جزء من كفة اليد
الأطراف السفلية	□ جزء من عظمة الحوض □ مستوى مفصل الورك □ خلال عظمة الفخذ خلال نهاية عظمة الفخذ قبل مفصل □ الركبة □ مستوى مفصل الركبة □ خلال عظمة الساق خلال نهاية عظمة الساق قبل مفصل □الكاحل □مستوى مفصل الكاحل □ جزء من القدم	□ جزء من عظمة الحوض □ مستوى مفصل الورك □ خلال عظمة الفخذ خلال نهاية عظمة الفخذ قبل □ مفصل الركبة □ مستوى مفصل الركبة □ خلال عظمة الساق خلال نهاية عظمة الساق قبل □ مفصل الكاحل □ مستوى مفصل الكاحل □ جزء من القدم

33	كم يوم مكثت في المستشفى بعد عملية البتر؟	.....يوم
34	ما هي خدمات إعادة التأهيل التي تلقيتها أثناء مكوثك في المستشفى ، مباشرة بعد البتر؟	□ العلاج الطبيعي □ الدعم النفسي □ الرعاية الطبية □ غيرها ، يرجى التحديد .....

		.....
معلومات بعد اجراء عملية البتر (مرحلة ما بعد الخروج من المستشفى)		
35	هل تمت إحالتك إلى مزود صحي آخر لمواصلة أو لبدء برنامج إعادة التأهيل الخاص بك؟ (بعد خروجك من المستشفى)	□ نعم □ لا
36	إذا كانت الإجابة بنعم ، فأين تم إحالتك؟ (يمكنك اختيار أكثر من خيار واحد)	□ مؤسسات أو جمعيات محلية □ عيادة تابعة لوازرة الصحة □ عيادة تابعة لوكالة الغوث □ عيادة خاصة □ مركز الأطراف الصناعية □ مؤسسات دولية □ مؤسسة أطباء بلا حدود □ غيرها ، يرجى التحديد ....
37	إذا كانت الإجابة بنعم ، فما نوع خدمات إعادة التأهيل التي تلقيتها؟	□ العلاج الطبيعي □ العلاج الوظيفي □ الدعم النفسي □ لا شيء □ غيرها ، يرجى التحديد ....
38	إذا كنت قد تلقيت خدمات إعادة التأهيل ، فيرجى ذكر مقدم الخدمة ، باستثناء مركز الأطراف الصناعية	.....
39	إذا تلقيت علاجًا طبيعيًا ، فيرجى تحديد الخدمات التي تلقيتها؟ (يمكنك اختيار أكثر من خيار ، يرجى قراءتها جميعًا)	□ تعليم العناية بنظافة الجزء المتبقي من الطرف المبتور □ تمارين تقليل تيبس الندبات اماكن الغرز □ ربط الرباط الضاغط بشكل صحيح □ منع المضاعفات مثل تيبس المفصل وقصر الأوتار □ تقوية العضلات □ تمارين اللياقة العامة للجسم □ تمارين اعادة التوازن □ تدريب على استخدام الادوات المساعدة في التنقل □ أخرى حدد..... .....
40	كيف تصف مدى رضاك عن خدمات العلاج الطبيعي التي تلقيتها؟	□ جيدة □ متوسطة □ سيئة
41	هل ما زلت بحاجة الى خدمات العلاج الطبيعي؟	□ نعم ، الى حد كبير □ نعم ، الى حد قليل □ لا

42	إذا تلقيت علاجًا وظيفيا ، فيرجى تحديد الخدمات التي تلقيتها؟ (يمكنك اختيار أكثر من خيار ، يرجى قراءتها جميعًا)	□ التدريب على أنشطة الوظيفية مثل الحركة من و الى السرير ، التوازن ، التنقل. □ التدريب على أنشطة الحياة اليومية مثل الأكل و ارتداء الملابس □ الاستخدام المناسب للأدوات المساعدة للحركة و التنقل كالعكاز و الكرسي المتحرك □ اعطاء النصح فيما يخص مواءمة الادوات المستخدمة في البيئة (المنزل ، العمل) من أجل رفع مستوى السلامة □ أخرى، حدد .....
43	كيف تصف مدى رضاك عن خدمات العلاج الوظيفي التي تلقيتها؟	□ جيدة □ متوسطة □ سيئة
44	هل ما زلت بحاجة الى خدمات العلاج الوظيفي؟	□ نعم ، الى حد كبير □ نعم ، الى حد قليل □ لا
45	إذا تلقيت دعما نفسيا ، فيرجى تحديد الخدمات التي تلقيتها؟ (يمكنك اختيار أكثر من خيار ، يرجى قراءتها جميعًا)	□ تقديم الاستشارة لك □ تقديم الاستشارة للعائلة □ تقديم جلسات فردية □ من خلال مجموعة دعم الأقران □ الاحالة الى جهة متخصصة أكثر في مجال الدعم النفسي □ أخرى، حدد .....
46	كيف تصف مدى رضاك عن خدمات الدعم النفسي التي تلقيتها؟	□ جيدة □ متوسطة □ سيئة
47	هل ما زلت بحاجة الى خدمات الدعم النفسي؟	□ نعم ، الى حد كبير □ نعم ، الى حد قليل □ لا

الجودة المدركة و رضى الشخص ذوي البتر. كل موزدي خدمات التأهيل ، ما عدا مركز الاطراف الصناعية.

ملاحظة: مصطلح تأهيل يدل على خدمات تأهيل الأشخاص ذوي البتر في جميع مزويدي هذه الخدمات عدا مركز الأطراف الصناعية.

