

# Users' Satisfaction with Assistive Devices in Afghanistan

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## ABSTRACT

**Purpose:** The objective of this study was to assess users' satisfaction and effectiveness of assistive devices in four regions of Afghanistan, namely Mazar-e-Sharif, Ghazni, Jalalabad and Taloqan.

**Method:** A random sample of 785 users, who were provided with 874 mobility and assistive devices in four regional prosthetic and orthotic workshops of the Swedish Committee for Afghanistan (SCA), participated in the study.

**Results:** The study revealed that the majority of the participants rated the assistive devices as very useful. While 45% of respondents even described them as excellent, 49% expressed a good level of satisfaction with the services they received at treatment centres. Similarly, the majority of respondents (67%) mentioned a maximum level of improvement, while 15% claimed to have witnessed some improvement in their physical condition. Fitting, comfort, and ease of use, along with durability, weight and appearance were rated as the most important factors of assistive devices. On the other hand, slow service and limited access to maintenance and repair facilities were identified as reasons for dissatisfaction.

**Conclusion:** The study provided continuous and valuable information to rehabilitation professionals regarding device effectiveness and satisfaction. The findings also recommended a stronger focus on comfort and usefulness of mobility and assistive devices. Lastly, the study suggested that lack of local device-repair service needs to be addressed by rehabilitation professionals.

**Key words:** physical rehabilitation, mobility and assistive devices, users' satisfaction, improvement in physical condition

## INTRODUCTION

The International Classification of Functioning (ICF) defines assistive devices and technology as any product, equipment, instrument or technology adapted

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or specially designed for improving the functioning of a person with disabilities (World Health Organisation, 2002). Assistive devices have the potential to reduce occupational performance limitations in everyday life by facilitating and enhancing work performance and social interactions. An assistive device may compensate for decreased or lost physical function. It may also increase or maintain the ability or prevent the future loss of such function and ability (Edyburn, 2007). The United Nations Convention on Rights of Persons with Disabilities (UNCRPD, 2006) mandates state parties progressively ensure access to assistive technology (Article 20), to health (Article 25), and to rehabilitation services (Article 26). Indeed, the Government of Afghanistan has ratified and signed the CRPD in 2012. As such, it is one of the few low-income and conflict-affected countries to include disability and physical rehabilitation in the Basic Packages of Health Services and Essential Packages of Hospital Services. Access to physical rehabilitation has also been guaranteed through the National Strategic Plan for Disability Prevention and Physical Rehabilitation 2017-2021 (Ministry of Public Health, 2017). Still, an estimated 149,000 persons with disabilities who need assistive devices, receive it largely through national and international NGOs.

Swedish Committee for Afghanistan (SCA) is one of the leading organisations in the field of physical rehabilitation services in Afghanistan. There are four regional physical rehabilitation centres managed by SCA, which are rendering physiotherapy, prosthetic, orthotic and mobility aids. There are an additional eight physiotherapy centres at provincial level. The services are provided free of charge. In addition, persons receiving assistive devices are provided free travel allowances, accommodation, and food during their stay in the physical rehabilitation centre.

The assistive devices provided in Afghanistan often result in an obvious change in a person's ability, and the evidence is easily noticed in comparison to other physical rehabilitation services, such as physiotherapy and occupational therapy. Nonetheless, very little is known about the need and effectiveness of assistive devices and the satisfaction level of users. Whereas evidence-based practices should be the basis of all rehabilitation, including application of assistive devices, very little data is available in the area (Fuhrer, 1999). In reality, user satisfaction reflects the client's needs, the perception of the service and device quality, and the extent to which priorities of the client are aligned with the design of the product (Magnusson et al, 2013). It includes technically precise device manufacturing, cosmetic appearance, comfort, functionality, and the possibility of local repair.

Factors that affect user satisfaction with rehabilitation services include provider competence, being treated with dignity and respect, informed choice, emotional support, efficiency in providing services, and available facilities (Jennings et al, 2005). Many studies have been conducted in high-income countries, but very few studies have assessed user satisfaction in a low-income country like Afghanistan (Magnusson et al, 2013).

