

# Satisfaction Feedback on the Services Provided for Amputees in Gaza

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**Abstract:** ***Objectives:** The aim of the study was to investigate the services provided in the Artificial Limb and Polio Centre. The study used an adapted questionnaire was designed for the same purpose by international committee of Red Cross (ICRC) in Ethiopia. Data were collected by the researcher using structured interviews to gather cross - sectional feedback on the services provided for amputee in Gaza. **Methods:** One hundred participant were presented clinically by amputation and received prosthesis and training. The sample were selected randomly from the record of Artificial Limb and Polio Centre ALPC, It included two groups of participants, new users received the prosthesis six to twelve months before conduction of the study and old users who received the prosthesis at least one year before the conduction of the study. The sample include both genders aged ten years and over. All the participant have sufficient cognition to understand the requirements of the study. **Results:** Overall satisfaction of the amputees was: 48.0% of respondents were very satisfied and the prosthesis met their expectations, 24.5% were quiet satisfied with it, 16.3% replied more or less, and 11.2% said that they were not satisfied at all with the prosthesis and it did not meet their expectation. **Conclusions:** The amputees were positively satisfied on the use of their services. However, some were not satisfied due to many reasons mainly on the comfortability of their prosthesis affecting their daily life activities and functionality which need to be addressed.*

**Keywords:** Amputee, satisfaction, prosthesis, services

## 1. Introduction

Amputation is defined as surgical removal or loss of body part such as arms or limbs in part or full (Dunkin MA 2020).

Data from Stanford Healthcare shows 49% rise in total number of amputations during the time of COVID - 19 pandemic, during March 2020 to February 2021 (Cahan E.2021).

The loss of a limb has severe implications for a person's mobility, and ability to perform activities of daily living, which can negatively impact their participation and integration into society (Dillingham TR, Pezzin LE 2008). Early rehabilitation within disaster and conflict settings is important in the prevention of severe mobility and self - care limitations, postural disorders, reduction in body's endurance, and inability to tolerate physical activities (Herasymentko O, et al 2018).

Those who sustain an amputation encounter multiple challenges during their recovery, rehabilitation, and reintegration into their homes and communities. Learning and adopting new strategies for basic mobility, personal hygiene, and activities of daily living with or without prosthesis is difficult. In prosthetic fitting, multiple attempts at socket fabrication are often needed to improve tolerance and comfort. Phantom limb and residual limb pain are extremely common and frequently require a multidisciplinary approach for optimal management (Le Feuvre P, Aldington D, 2014).

Regaining mobility is an important rehabilitation objective for patients with a transtibial amputation. Satisfaction with the prosthesis plays a key role in regaining mobility and is important for optimizing use of the prosthesis, preventing rejection, and increasing compliance with the medical regimen (MohdHawari N, 2017).

(DeRuyter et al.1995) defined patients' satisfaction along with other factors such as clinical outcomes, functional status, quality of life, and cost as key indicators in the field of assistive devices. Moreover, achieving more favorable clinical outcomes requires the patient's adherence to the use of the prescribed orthoses or prostheses (Ghorbani F et al 2016). The patient's satisfaction is a factor playing a role in his/her adherence to the treatment (Barbosa CD et al 2012). Some researchers believe that esthetic factors and convenience, as well as economic status and social issues, affect the level of satisfaction with an orthosis or a prosthesis and can improve patients' adherence to the orthotic/prosthetic intervention (Valdes K. et al 2016).

## 2. Literature Review

Limb amputation is an ancient surgical procedure first described by Hippocrates in 460–377 BC and was performed throughout the centuries for several punitive and therapeutic reasons (Chalya PL et al2012).

A major lower limb amputation is defined as a surgical removal of a part or whole limb by cutting through the bone or joint proximal to the ankle (Ajibade A et al 2013).

There are several conditions that can lead to amputation (Dunkin MA 2020)

- Severe infection with extensive tissue damage
- Gangrene
- Trauma resulting from accident or injury, such as crush or blast wound
- Congenital/ Paediatric limb deficiency undergoing conversion amputation
- Congenital deformities of digits or limbs
- Congenital extra digits or limbs
- Necrosis or Necrotizing Fasciitis

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- Cellulitis
- Peripheral Arterial Disease
- Frostbite
- Malignant/ cancerous tumor in bone or muscle of the limb e. g. Osteosarcoma
- Conditions that affect blood flow for example Diabetes

In developed countries, peripheral vascular disease accounted for 80 - 90% of all amputations, and traumatic accident rates have either been constant or declining (Jensen PS et. Al 2017). On the other hand, in developing countries, trauma is the main cause of amputation, and in countries where landmines exist, they also lead to increased rate of amputation (Asadollahi R et. al 2010).