الرجاء اختيار الرقم الذي يعبر موافقتك مع الجمل التالية:

1-غير موافق بشدة 2-غير موافق 3-محايد 4-موافق 5-موافق بشدة

	من وجهة نظرك	**1**	**2**	**3**	**4**	**5**
48	المركز نظيف					
49	اخذ المواعيد سهل					
50	مقدمي الخدمة مؤدبين و يتعاملون بأريحية مع المريض					
51	مقدمو الخدمة يعبرون عن اهتمامهم بالمرضى					
52	يحترم مقدمو الخدمة المواعيد					
53	مقدمو الخدمة مستعدون للاجابة عن اي استفسار او تساؤلات					
54	يتفهمون الاحتياجات الخاصة لكل مريض					
55	يعاملون جميع المرضى بالتساوي					
56	يشجعون المرضى على الثقة بأنفسهم					
57	يجعلوك تشعر بالامان					

الرضى

الرجاء اختيار الرقم الذي يعبر موافقتك مع الجمل التالية:

1-غير موافق بشدة 2-غير موافق 3-محايد 4-موافق 5-موافق بشدة

	ما مدى رضاك عن	**1**	**2**	**3**	**4**	**5**
58	أخذك لمواعيد المتابعة					
59	وقت انتظار الخدمة في المركز					
60	الوقت الذي قضاه مزود الخدمة معك					
61	شرح مقدم الخدمة عن الخدمات الصحية الخاصة بخدمات تأهيل ذوي البتر					
62	كفاءة مقدم الخدمة بشكل عام					
63	مستوى رضاك العام عن الخدمة المقدمة من هذا المركز					

معلومات متعلقة بالخدمات المقدمة من مركز الأطراف الصناعية

64	من أين تم احالتك الى مركز الأطراف الصناعية؟	□مستشفى / عيادة تابعة لوازرة الصحة □ مؤسسات أو جمعيات محلية □ مؤسسات أو جمعيات دولية □ عيادة خاصة □ غيرها ، يرجى التحديد ....
65	كم طرف تسلمت من المركز لغاية هذا اليوم؟	.....طرف
66	هل تلقيت خدمات العلاج الطبيعي داخل المركز؟	□ نعم □ لا
67	إذا تلقيت علاجًا طبيعيًا في المركز، فيرجى تحديد الخدمات التي تلقيتها؟ (يمكنك اختيار أكثر من خيار ، يرجى قراءتها جميعًا)	□تعليم العناية بنظافة الجزء المتبقي من الطرف المبتور □ تمارين تقليل تيبس الندبات اماكن الغرز □ ربط الرباط الضاغط بشكل صحيح □ منع مضاعفات تيبس المفصل وقصر الأوتار □ تقوية العضلات □ تقليل الاحساس الغير طبيعي و عمل مساج لندب لغرز في الجزء المتبقي من الطرف المبتور □ تمارين اللياقة العامة للجسم □ تمارين اعادة التوازن □ تدريب على استخدام الادوات المساعدة في التنقل □ تدريب على المشي بالطرف الصناعي □ تدريب على استخدام الطرف الصناعي في نشاطات الحياة اليومية □ تلقيت كل الخدمات السابقة
68	هل شعرت بأن أخصائي العلاج الطبيعي قضى وقت كافي معك؟	□ نعم □ لا
69	كم عدد جلسات العلاج الطبيعي التي تلقيتها خلال الأسبوع؟	.....جلسة
70	ماهو معدل الوقت الذي تقضيه في جلسة العلاج الطبيعي؟	.....دقيقة
71	هل يوجد لديك جدول واضح لمواعيد جلساتك في المركز؟	□ نعم □ لا
72	هل أخصائي العلاج الطبيعي ملتزم بموعد جلساتك؟	□ نعم □ الى حد ما □ لا
73	بشكل عام كم دقيقة تنتظر في المركز قبل أن تبدأ جلستك في العلاج الطبيعي؟	.....دقيقة

74	بشكل عام كم دقيقة تنتظر في المركز قبل أن تبدأ جلستك في العلاج الطبيعي؟ (من وقت دخولك المركز و لغاية تلقيك جلسة العلاج الطبيعي)	.....دقيقة
75	هل تلقيت خدمات الدعم النفسي في المركز؟	□ نعم □ لا
76	إذا تلقيت خدمات الدعم النفسي في المركز، فيرجى تحديد الخدمات التي تلقيتها؟ (يمكنك اختيار أكثر من خيار ، يرجى قراءتها جميعًا)	□ تقديم الاستشارة لك □ تقديم الاستشارة للعائلة □ تقديم جلسات فردية □ من خلال مجموعة دعم الأقران □ الاحالة الى جهة متخصصة أكثر في مجال الدعم النفسي □ أخرى، حدد ....
77	هل شعرت بأن الأخصائي النفسي قضى وقت كافي معك؟	□ نعم □ لا
78	بشكل عام أكم دقيقة تنتظر في المركز قبل أن تبدأ جلستك في الدعم النفسي؟	.....دقيقة
79	بشكل عام أكم دقيقة تنتظر في المركز قبل أن تبدأ جلستك في الدعم النفسي؟ (من وقت دخولك المركز و لغاية تلقيك الجلسة)	.....دقيقة
80	كيف تصف مدى رضاك عن الخدمات التي تلقيتها في المركز؟	□ جيدة □ متوسطة □ سيئة
81	هل ما زلت بحاجة الى خدمات التأهيل في المركز؟	□ نعم ، الى حد كبير □ نعم ، الى حد قليل □ لا

الجودة المدركة و رضى الشخص ذوي البتر. في مركز الاطراف الصناعية.

ملاحظة: مصطلح تأهيل يدل على خدمات تأهيل الأشخاص ذوي البتر في مركز الأطراف الصناعية.

الرجاء اختيار الرقم الذي يعبر موافقتك مع الجمل التالية:

1-غير موافق بشدة 2-غير موافق 3-محايد 4-موافق 5-موافق بشدة

	من وجهة نظرك	1	2	3	4	5
	الملموسات					
82	مقدمو الخدمة انيقين ويرتدون الملابس المناسبة.					
83	المركز نظيف.					
84	المنظر الخارجي للمركز جذاب.					
85	ساعات العمل مناسبة.					
86	اخذ المواعيد سهلة.					
	التعاطف					
87	مقدمي الخدمة مؤدبين و يتعاملون بأريحية مع المريض.					
88	مقدمو الخدمة يعيرون اهتمامهم للمرضى.					
89	مقدمو الخدمة يهتمون لمعتقدات و مشاعر المرضى.					
90	مقدمو الخدمة يأخذون في حسابهم اهتمامات المريض.					
91	مقدمو الخدمة يتفهمون احتياجات المرضى.					
	الموثوقية					
92	يحترم مقدمو الخدمة المواعيد.					
93	يقدمون الخدمة في الوقت المناسب.					
94	يتعاملون مع كل اهتماماتك الصحية.					
95	مقدمو الخدمة مستعدون للاجابة عن اي تساؤلات او استفسارات.					