## **Objective**

The study aimed to investigate client satisfaction concerning products, services related to assistive devices, their serviceability and usefulness. The study may provide empirical evidence on user satisfaction related to rehabilitation and assistive devices in low-income and conflict-affected countries, such as Afghanistan.

## **METHOD**

### **Study Design**

The cross-sectional study, conducted between January and December 2017, utilised a set of structured questionnaires which considered different aspects of satisfaction as well as limitations related to data collection in insecure and low-resource settings. The questionnaires were field-tested prior to final use, and researchers had a clear understanding about data collection and analysis. The questionnaires were used with diverse population groups, who use different types of assistive devices to compensate for their physical impairments.

### **Setting**

The study was undertaken in four prosthetic and orthotic centres in four regional physical rehabilitation centres. There is a range of assistive devices produced and delivered in these centres; they include prostheses, orthoses, wheelchairs, tricycles, axillary crutches, tripods, quadripods, canes and chairs for persons with cerebral palsy, among others. About 72% of persons with disabilities who received any of these devices had war-related injuries.

### **Participants**

The sample was drawn from the client register at each of the four regional

prosthetic and orthotic centres. The study was conducted throughout the year by drawing samples from all four rehabilitation centres. Based on the expected number of users per year, a random sample of 8% was considered appropriate. Respondents considered for the study were in the age group of 14 years and above. The 785 clients who were randomly selected included 240 women and girls and 634 men and boys, provided with 874 assistive devices. Efforts were made to ensure that the sample was representative of both men and women clients, and that different device categories were considered.

### **Data Collection and Analysis**

The questionnaire comprised 11 items, of which 6 were related to user satisfaction with assistive devices and 5 were related to service delivery. Another 8 questions were related to improvements in the physical condition and quality of life due to using the device. Four response levels were set up to assess service satisfaction, namely *very bad*, *average*, *good* and *excellent*, whereas improvement was categorised as *no help*, *little help*, *some extent*, *maximum extent* and *no opinion*.

To avoid biases and maintain neutrality, the questionnaire was administered by non-service providers, including receptionists, community-based rehabilitation workers, and field supervisors. The questionnaire was translated into the local language, and research participants were informed about the purpose of the study prior to giving consent. Face-to-face interviews were conducted for illiterate participants.

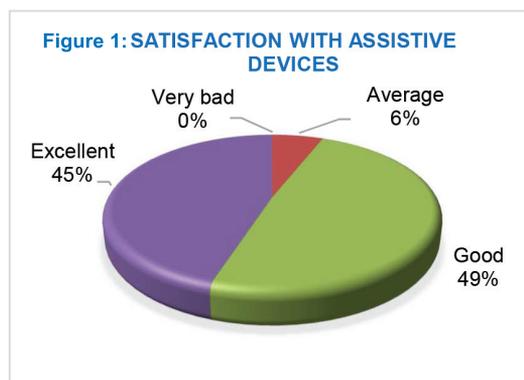
Data was entered in MS Excel by regional information officers. Final data was compiled and analysed by the senior disability programme specialist, based in Kabul. For final analysis and reporting, the total score for each domain was converted into percentages.

### **Limitation**

First, the possibility of bias cannot be ignored, as SCA staff employed at the physical rehabilitation centres conducted the interviews. An element of social desirability bias is possible, as participants might have responded in a way that is expected by or acceptable to the interviewers. Furthermore, since assessment involved different device users, a more nuanced perspective might not have been gained.

## RESULTS and DISCUSSION

In general, users were satisfied with the assistive devices and service provided. The services were rated as *excellent* and *good* by 45% and 49% of the respondents respectively. Only 6% of the respondents expressed a satisfaction level of *average* (Figure 1).



Similarly, 71% of the respondents rated the welcoming and overall behaviour of staff members as *excellent* (Table 1).

However, satisfaction was lowest in terms of local repair services, as 47% of respondents claimed that devices could not be repaired locally.