A traumatic lower limb amputation (LLA) is commonly seen in young, active people and not only it can be devastating but also functional capacity and quality of life can often be limited during the patient's most productive years (Murray CD, Forshaw MJ.2013).

Patient satisfaction is a key indicator of the quality of care. It plays an important role in the evaluation of outcomes of health care services and management of the health care budget. (MohdHawari N, et al 2017) Numerous theories and models of patient satisfaction exist, including "the value expectancy model," "the disconfirmation theory," "the attribution theory," and "the need theory." (Batbaatar E, et al 2015).

Satisfaction is defined in different ways, for example, "an emotional or affective evaluation of the service based on cognitive processes which were shaped by expectations"; "a congruence of expectations and actual experiences of a health service"; and "an overall evaluation of different aspects of a health service." (Batbaatar E, et al 2015).

In summary, patient satisfaction entails matching patients' experiences with their expectations.

Patients' satisfaction with health services is recognized by the World Health Organization (WHO) as one of the five indicators of service quality. (Xesfingi S, Vozikis A, 2016). Satisfaction assessment in the O&P field is more difficult than other parts of the health system because health practitioners, deliver wearable devices such as orthoses, prostheses, insoles, and medical shoes to the patients in addition to providing services such as patients assessment and training (Joseph M, et al 2018).

### 3. Material and Method

100 Participants were presented clinically by amputation. The participants were selected according to the following criteria; The participants were amputees who received prosthesis from the ALPC.

For first users: Minimum 6 months ago (from the date of the survey) up to 12 months; For old users: all old users; Beneficiaries' age: 10 years and more. Lower limb amputees and upper limb amputees. The participants should have sufficient cognition to understand the requirement of the study. Both genders. The participants of the study were 100

amputees who were randomly selected from the registered amputees in the ALPC in the PMS system in June 2015.

#### 3.1 Methods

The questionnaires were made to identify the satisfaction from beneficiaries about services provided by ALPC. Beneficiaries were interviewed by 8 physiotherapy students using face to face or by phone where the questionnaires were filled.

#### 3.2 Data collection

The data were collected in June 2015 by the students of Al - Azher University, carried out in successive 21 days. The students looked over the filled questionnaires to check adequate completion of all questionnaires. And were reviewed individually by ICRC PT.

The questionnaires were provided with a clear explanation of the purposes of the study, the ways of responding, and the conditions of information in order to avoid bias. The questionnaires include multiple choice questions: which used wide variety of questions aims to meet the objectives of the study. The questionnaire composed of five sections designed to accomplish the aim of the research.

#### 3.3 Data analysis

The research methodology relies on data that uses the descriptive analysis using (SPSS) statistics program. A chi - squared test, also referred to as  $\chi^2$  test (or chi - square test), is a statistical hypothesis test in which the sampling distribution of the test statistic is a chi - square distribution when the null hypothesis is true. Chi - squared tests are often constructed from a sum of squared errors, or through the sample variance. Test statistics that follow a chi - squared distribution arise from an assumption of independent normally distributed data, which is valid in many cases due to the central limit theorem. A chi - squared test can then be used to reject the hypothesis that the data are independent.

#### 3.4 Chi - Square Formula

$$\chi^2 = \sum \frac{(\text{Observed Value} - \text{Expected Value})^2}{(\text{Expected Value})}$$

Pearson's correlation coefficient when applied to a sample is commonly represented by the letter r and may be referred to as the sample correlation coefficient or the sample Pearson correlation coefficient. To obtain a formula for r by substituting estimates of the covariances and variances based on a sample into the formula above. So if one data set {x1, . . ., xn} containing n values and another data set {y1, . . ., yn} containing n values then that formula for r is:

$$r = r_{xy} = \frac{\sum_{i=1}^n (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum_{i=1}^n (x_i - \bar{x})^2} \sqrt{\sum_{i=1}^n (y_i - \bar{y})^2}}$$

where:

$n, x_i, y_i$  are defined as above

$$\bar{x} = \frac{1}{n} \sum_{i=1}^n x_i$$

(the sample mean); and analogously for  $\bar{y}$

**4. Results**

This study was conducted to evaluate participants' satisfaction feedback of the services provided by ALPC. One hundred amputees of both genders participated in the study. The correctness of the questionnaire has been ascertained by the judgment of the validity trustees.