الاستجابة						
96	يستجيبون بكفاءة لاحتياجات المرضى الصحية.					
97	يستجيبون بكفاءة لاحتياجات المرضى الغير صحية.					
98	دائما يرحبون بخدمتك.					
99	يتفهمون الاحتياجات الخاصة لكل مريض.					
100	غير مشغولين للاجابة عن استفسارتك.					
101	يعاملون جميع المرضى بالتساوي.					
الثقة						
102	يشجعون المرضى على الثقة بأنفسهم.					
103	يجعلوك تشعر بالأمان.					
104	يراعونك باستمرار.					
105	يقدمون الخدمة التي تحسن حياتك اليومية.					
106	يقدمون الخدمة التي تقلل من المك وشكواك.					
الرضى الرجاء اختيار الرقم الذي يعبر موافقتك مع الجمل التالية: 1-غير موافق بشدة 2-غير موافق 3-محايد 4-موافق 5-موافق بشدة						
ما مدى رضاك عن		**1**	**2**	**3**	**4**	**5**
107	أخذك لمواعيد المتابعة.					
108	وقت انتظار الخدمة في المركز.					
109	صالة انتظار الخدمة في المركز.					
110	الترحيب من قبل مقدم الخدمة.					
111	الوقت الذي قضاه مزود الخدمة معاك.					
112	شرح مقدم الخدمة عن الخدمات الصحية الخاصة بخدمات تأهيل ذوي البتر					
113	احترام مقدم الخدمة للخصوصية.					
114	طريقة تعليم و تثقيف مقدم الخدمة لك.					
115	مستوى رضاك العام عن الخدمة المقدمة من هذا المركز					
116	كفاءة مقدم الخدمة بشكل عام					
117	هل سوف تنصح أي أحد من أقربائك أو أصدقائك ممن يحتاجون خدمات يقدمها المركز بأن يتوجهو للمركز للاستفادة من هذه الخدمات؟	□ نعم □ لا				
118	اذا كانت الاجابة لا ، برجاء ذكر السبب.	....				
119	هل تنوي مواصلة تلقي الخدمات من مركز الأطراف؟	□ نعم □ لا				
120	ماذا تنصح لتحسين جودة الخدمات التي يقدمها الموظفون في مركز الأطراف؟	....				

Prosthesis Evaluation Questionnaire.

Interviewer Name: **Interview date:**

Ambulation (AM)		
Scale Name	**Items**	**Degree (0 to 10)**
13A	Over the past four weeks, rate your ability to walk when using your prosthesis.	
13B	Over the past four weeks, rate your ability to walk in close spaces when using your prosthesis.	
13C	Over the past four weeks, rate your ability to walk up stairs when using your prosthesis.	
13D	Over the past four weeks, rate how you have felt about being able to walk down stairs when using your prosthesis.	
14E	Over the past four weeks, rate your ability to walk up a steep hill when using your prosthesis.	
14F	Over the past four weeks, rate your ability to walk down a steep hill when using your prosthesis.	
14G	Over the past four weeks, rate your ability to walk on sidewalks and streets when using your prosthesis.	
14H	Over the past four weeks, rate your ability to walk on slippery surfaces (e.g. wet tile, snow, a rainy street, or a boat deck) when using your prosthesis.	
Appearance (AP)		
Scale Name	**Items**	**Degree (0 to 10)**
3J	Over the past four weeks, rate how your prosthesis has looked.	
3M	Over the past four weeks, rate the damage done to your clothing by your prosthesis.	
3N	Over the past four weeks, rate the damage done to your prosthesis cover.	
4O	Over the past four weeks, rate your ability to wear the shoes (different heights, styles) you prefer.	

4P	Over the past four weeks, rate how limited your choice of clothing was because of your prosthesis.	

Frustration (FR)

Scale Name	Items	Degree (0 to 10)
10B	Over the past four weeks, rate how frequently you were frustrated with your prosthesis.	
10C	If you were frustrated with your prosthesis at any time over the past month, think of the most frustrating event and rate how you felt at that tune.	

Perceived Response (PR)

Scale Name	Items	Degree (0 to 10)
10A	Over the past four weeks, rate how often the desire to avoid strangers' reactions to your prosthesis made you avoid doing something you otherwise would have done.	
11D	Over the past four weeks, rate how your partner has responded to your prosthesis	
	Think of two close family members (other than your partner) and write down their relationship to you, like mother or son. #1 #2 OR check I don't have any close family members.	
11E	Over the past four weeks, rate how this response has affected your relationship.	
11G	Over the past four weeks, rate how Family Member #1 has responded to your prosthesis	
12H	Over the past four weeks, rate how Family Member #2 has responded to your prosthesis.	

Residual Limb Health (RL)

Scale Name	Items	Degree (0 to 10)
4Q	Over the past four weeks, rate how much you sweat inside your prosthesis (in the sock, liner, socket).	
4R	Over the past four weeks, rate how smelly your prosthesis was at its worst.	

4S	Over the past four weeks, rate how much of the time your residual limb was swollen to the point of changing the fit of your prosthesis.	
5T	Over the past four weeks, rate any rash(es) that you got on your residual limb.	
5U	Over the past four weeks, rate any ingrown hairs (pimples) that were on your residual limb.	
5V	Over the past four weeks, rate any blisters or sores that you got on your residual limb.	

Social Burden (SB)

Scale Name	Items	Degree (0 to 10)
12I	Over the past four weeks, rate how much a burden your prosthesis has been on your partner or family members.	
12J	Over the past four weeks, rate how much having your prosthesis has hindered you socially.	
12K	Over the past four weeks, rate your ability to take care of someone else, (e.g. your partner, a child, or a friend).	

Sounds (SO)

Scale Name	Items	Degree (0 to 10)
3K	Over the past four weeks, rate how often your prosthesis made squeaking, clicking, or belching sounds.	
3L	If it made any sounds in the past four weeks, rate how bothersome these sounds were to you.	