**Table 1: User Satisfaction related to Assistive Devices and Services**

Domains of Satisfaction	Very Bad	Average	Good	Excellent
Welcome and Behaviour at the Registration Counter	0%	4%	25%	71%
Physical Accessibility within Workshop and its Environment	0%	6%	32%	62%
Facilities within the Mobility and Assistive Devices Workshop	0%	8%	32%	60%
Speed of Service	1%	12%	21%	66%
Respondent's Participation in deciding about Devices	0%	9%	29%	62%
Gait Training provided to the Person	1%	8%	27%	64%
Training provided by Staff regarding Device Use and Maintenance	1%	8%	28%	64%
Device Durability, Look and Weight	0%	7%	39%	54%
Fitting, Comfort and Ease of Use of Device	1%	6%	32%	61%
Access to Local Repair Options	47%	18%	18%	17%
Overall Satisfaction	0%	6%	49%	45%

Apart from assessing satisfaction levels, the study explored the purpose and impact of the devices by service users, following the criteria of the International Classifications of Functioning guidelines of the World Health Organisation

(2002). Most participants opined that their assistive devices would be helpful in sitting, standing, moving, self-care, domestic lives, going to school, carrying out employment, sports and leisure activities, and maintaining relationships. An overwhelming majority of 91% felt that their assistive devices would be more helpful in their movements. While 51% argued that these devices would be helpful for accessing education centres, 52% claimed that their devices would support them with access in places of employment. Moreover, 67% and 15% of the study participants said that these devices would aid them in maintaining social relations to a *maximum* or *some* extent respectively.

**Table 2: Physical Improvements with Assistive Devices**

Activities	No Help	Very Little	Some Extent	Max Extent	No Opinion
Sitting and Standing	1%	3%	22%	67%	7%
Moving Around	0%	2%	19%	72%	6%
Self-Care (dress, bath, eating, use of toilet)	1%	9%	19%	59%	12%
Domestic Life	1%	10%	16%	59%	14%
Accessing Education Centre	3%	8%	11%	40%	38%
Accessing Place of Employment or Non-Remunerative Employment	2%	5%	12%	40%	41%
Sports and Leisure	1%	4%	21%	60%	14%
Maintaining Social Relations	2%	2%	15%	67%	14%

A study conducted in South Korea by Sang-Heon Lee in 2014 revealed similar findings. The results of the study showed that 16.7%, 29%, 31.2 % and 20.3% of respondents were very satisfied with the following attributes: weight, durability, ease of use and comfort respectively. Moreover, 29% were satisfied with service delivery and 26% acknowledged the professional nature of the services. The study also mentioned impacts related to the usage of assistive devices. As per the study findings, 37.8% of the respondents used their devices for activities of daily living, 34.45% for mobility, 5.74% for education and 3.83% for cultural, leisure and sports activities. It can therefore be concluded that despite socio-economic differences prevailing in both countries, satisfaction levels of service users and the impact of standardised assistive devices on their physical functions are similar.

## CONCLUSION

Assistive devices improve user ability to perform daily activities and decrease user dependency on human assistance (Agree et al, 2004). A hallmark of evidence-based

practice is a commitment to address service user expectations and goals (Fuhrer et al, 2003). This study is the first of its kind to examine the impact of assistive devices and user satisfaction of physical rehabilitation centres in Afghanistan. The results indicated that the overall satisfaction with both assistive devices and related services was very high. The study also suggests that assistive devices successfully contribute to enhancing mobility, improving access to education and employment, and fostering social participation of service users. Moreover, the study is a critical tool to address individual needs and promote participation of service users. It provided valuable feedback to beneficiaries, family members, prosthetists, orthotists, physiotherapists, occupational therapists, and the service facility to critically scrutinise their products and services. Reflections on the different aspects of the examined services will not only help to improve product quality and staff conduct, but will also promote the active participation of service users in making decisions about their devices.

## ACKNOWLEDGEMENT

The study was conducted in four physical rehabilitation centres of the Swedish Committee for Afghanistan. The author would like to express his appreciation to the SCA management, and the Disability Programme Manager in particular, for providing the support necessary to conduct and publish this study. Special thanks to the SCA colleagues Dr. Aziz Baig, Wycliffe Ochieng, and Sandra Kukla who helped in finalising the article.

The author is truly grateful to all the persons with disabilities who spared their valuable time to participate in this study, as well as all the field level staff of the disability programme who voluntarily conducted the interviews and collected data.

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