The total registered amputees in the data base system at the ALPC were 700. A list of 146 amputees who received prosthesis from ALPC were selected randomly to help acquire a core sample of 100 prosthetic users. Of the 146 amputees only 100 participants complied with all parameters of the survey except 2 whom didn't complete the entire process, however, their answers were included. Of those

patients who did not participate in the survey there were a number of factors for why they were not included, these include: 7 patients who did not want to participate, 33 who could not be contacted, 1 who for security reasons could not be involved, 1 who for medical reasons could not be involved, 2 who died during the survey timeframes, 2 were excluded during the survey timeframe as it was found that they didn't fit the criteria of the study. Amongst participants, 97 adults and 3 children (**Fig 1**).

The average age of participants was 36.3 years, minimum age was 12 years, and maximum age was 70 years, 12 have upper limb amputation and 88 have lower limb amputation **Table (1)**.

Almost all of the participants are living in an urban area. 14 have their amputations on both sides while 86 have in one side.

**Table 1:** The description of the beneficiaries participated in the study.

Participants	Age years	Gender	Upper \ Lower limb amputated
100	10 years and more	84 Males 16 Females	12 UL 88 LL

**Causes of Amputation**

The results show that the cause of disability for most cases was War/Min (54.0%), in comparison with 17.0% traffic accidents, 2.0% congenital, 1.0% infection, 9.0% trauma, and 17.0% vascular disease.

**Types of participants' prosthesis**

A majority of 61.0% has Trans - Tibial prosthesis, followed by 18.0% who have Trans - Femoral prosthesis.

**Appointments**

Furthermore, 99.0% of them added that it was easy to get an appointment for ALPC. Not to mention that when they were asked if they are kept waiting for long time to receive services (e. g. physio session, casting, check socket etc.) or not, 90.9% of them said "no", 4.0% said, more or less, and 5.1% said "yes".

Results also reveal that 20.2% of them got an appointment for services follow up, and 79.8% did not. Besides, a majority of 98.0% did not pay for services and/or prosthesis, and only 2.0% did pay for their services and prosthesis.

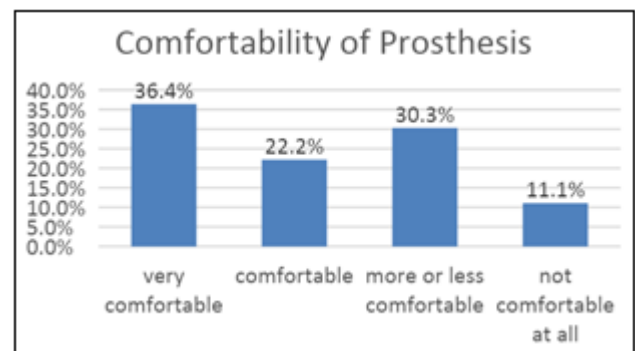
**Interpersonal manner and communications**

Results reveal 92.9% of respondents think that the staff are friendly and listen to them and are keen to inform and help them whenever required, 6.1% said that more or less this was the case, and only 1.0% think otherwise. Moreover, all of them agreed that the treatment process offered by the staff was very professional, and a majority of 97.0% were well informed about all treatment steps and functioning of the rehab services, 2.0% more or less, and only 1.0% were not well - informed.

**Comfortability**

Further results in figure 5 show that 36.4% of participants answered that the prosthesis was very comfortable, 22.2% that it was comfortable, 30.3% said more or less, and 11.1%

answered it was not comfortable at all due to many reasons such as causing pain, discomfort, skin problems, limit mobility, heavy, tight etc.