Utility (UT)

Scale Name	Items	Degree (0 to 10)
1B	Over the past four weeks, rate the fit of your prosthesis.	
1C	Over the past four weeks, rate the weight of your prosthesis.	
1D	Over the past four weeks, rate your comfort while standing when using your prosthesis.	
2E	Over the past four weeks, rate your comfort while sitting when using your prosthesis.	
2F	Over the past four weeks, rate how often you felt off	

	balance while using your prosthesis.	
2G	Over the past four weeks, rate how much energy it took to use your prosthesis for as long as you needed it.	
2H	Over the past four weeks, rate the feel (such as the temperature and texture) of the prosthesis (sock, liner, socket) on your residual limb (stump).	
2I	Over the past four weeks, rate the ease of putting on (donning) your prosthesis.	

Well Being (WB)

Scale Name	**Items**	**Degree (0 to 10)**
16C	Over the past four weeks, rate how satisfied you have been with how things have worked out since your amputation.	
16D	Over the past four weeks, how would you rate your quality of life?	

Satisfaction

individual item	**Items**	**Degree (0 to 10)**
1A	Over the past four weeks, rate how happy you have been with your current prosthesis.	
16A	Over the past four weeks, rate how satisfied you have been with your prosthesis.	
16B	Over the past four weeks, rate how satisfied you have been with how you are walking.	

Pain(Specific Bodily Sensations)

individual item	**Items**	**Degree (1 to 6)**
6	Over the past four weeks, rate how often you have been aware of non-painful sensations in your phantom limb. a. Never b. only once or twice c. a few times (about once/week) d. fairly often (2-3 times/week) e. very often (4-6 times/week) f. several times every day g. all the time or almost all the time	a=0 b=1 c=2 d=3 e-4 f=5 g=6
	Over the past four weeks, rate how often you had pain in your	a=0

	phantom limb. a. Never b. only once or twice c. a few times (about once/week) d. fairly often (2-3 times/wee e. very often (4-6 times/week) f. several times every day g. all the time or almost all the time	b=1 c=2 d=3 e-4 f=5 g=6
	How long does your phantom limb pain usually last? a. I have none b. a few seconds c. a few minutes d. several minutes to an hour e. several hours f. a day or two g. more than two days	a=0 b=1 c=2 d=3 e-4 f=5 g=6
	Over the past four weeks, rate how often you had pain in your residual limb. a. never أ b. only once or twice c. a few times (about once/week) d. fairly often (2-3 times/week) e. very often (4-6 times/week) f. several times every day g. all the time or almost all the time	a=0 b=1 c=2 d=3 e-4 f=5 g=6
	Over the past four weeks, rate how often you had pain in your other leg or foot. a. never b. only once or twice c. a few times (about once/week) d. fairly often (2-3 times/week) e. very often (4-6 times/week(f. several times every day g. all the time or almost all the time	a=0 b=1 c=2 d=3 e-4 f=5 g=6
	Over the past four weeks, rate how often you experienced back pain. a. never b. only once or twice c. a few times (about once/week) d. fairly often (2-3 times/week) e. very often (4-6 times/week(f. several times every day g. all the time or almost all the tune	a=0 b=1 c=2 d=3 e-4 f=5 g=6
individual item	**Items**	**Degree (0 to 10)**
	If you had non-painful sensations in your phantom limb during the past month, rate how intense they were on average.	
	Over the past month, how bothersome were these sensations in your phantom limb?	

	If you had any pain in your phantom limb this past month, rate how intense it was on average. -	
	In the past four weeks how bothersome was the pain in your phantom limb?	
	If you had any pain in your residual limb over the past four weeks, rate how intense it was on average. .	
	OVER THE past four weeks how bothersome was the pain in your residual limb?	
	If you had any pain in your other leg or foot over the past four weeks, rate how intense it was on average.	
	OVER THE past four weeks how bothersome was the pain in your other leg or foot?	
	If you had any back pain over the past four weeks, rate how intense it was on average.	
	OVER THE past four weeks how bothersome was the back pain?	

Transfer

individual item	**Items**	**Degree (0 to 10)**
14I	Over the past four weeks, rate your ability to get in and out of a car when using your prosthesis.	
15J	Over the past four weeks, rate your ability to sit down and get up from a chair with a high seat (e.g., a dining chair, a kitchen chair, an office chair).	
15K	Over the past four weeks, rate your ability to sit down and get up from a low or soft chair (e.g. an easy chair or deep sofa).	
15L	Over the past four weeks, rate your ability to sit down and get up from the toilet.	
15M	Over the past four weeks, rate your ability to shower or bathe safely.	

prosthetic care

individual item	Items	Degree (0 to 10)
17E	How satisfied are you with the person who fit your current prosthesis?	
17F	How satisfied are you with the training you have received on using your current prosthesis?	
17G	Overall, how satisfied are you with the gait and prosthetic training you have received since your amputation.	

Self efficacy

individual item	Items	Degree (0 to 10)
18A in Gp6	When the fit of my prosthesis is poor, I will get...	
18B	When the comfort of my prosthesis is poor, I will get...	
18C	Without my prosthesis, I will get...	

Importance questions

individual item	Items	Degree (0 to 10)
18A inGp7	How important is it that the weight of your prosthesis feel right?	
19B	How important is the ease of putting on (donning) your prosthesis?	
19C	How important is the appearance of your prosthesis (how it looks)?	
19D	How important is it to you to be able to wear different kinds of shoes (heights or styles)?	
19E	How important is it that your prosthesis' covering is durable (cannot be torn, dented, easily scratched, or discolored)?	
19F	How bothersome is it when you sweat a lot inside your prosthesis (in the sock, liner, socket)?	
20G	How bothersome to you is swelling in your residual limb (stump)?	
20H	How important is it to avoid having any ingrown hairs (pimples) on your residual limb (stump)?	

20I	How bothersome is it to see people looking at you and your prosthesis?	
20J	How important is being able to walk up a steep hill?	

Quality of life questionnaire: Face-to- face

WHOQOL-BREF

& DISABILITIES MODULE

A Measure of the Quality of Life of People with Disabilities

Field Trial Version

5-point scales

Prepared by the DIS-QOL Group

January 2011

ABOUT YOU

Before you begin, we would like to ask you to answer a few general questions about yourself. Please answer by putting a cross like this **X** in the box beside the correct answer OR write in the space provided.

Name: .....*and / or* **ID Number**:.....
(For office use only)

Gender Male ☐ Female ☐

Age (in years) ☐ **Date of Birth** ☐☐☐
(dd / mm / yy)

Marital status: *Select the **one** that best describes your **current** situation*

Single	☐	Separated	☐
Married	☐	Divorced	☐
Living with Partner	☐	Widowed	☐

Home location: (name of village / town / city): ..... **Post Code**:.....

Living circumstances & support: *Select the **one** that best describes your situation*

- Living at home - no support required ☐
- Living at home with support from unpaid carers (e.g. partner, family, friends) ☐
- Living at home with support from paid carers ☐
- Living in community care / sheltered housing supported by staff ☐
- Living in a residential care home / nursing home ☐
- Living in a long-stay hospital ☐
- Other (*please tell us what*)..... ☐

Education: *What is the highest level of education you received?*

- None at all ☐
- Special school ☐
- Primary school ☐
- Secondary school / High school ☐
- College / University ☐
- Other (*please tell us what*)..... ☐

Health status: *Are you currently ill or in poor health?* Yes ☐ No ☐

If something is wrong with your health, what do you think it is? .....

..... illness / problem

Disability status: *Do <u>you</u> believe you have a disability?* Yes ☐ No ☐

<u>If you believe you have a disability</u>, what do you think it is? .....

.....

How long have you had this disability?..... (*years / months*)

How visible is this disability? *(Do you feel other people see or notice this disability?)*

Not at all ☐ A Little ☐ Moderately ☐ Mostly ☐ Totally ☐

How much does this disability affect your life?

Hardly at all ☐ Mildly ☐ Moderately ☐ Severely ☐ Profoundly ☐

Occupation: *What is your **main** occupation /daytime activity?*

- Paid employment ☐
- Voluntary employment (unpaid) ☐
- Unemployed, currently looking for work ☐
- Education (full-time or part-time) ☐
- Day hospital / Day centre ☐
- Home-based (e.g. homemaker, household duties etc) ☐
- Retired ☐
- None ☐
- Other (*please tell us what*)..... ☐

Income: *Compared to other people in your country, how would you rate your **financial situation and possessions**?*

- Well above average ☐
- Slightly above average ☐
- Average ☐
- Slightly below average ☐
- Well below average ☐

Thank you for this information

INSTRUCTIONS

This assessment asks how you feel about your quality of life, health or other areas of your life. It is just about you – you and your life.

Please keep in mind **what is important to you**; what makes you happy; your hopes and dreams, and your worries or concerns.

Please answer all the questions. If you are unsure about which answer to give to a question - if it is hard to pick an answer - **please choose the one** that seems nearest or most appropriate. This can often be the first thing that comes into your mind. Some questions include an example to help you think about your answer.

There are no right or wrong answers – just answer what is true for you. Please think about your life **in the last two weeks.**

For example, thinking about the last two weeks, a question might ask:

EXAMPLE					
	Not at all	A Little	Moderately	Mostly	Totally
Do you get the kind of support from others that you need? *For example, do you get the kind of help you need from other people?*	1	2	3	4	5

In this item, the question has an example. You should circle the number that best fits your opinion about the kind of support (or help) you got from others over the last two weeks. So you would circle the number 2 if the support (or help) you got met your needs a little, as follows:

EXAMPLE					
	Not at all	A Little	Moderately	Mostly	Totally
Do you get the kind of support from others that you need? *For example, do you get the kind of help you need from other people?*	1	(2)	3	4	5

Alternatively, you would circle number 1 if the support you got over the last two weeks did not meet your needs at all.

Please read each question, think about your feelings, and circle the number on the scale for each question that gives the best answer for you.

You may find it helpful to look at the 'smiley faces' that add a visual guide (a picture) to the number scales for some items. These are available printed on separate cards also.

If you would like some help to write your answers on the form, it is OK to ask someone to do this for you.

Please think about your life **in the last two weeks**:

The first two questions ask about your life and health overall.

		Very poor	Poor	Neither poor nor good	Good	Very good
1G	How would you rate your quality of life?	1	2	3	4	5

		Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
2G	How satisfied are you with your health?	1	2	3	4	5

The following questions ask about **how much** you have experienced certain things in the last two weeks.

		Not at all	A little	A moderate amount	Very much	An extreme amount
3	To what extent do you feel that (physical) pain prevents you from doing what you need to do?	1	2	3	4	5
4	How much do you need any medical treatment to function in your daily life?	1	2	3	4	5
5	How much do you enjoy life?	1	2	3	4	5
6	To what extent do you feel your life to be meaningful?	1	2	3	4	5

		Not at all	A little	A moderate amount	Very much	Extremely
7	How well are you able to concentrate?	1	2	3	4	5
8	How safe do you feel in your daily life?	1	2	3	4	5
9	How healthy is your physical environment?	1	2	3	4	5

The following questions ask about **how completely** you experienced or were able to do certain things in the last two weeks.

		Not at all	A Little	Moderately	Mostly	Completely
10	Do you have enough energy for everyday life?	1	2	3	4	5
11	Are you able to accept your bodily appearance?	1	2	3	4	5
12	Have you enough money to meet your needs?	1	2	3	4	5

		Not at all	A Little	Moderately	Mostly	Completely
13	How available to you is the information that you need in your day-to-day life?	1	2	3	4	5
14	To what extent do you have the opportunity for leisure activities?	1	2	3	4	5

		Very poor	Poor	Neither poor nor good	Good	Very good
15	How well are you able to get around?	1	2	3	4	5

The following questions ask you to say how **good or satisfied** you have felt about various aspects of your life over the last two weeks.

		Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
16	How satisfied are you with your sleep?	1	2	3	4	5
17	How satisfied are you with your ability to perform your daily living activities?	1	2	3	4	5
18	How satisfied are you with your capacity for work?	1	2	3	4	5
19	How satisfied are you with yourself?	1	2	3	4	5
20	How satisfied are you with your personal relationships?	1	2	3	4	5
21	How satisfied are you with your sex life?	1	2	3	4	5
22	How satisfied are you with the support you get from your friends?	1	2	3	4	5
23	How satisfied are you with the conditions of your living place?	1	2	3	4	5
24	How satisfied are you with your access to health services?	1	2	3	4	5
25	How satisfied are you with your transport?	1	2	3	4	5

The following question refers to **how often** you have felt or experienced certain things in the last two weeks.

		Never	Seldom	Quite often	Very often	Always
26	How often do you have negative feelings such as blue mood, despair, anxiety, depression?	1	2	3	4	5

DISABILITIES MODULE

The next question asks about your disability overall.

		Not at all	A Little	Moderately	Mostly	Totally
27G	Does your disability have a negative (bad) effect on your day-to-day life?	1	2	3	4	5

The following questions ask about how you have felt about certain things, how much certain things have applied to you, and how satisfied you have been about various parts of your life over the last two weeks

		Not at all	A Little	Moderately	Mostly	Totally
28	Do you feel that some people treat you unfairly?	1	2	3	4	5
29	Do you need someone to stand up for you when you have problems?	1	2	3	4	5
30	Do you worry about what might happen to you in the future? *For example, thinking about not being able to look after yourself, or being a burden to others in the future.*	1	2	3	4	5

		Not at all	A Little	Moderately	Mostly	Totally
31	Do you feel in control of your life? *For example, do you feel in charge of your life?*	1	2	3	4	5
32	Do you make your own choices about your day-to-day life? *For example, where to go, what to do, what to eat.*	1	2	3	4	5
33	Do you get to make the big decisions in your life? *For example, like deciding where to live, or who to live with, how to spend your money.*	1	2	3	4	5
34	Are you satisfied with your ability to communicate with other people? *For example, how you say things or get your point across, the way you understand others, by words or signs.*	1	2	3	4	5
35	Do you feel that other people accept you?	1	2	3	4	5
36	Do you feel that other people respect you? *For example, do you feel that others value you as a person and listen to what you have to say?*	1	2	3	4	5

						
		Not at all	A Little	Moderately	Mostly	Totally
37	Are you satisfied with your chances to be involved in social activities? *For example, meeting friends, going out for a meal, going to a party etc.*	1	2	3	4	5
38	Are you satisfied with your chances to be involved in local activities? *For example, being part of what is happening in your local area or neighbourhood.*	1	2	3	4	5
39	Do you feel that your dreams, hopes and wishes will happen? *For example, do you feel you will get the chance to do the things you want, or get the things you wish for, in your life?*	1	2	3	4	5

Do you have any comments about the questionnaire?

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THANK YOU FOR YOUR HELP

Annexes (6): The guiding questions of the focus group discussion – service provider

أسئلة تخص مقدم الخدمة:

1. ماهي وجهة نظرك بخدمات التأهيل المقدمة للأشخاص ذوي البتر؟
2. من وجهة نظرك: ما مدى تلبية أقسامكم لاحتياجات المرضى من خدمات في مجال تأهيل الأطراف الصناعية؟

(أسئلة تحقق)

- أخصائي العلاج الطبيعي
- الأخصائي النفسي الاجتماعي
- أخصائي الأطراف
- الخدمات الصحية
- أشياء أخرى حدد

3. هل خدمات التأهيل المقدمة قبل أو بعد عملية البتر مناسبة وتلبي الاحتياجات للأشخاص ذوي البتر؟ الرجاء الشرح
4. هل الخدمات التي تقدم لتأهيل الأشخاص ذوي البتر مناسبة؟ الرجاء الشرح؟

(أسئلة تحقق)

- تلبي الاحتياجات
- شمولية الخدمات
- البعد الجغرافي عن مكان سكن المرضى
- مساحة القسم
- مكان انتظار المرضى
- توفر كافة الخدمات الغير صحية اللازمة (مياه صالحة للشرب، تواليت، ...الخ)
- تجهيزات القسم (توفر المعدات والأدوات)
- فترات العمل (صباحي فقط)
- سهولة المواصلات
- فترات الانتظار

5. هل الطاقم العامل يتلقى تدريبات تقنية بشكل منتظم؟

(أسئلة تحقق)

- الطاقم العامل لديه خبرة كافية

- مدى انتظام تلقي التدريبات داخل وخارج المؤسسة
- هل يتم نقل الخبرات من المستفيد من التدريب للزملاء؟ كيف؟
- هل عدد الأخصائيين كافي لتقديم الخدمة بجودة عالية في القسم/ المستشفى

6. ما مدى دعم الادارة لأقسام التأهيل؟

(أسئلة تحقق)

- تسهيلات يتم تقديمها من الادارة لتسهيل تقديم خدمات التأهيل؟ ما هي؟
- هل يوجد ادوات متابعة وتقييم للتحسين والتطوير الأداء؟ حددها؟

7. هل البروتوكولات العلاجية الخاصة بتأهيل الأشخاص ذوي البتر متوفرة/ متاحة للأخصائيين؟

(أسئلة تحقق)

- هل يتم متابعة توفيرها وتطبيقها من المدراء؟
- هل يتم التدريب عليها؟
- هل لديك نسخة منها (ورقية ام الكترونية) ؟
- هل يتم تحديثها بشكل دوري؟
- هل تشارك بتحديث البروتوكولات؟
- هل تلقيت تدريب على البروتوكولات؟

8. ما مدى توفر واستمرارية خدمة الأطراف الصناعية على المدى البعيد؟

(أسئلة تحقق)

- تمويل الأطراف الصناعية.
- هل يغطي التأمين الصحي نفقات الحصول على الطرف الصناعي؟
- هل نظام المتابعة فعال؟

9. من وجهة نظركم: ماهي أهم نقاط الضعف بالخدمات التي يتم تقديمها للأشخاص ذوي البتر؟

(أسئلة تحقق)

- هل هذه النقاط تعتبر معيقات لتقديم الخدمة؟
- كيف يمكن التغلب على هذة النقاط
- عوامل اخرى حدد