**Figure 1:** Comfortability of prosthesis felt by participants

**Wearing prosthesis**

79.8% said that it is easy for them to wear the prosthesis, in comparison with 8.1% who said it is not the case, and 12.1% who think more or less it is easy to wear. See Table 2 hereunder shows the average number of hours they wear their prosthesis per day:

**Table 2:** Average number of hours a day they wear prosthesis

Average no. of hrs they wear the prosthesis per day	Frequency	Percent
1>	9	9
2	4	4
4	4	4
5	4	4
6	7	7
7	4	4
8	4	4
9	2	2
10	7	7
10<	54	54
Total	99	99

	System	1	1
	Total	100	100

The daily average number of meters they can walk with the prosthesis (s) is shown in table 3 below

**Table 3:** Average numbers of meters they can walk with their prosthesis (s)

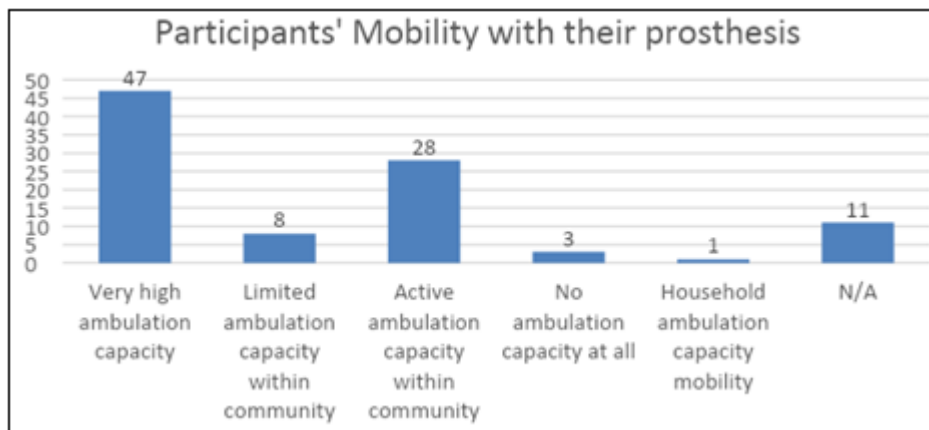
Average no. of meters they wear the prosthesis per day	Frequency	Percent
0 - 5	5	5
5 - 25	2	2
25 - 75	1	1
75 - 200	18	18
200 - 500	21	21
over 500	42	42
NA	9	9
Total	98	98
System	2	2
Total	100	100

**Participants Mobility with their prosthesis**

3.1% when asked how would they rate their mobility with the device said that there is no ambulation capacity at all, 1.0% said household ambulation capacity mobility, 28.6% an active ambulation capacity within community, 8.2% replied with limited ambulation capacity within community, and only 48.0% answered with a very high ambulation capacity, as shown below in (Table 4) and (Figure 2)

**Table 4:** Participants' mobility with their prosthesis

	Frequency	%
Very high ambulation capacity	47	48, 0
Limited ambulation capacity within community	8	8, 2
Active ambulation capacity within community	28	28, 6
No ambulation capacity at all	3	3, 1
Household ambulation capacity mobility	1	1, 0
N/A	11	11, 2
Total		



**Figure 2:** Participants' mobility with their prosthesis

**Earning living**

Earning living of the respondents when asked to if they are working for their own living or 43.9% for the living of their households said that they are not working but receive an allowance and contribute to the household's living, 23.5% said that they are working for all household's costs, 10.2% are working and contributing to the household's living, 4.1% are working for their own living, and finally, 18.4% are not working, and (living at other's charge. (table 5).

**Table 5:** Earning living

	Frequency	%
Working and providing for all household's costs	23	23.5
Working and contributing to the household's living	10	10.2
Working for own living	4	4.1
Not working, at other's charge	18	18.4
Not working but receive an allowance and contribute to the household's living	43	43.9
Total	98	100.0

Further results reveal that 37.8% of respondents believe that the prosthesis is very important for earning their living, 48.0% said it is not applicable, 3.1% replied that it is important, 3.1% more or less important, and only 8.2% said that it is not important at all for earning their living

**Interaction with community**

A majority of 84.7% answered with very important' when asked about how important is their prosthesis for interacting within their community, which includes going to work, mosque, reaching school, shopping, banks, restaurants, meeting friends, and so on so forth.

10.2% said it is very important, 4.1% that it is more or less important, and only 1.0% said that it is not important at all. Further results reveal that for those who answered with important ', activities include mainly meeting friends, restaurants, shopping, and going to mosque, as shown in the table 6 hereunder:

**Table 6:** Participants' interaction with community

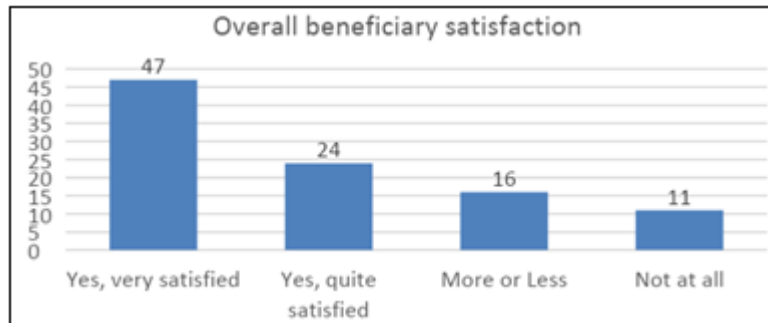
	Frequency	%
Going to work	31	7.5%
Going to mosque	76	18.3%
Reaching school/university	17	4.1%
Shopping	85	20.5%
Sport activities	33	8.0%
Restaurants	78	18.8%
Meeting friends	92	22.2%
Other	3	0.7%
Total	415	100.0%

**Overall satisfaction**

48.0% of participants said they are very satisfied and that the prosthesis met their expectation, 24.5% said that they are quite satisfied with it, 16.3% replied more or less, and 11.2% said that they are not satisfied at all with the prosthesis and it did not meet their expectation.

**Table 7:** Overall satisfaction

	Frequency	%
Yes, very satisfied	47	48.0
Yes, quite satisfied	24	24.5
More or Less	16	16.3
Not at all	11	11.2
Total	98	100.0

**Figure 3:** Overall satisfaction**5. Discussion**

Prosthesis satisfaction is viewed as a multidimensional and dynamic construct. Prosthesis satisfaction is the patient's subjective and emotional evaluation of (aspects of) the prosthesis that is influenced by the appearance, properties, fit, and use of the prosthesis, as well as aspects of the residual limb. Emotions regarding the prosthesis are also influenced by the patient's psychological state, for example, depression and anxiety; psychological factors and person-related characteristics, such as prior experiences, coping, expectations, general values, beliefs, perceptions, and social context (Batbaatar E, 2017).

The immediate reaction to the news of amputation depends on whether the amputation was planned, occurred within the context of chronic medical illness or necessitated by a sudden onset of infection or trauma (Ghous M.2015).

After learning that amputation may be required, anxiety often alternates with depression. Anxiety may be the fate of the limb that will be removed, as well as about the prospect of phantom limb pain, which many patients (who know of other amputees) may be familiar with (Ghous M.2015).

Self-assessed health status was one of the strongest predictors of patient satisfaction. It was evident that poor health status led to overall lower satisfaction levels (Schoenfelder T, et al 2011). with interpersonal care and organizational characteristics (Fan VS, et al 2005). Self-assessed health was positively correlated to patient satisfaction (Alhashem AM, et al 2011).

Result of this study revealed that 48.0% of respondents said they are very satisfied and that the prosthesis met their expectations, 24.5% said that they are quite satisfied with it, 16.3% replied more or less, and 11.2% said that they are not satisfied at all with the prosthesis and it did not meet their expectations

Expectations were studied very frequently as one of the most important predictors of patient satisfaction (Bjertnaes OA,

et al 2012). When patients expectations matched health service performance, patients were satisfied with overall health services (Atkinson S, Haran D 2005). However, associations between expectations and satisfaction were inconsistent across the studies; and methods and interpretations in the studies varied. Furthermore, expectation based theories and models were not supported by empirical studies (Crow R, et al 2002).

The study agrees with (Ali S, et al 2012) who found that the mean overall satisfaction on a 0 - to 100 - point numerical rating scale was 63.14 for the polyethylene foam liner, 75.94 for the silicone liner with shuttle lock, and for the seal - in liner.

The satisfaction with the prosthesis has a considerable effect on wearing

- **Time:** The mean satisfaction level with prosthesis was  $7 \pm 3.8$  in patients with LLA. Seven patients (23.3%) give 10 point as satisfaction level on a 10 - point rating scale. Only 2 (6.7%) patients gave 2 point on the scale as lowest score. The mean level of satisfaction with prosthesis of patients with above knee (included knee disarticulation) and other levels were so (close ( $7 \pm 2.3$  vs.  $7 \pm 3.5$ ) ( $p > 0.05$ )). (Yasin Demir, 2019)

The most common reasons of dissatisfaction in some of the participants were due to the fact of prosthesis causing pain, limits mobility, bad cosmetic appearance, and is not real as the limb, not mobile, heavy, and uncomfortable, need other options of prosthesis e. g. for sports. Some expected better quality.