10. ما هي التحديات أمام خدمات التأهيل المقدمة للأشخاص ذوي البتر والاستمرار في تقديمها؟
11. ما اقتراحاتك للتطوير/ للتحسين؟

هل ترغبون في إضافة شيء اخر؟

Annexes (7): The guiding questions of the Key informant interview discussion

أسئلة المقابلات الشخصية

1. كيف تقيم خدمات تأهيل الأطراف الصناعية؟

   (أسئلة تحقق)

   - تلبي الاحتياجات
   - شمولية الخدمات
   - مناسبة
2. هل خدمات التأهيل المقدمة قبل أو بعد عملية البتر مناسبة وتلبي الاحتياجات للأشخاص ذوي البتر؟ الرجاء الشرح
3. أخبرني عن نقاط قوة خدمات تأهيل الأشخاص ذوي البتر من وجهة نظرك؟
4. أخبرني عن نقاط ضعف خدمات تأهيل الأشخاص ذوي البتر من وجهة نظرك؟
5. كيف تصف السياسات والبروتوكولات المتاحة لخدمات تأهيل الأشخاص ذوي البتر؟ كيف يتم استخدامها ؟
6. ما مدى دعم و تشجيع الادارة للطاقم الطبي؟
7. لأي مدى توفر الموارد البشرية الازمة لتقديم الخدمات؟ ما التدريبات اللازمة لطواقم التأهيل؟
8. من وجهة نظرك كيف لنا
   - أن نحفز رضا المستفيدين من خدمات التأهيل للأشخاص ذوي البتر ؟
   - أن نطور خدمات التأهيل للأشخاص ذوي البتر ؟
   - أن نضمن استمرارية تقديم الخدمات للأشخاص ذوي البتر ؟

هل ترغبون في اضافة شيء؟

Annexes (8): Consent form

طلب الموافقة على المشاركة في عينة البحث

الأخوات و الأخوة الأعزاء.

أنا الباحث / أحمد حيدر موسى , طالب ماجستير في برنامج الصحة العامة تخصص ادارة صحية في جامعة القدس و اقوم بعمل دراسة بعنوان

" تقييم خدمات تأهيل الأشخاص ذوي البتر في محافظات غزة"

كمتطلب للحصول على درجة الماجستير حيث اقوم بجمع البيانات لهذه الدراسة التي تركز على تقييم خدمات التأهيل للأشخاص ذوي البتر في محافظات غزة، وتتناول الدراسة عدة محاور تهدف لمعرفة جودة هذه الخدمات و معرفة مدى رضاك كمستفيد عنها والنتائج التي حصلت عليها بعد تلقيك الخدمة. وقد تم اختيارك من سجلات مركز الأطراف الصناعية والشلل التي تم تقديم الخدمة لك هناك حيث ينطبق عليك معايير الدراسة و الغرض من هذه المقابلة هو جمع المعلومات التي تساعدني كباحث على فهم طبيعة خدمات تأهيل الأشخاص ذوي البتر و كيفية تقديمها و ابراز نقاط القوة والضعف في الخدمات المقدمة من وجهة نظرك.

وعلى الرغم من أن المشاركة في هذه الدراسة طوعية يمكنك عدم الاجابة على بعض او جميع الاسئلة، الى أنني سأقدر كثيرا مشاركتك حيث أنها مهمة بالنسبة لنا.

المشاركة في هذه الدراسة ينطوي على ملئ الاستبيان الذي سيتطلب حوالي 45 دقيقة من وقتك. مهما كانت المعلومات التي سوف تقدمها سيتم الاحتفاظ بها بسرية تامة وسوف يطلع عليها فريق البحث فقط، حيث لن يتم مشاركتها مع أي جهات اخرى.

يبقى أن أوضح أن مشاركتك في تعبئة هذا الاستبيان لن ينتج عنها أي مقابل مالي وأن المعلومات التي تم الحصول عليها عنك وعن أسرتك في هذه الدراسة لن تؤثر على أي خدمات أو أي دعم تتلقاه من قبل أي جهة.

هل أنت موافق على المشاركة؟	موافق	غير موافق

شاكرين تعاونكم

الباحث / أحمد حيدر موسى

Annex (9): list of arbitrators

The study tool (interviewed questionnaire) was reviewed and evaluated by the following exerts:

Dr. Bassam Abu Hamad, Al Quds University

Dr. Yehia Abed, Al Quds University

Dr. Nabeel Roshdi Al Shawa, ALPC & PRCS

Mr. Gregory Halford; Honorary Lecturer La Trobe University

Dr. Mohamed El Sultan; Al Azhar University; Physiotherapy college

Mr. Faraj Abu Raya, Former UNRWA, Head of Physiotherapy Program

Ms. Saeda Al-Barawi, International Committee of the Red Cross- Physical Rehabilitation Project.

Ms. Suad Ghaben, Al Azhar University, Physiotherapy college

Ms. Alia Elkeshawi, Ministry of Health – Physical Therapy and Rehabilitation Unit

Mr. Jehad Okasha, Ministry of Health

Arabic Abstract

ملخص الدراسة

عنوان الدراسة: تقييم خدمات تأهيل الأشخاص ذوي البتر في محافظات غزة

إعداد: أحمد حيدر محمد موسى

اشراف: د. ختام أبو حمد

الهدف و منهجية الدراسة:

تتطلب رعاية الأشخاص الذين بترت أطرافهم خدمات إعادة تأهيل متخصصة ومترابطة. بالنسبة لقطاع غزة ، لا توجد دراسات لتقييم الخدمات المقدمة لإعادة تأهيل مبتوري الأطراف في القطاع ، حيث تهدف هذه الدراسة إلى تقييم خدمات إعادة تأهيل مبتوري الأطراف في محافظات غزة من أجل الوصول لاقتراحات وتوصيات للتدخلات التي من شأنها تحسين الأداء العام لخدمات إعادة تأهيل مبتوري الأطراف، وبالتالي تحسين جودة الحياة بشكل عام للأشخاص الذين بترت أطرافهم. اعتمدت هذه الدراسة طريقة البحث المندمج، حيث قام الباحث بجمع وتحليل البيانات والنتائج من خلال الطرق والأدوات الكمية والنوعية في نفس الدراسة. تم إجراء المكون الكمي على 370 شخصًا بترت أطرافهم تم اختيارهم عشوائيًا حيث تم تعبئة استبيانًا من خلال المقابلات معهم بمعدل استجابة 100٪. بالإضافة إلى ذلك ، تم جمع البيانات النوعية من خلال 8 مقابلات فردية متعمقة و 3 مجموعات بؤرية مع مقدمي الرعاية الصحية وإعادة التأهيل. تم تحليل البيانات الكمية باستخدام برنامج التحليل الاحصائي SPSS وتم تحليل البيانات النوعية باستخدام تقنية الترميز و كان اختبار الموثوقية مرتفع.