This study agree was with (Yasin Demir, 2019) that the leading reasons for rejection or dissatisfaction with the lower limb prosthesis were excessive perspiration, itching and pain. Cosmetic anxiety was significantly correlated with daily prosthesis wearing time. Itching, pain and wound were significantly correlated with satisfaction with prosthesis The most common reported problem in lower limb prosthesis user patients was excessive perspiration (18 patients, 60%).

Itching related with prosthetic use was reported by 14 (46.7%) patients. Other faced problems were: pain (12 patients, 40%), wound (11 patients, 36.7%), poor socket fit or suspension (8 patients, 26.7%) heaviness of the prosthesis (6 patients, 20%), and cosmetic anxiety (2 patients, 6.7%).

During the study, it was found that 99.0% of them added that it was easy to get an appointment for ALPC. Not to mention that when they were asked if they are kept waiting for long time to receive services (physio session, casting, check socket etc.) or not, 90.9% of them said "no", 4.0% said, more or less, and 5.1% said "yes".

Results also reveal that 20.2% of them got an appointment for services follow up, and 79.8% did not. Besides, a majority of 98.0% did not pay for services and/or prosthesis, and only 2.0% did pay for their services and prosthesis.

These findings were in disagreement with (**Chris Harwood, 2014**) who reported that patient in Queen Mary's Hospital will be given a follow up appointment for about a month after he has been discharged from therapy. At this appointment the doctor will check the fit of his prosthesis and discuss his progress. Further appointments will be made as necessary. If at any time he has any problems or concerns, he is encouraged to contact the clinic for an appointment with the doctor and/or prosthetics.

These findings also were in disagreement with (**Lina Magnusson, 2014**) who reported that Access to repairs and follow - up services were important to patients, and should be addressed by both professionals operating within the rehabilitation field and policymakers.

Result of this study revealed 92.9% of respondents said that the staff are friendly and listen to them and are keen to inform and help them whenever required, 6.1% said that more or less this was the case, and only 1.0% said that they were unfriendly.

These findings were in agreement with (**Baghbanbashi A, 2022**) who reported that the satisfaction with the services summed up to  $72.12 \pm 15.89$ . In terms of service satisfaction, the highest satisfaction was related to the courtesy and respectful behavior of the employees of the complex ( $4.92 \pm 0.57$ ). The lowest level of satisfaction from services was for the coordination of clinic staff with other treatment staff ( $1.56 \pm 2.11$ ).

Further results show that 36.4% of participants answered that the prosthesis was very comfortable, 22.2% that it was comfortable, 30.3% said more or less, and 11.1% answered it was not comfortable at all due to many reasons such as causing pain, discomfort, skin problems, limit mobility, heavy, tight etc.

Another finding about wearing the prosthesis, 79.8% said that it is easy for them to wear the prosthesis, in comparison with 8.1% who said it is not the case, and 12.1% who think more or less it is easy to wear.

The above two results was confirmed with (**Nurhanisah Mohd Hawar, 2016**) who found that About 33.3% of the

subjects rated the "weight of the socket" as somewhat good. And 25% of the subjects ranked as somewhat good the items "easy to don and doff", "comfortable to wear", "cause discomfort", "cause excessive perspiration" and "appearance of the socket", while 16.7% of the subjects rated "easy to swing", "feel pain", "feel looseness", "feel tight", "cause skin irritation" and "the durability of the socket" at the same level of satisfaction.

Previous study by (**Gholamhossein Pirouzi, 2014**) reported that donning and doffing is easier in the air pneumatic suspension system (APSS) than in the current sockets. The advantage of the APSS system is the prosthesis fitting adjustment will perform after donning and doffing will perform by release pressure.

The study reveal that 54% of the amputee use the prosthesis more than 10 hours per day, 4% use the prosthesis for 4 hours and 9% use the prosthesis less than one hour.