أهم النتائج:

بينت الدراسة أن السبب الرئيسي لبتر الأطراف في قطاع غزة مرتبط بالاعتداءات الاسرائيلية على القطاع , والسبب الرئيسي الثاني لبتر الأطراف السفلية هو مرض السكري. كما أوضحت بأنه تم مكوث أكثر من نصف المشاركين في الدراسة في المستشفى قبل عملية البتر بنسبة (58.1٪). وبلغ متوسط فترة الاستشفاء(المكوث في المستشفى) بعد عملية البتر 26.54 يومًا ، حيث تلقوا فيها جميعًا خدمات الرعاية الطبية في هذه الفترة ، و كذلك تلقى 45.70٪ منهم علاجًا طبيعيًا ، وتلقى 24.1٪ منهم علاجًا نفسيًا خلال نفس الفترة. بعد الخروج من المستشفى ، تمت إحالة أكثر من ثلثي المشاركين في الدراسة إلى مقدم رعاية صحية آخر للأستمرار / أو البدء في برنامج إعادة التأهيل. ووجدت الدراسة أن معظم المشاركين تلقوا خدمات إعادة التأهيل في أكثر من مكان. حيث أعرب معظم المشاركين في الدراسة (87.24٪) عن رضاهم عن خدمات إعادة التأهيل التي يقدمها مركز الأطراف الصناعية.

علاوة على ذلك ، فإن نتيجة تقييم الأطراف الاصطناعية المستخدمة و التي قيمت جودة هذه الأطراف من عدة مجالات مختلفة تتعلق بردود المشاركين في الدراسة وهي كتالي: وفقًا لفائدة الأطراف الاصطناعية / المنفعة العائدة على المستفيد وكانت بنسبة 6.17 ، صحة الجزء المتبقي من الطراف الذي تم بتره وكانت بنسبة 6.21 ، المظهر الخارجي للطرف وكانت بنسبة 6.48 ، الصوت الصادر من الطرف أثناء المشي أو الاستخدام وكانت بنسبة 6.18 ، القدرة على استخدام الطرف في المشي وكانت بنسبة 5.65، القدرة على استخدام الطرف في التنقل وكانت بنسبة 6.64، الاستجابة و ردة فعل الاخريين بانسبة للطرف الصناعي وكانت بنسبة 8.19، الإحباط الناتج من استخدام

الطرف الصناعي وكانت بنسبة 5.79 ، و أخيرا العبء الاجتماعي الناتج من استخدام الطرف الصناع,وكانت بنسبة 7.62 وذلك من اجمالي 10 نقاط كحد أعلى يدل على رضى مستخدم الطرف الصناعي.

تعتبر جودة الحياة للأشخاص الذين بترت أطرافهم جيدة بشكل عام حيث بلغ متوسط نسبة جودة الحياة 74.4٪ .فقط ، 45.3٪ من المستفيدين أفادوا بأنهم يتمتعون بحياة جيدة مقارنة بـ 19٪ أفادوا عن تدني جودة الحياة التي يعيشونها و 1.6٪ يعيشون حياة سيئة للغاية. ومن المثير للاهتمام ، أن 25.7٪ لم يتمكنوا من تحديد ما إذا كانو يعيشون حياة جيدة أم سيئة. بالإضافة إلى ذلك ، من وجهة نظر المشاركين في الدراسة ، لم يكن المجتمع عادلاً بما يكفي لهم لأنهم يشعرون بطريقة ما بالتمييز والاستبعاد الاجتماعي .وأظهرت الدراسة أن هناك فعالية جيدة تقريبا ورضا جيد عن خدمات إعادة تأهيل مبتوري الأطراف في قطاع غزة ومع ذلك ، مازال هناك مجال لمزيد من التحسينات في التفاعل والتنسيق عبر مقدمي خدمات التأهيل في جميع مراحل خدمات إعادة تأهيل مبتوري الأطراف ومسارات الإحالة فيما بينهم.

التوصيات:

لا يتلقى مبتورو الأطراف خدمات شاملة ، وبالتالي يجب أن تكون الخدمة المقدمة مصممة لتلبية احتياجات الأشخاص ذوي الإعاقة ، بما في ذلك الخدمات الصحية والتعليمية. هناك حاجة ماسة للاستثمار في برامج تعزيز الصحة للوقاية من الأمراض المزمنة ومكافحتها من أجل تقليل فرص بتر الأطراف بسبب مثل هذه الأمراض ، كذلك يحتاج الأشخاص ذوو الإعاقة إلى الدعم المالي لتلبية احتياجات حياتهم الأساسية ، وكذلك لمواجهة زيادة الطلب على الخدمات بسبب الإعاقة. الدعم المالي الحالي لا يكفي لتغطية احتياجاتهم الأساسية من خدمات التعليم والصحة والنقل. هناك حاجة لإجراء دراسات أخرى لاستكشاف بعمق منظور مقدمي الخدمات فيما يتعلق بخدمات إعادة تأهيل مبتوري الأطراف المتاحة ولتقييم إمكانية الوصول والقدرة على تحمل التكاليف من الخدمات للأشخاص ذوي الإعاقة ، بما في ذلك التعليم والعمل والخدمات الصحية. أخيرًا هناك حاجة ماسة إلى تطبيق الإطار القانوني رقم 4 (1999) ، الذي يسلط الضوء على حقوق الأشخاص ذوي الإعاقة في العمل ويدعم حقوق الأشخاص ذوي الإعاقة على أساس مبادئ الإنصاف.