These result corresponding with (**Yasin Demir, 2019**) that all lower limb amputees were using their prosthesis. Nineteen (63.3%) patients were using the prosthesis all day, 9 (30%) patients were using frequently and 2 (6.7%) patients were using rarely and none of the amputees had rejected prosthesis use. The mean daily prosthetic wearing time was  $11.4 \pm 3.8$  hours.

Another findings about mobility with prosthesis 48% Very high ambulation capacity, 8.2% Limited ambulation capacity within community, 28, 6% Active ambulation capacity within community, 3.1% No ambulation capacity at all, 1% Household ambulation capacity mobility, 11.2 % N/A.

A previous study by (**Nurhanisah Mohd Hawar, 2016**) were agreed when the amputees were asked to determine their level of activity that 33.3% of them rated themselves as highly active, 8.3% of the amputees rated themselves as moderately active, 41.7% said they had a low level of daily activity and 33.3% responded they were sedentary. Thus, a higher number of the amputees responded that they had low daily activity.

This agree with (**Lina Magnusson, 2014**) that the majority of patients could walk more than 1 km when using their prosthetic or orthotic device. Less than half could manage this distance without using their prosthesis or orthosis. The majority could move around in their home and rise from a chair, even though they experienced difficulties in doing so. Difficulties were reported while walking on uneven ground or up and down hills. Only a few patients could not walk on stairs or get into a car or bus, even though approximately half experienced difficulties while performing these activities.

Another findings in this study about earning living and return to work with income, 43.9% of the respondents when asked to if they are working for their own living or for the living of their households said that they are not working but receive an allowance and contribute to the household's living, 23.5% said that they are working for all household's costs, 10.2% are working and contributing to the household's living, 4.1% are working for their own living,

and finally, 18.4% are not working, and living at other's charge.

These findings in agreement with (Lilian de Fátima Dornelas, 2010) who reported that all amputees received prostheses and 16 (61.5%) of them reported using it for walking. All subjects remained off work after the accident, and 16 (66.7%) remained off work by utilizing the Social Security, six (25%) retired due to disability and two (8.3%) retired due to age. Five of the people away by Social Security returned to work and three retired due to disability and age declared that they are active to supplement their retirement income.

The importance of prosthesis in interaction within community majority of 84.7% answered with 'very important' when asked about how important is their prosthesis for interacting within their community, which includes going to work, mosque, reaching school, shopping, banks, restaurants, meeting friends, and so on so forth. 10.2% said it is very important, 4.1% that it is more or less important, and only 1.0% said that it is not important at all.

This agreed with (Thea - Louise Schober, Charlotte Abrahamsen, 2022) during a qualitative systematic review conclude that the reactions of patients' friends to their amputation varied substantially, and affected their friendship to a greater or lesser extent. Some patients felt there was no change in their interactions compared to before the amputation: "I visit my friends and we play cards (...) I was afraid they would stop playing with me but nothing has changed." (Couture et al., 2010). In contrast, other patients found that some friends were not as accepting of the new situation (Torbjörnsson et al., 2017; Washington and Williams, 2016), and that the amputation was referred to as 'the elephant in the room' (Washington and Williams, 2016). Patients even experienced a lack of contact with their friends as a result (Couture et al., 2010).

## 6. Conclusion

There has generally been a good level of satisfaction from the amputees who received their prosthesis from the ALPC. The majority of amputees had no problems in getting appointments with the ALPC. There has been a good level of interpersonal manner and communication from the ALPC staff in handling amputees. Most of the participants experienced a good level of interaction within the community.

## 7. Recommendations

- Efforts should be made to overcome the problems that cause dissatisfaction, especially amputees who have TF prosthesis which can cause difficulty in donning and doffing or the prosthesis is causing pain, discomfort, skin problems, limited mobility, heaviness, tightness etc.
- The majority of amputees who use upper limb prosthesis were unsatisfied with their prosthesis as it doesn't help the functionality. It is recommended to consider these issues.

- It is recommended that a follow - up appointment be established for amputees as the majority of participants reported they didn't have follow - up appointments. A follow up appointment may help to reduce problems from an early stage.
- There were issues with amputees' interaction within the community, it is advisable that the ALPC employ a social worker who can provide psychosocial support to combat this issue
- Make efforts to improve the walking distance and duration for users of prosthesis and try to overcome problems such as pain, pressure, skin problems, friction etc. caused by the prosthesis.

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