

Barriers for Accessing Assistive Products in Low- and Middle-Income Countries (LMICs)

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Abstract. WHO implemented the Rapid Assistive Technology Assessment in 2021. This is a household survey on self-reported use, need and barriers for accessing AT in 35 countries globally. In order to obtain comparable data, all surveys followed guidelines developed by WHO, including national two-stage random sampling of households. The 2021 rATA survey included 32 of a total of 140 LMICs globally. Around 40 % of the total respondents (all countries) estimated travel distance to be <5 km, varying from less than 10 % to almost 60 % among the countries. Around 15 % had to travel more than 50 km, varying from 1.3 % to 37.5 %. More individuals living in rural as compared to urban areas had to travel more than 25 km to get their main assistive product. Gender differences were marginal. By far the most prevalent barrier to access assistive products was "Cannot afford", amounting to 39.9% and varying from 6.7 % to 79.1 % among countries. This was followed by "No support" with 14.3 %, varying from 2.3 % to 36.9 %, and "Not available" with 8.1 %, varying from 1 % to 21.5 %. More barriers were reported in rural than urban areas and women report more barriers than men. Variation between countries in both travel time and barriers is substantial and country-specific service development is needed to guide service development.

Keywords. Assistive products, access, low- and middle-income countries

1. Introduction

Access to Assistive Technology (AT) and relevant services is of great importance for inclusion of persons with functional difficulties in education, employment and social life. The Global Report on Assistive Technology (GReAT), published in 2022 by the World Health Organization (WHO) and United Nations Children's Fund (UNICEF), estimated that 2.5 billion people currently need AT [1]. GReAT further confirmed large unmet needs for AT across the world, and particularly in LMICs. The report presented estimates on access to AT varying from 3% to 90% among individuals who needed AT, with the lowest estimates among the poorest countries. In poor and vulnerable populations, access to AT and related services may be a key element in poverty reduction and development of inclusive societies. While a broad systems approach is necessary to ensure access to

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AT for all, understanding the barriers to accessing AT in LMICs is one important element in systems building.

2. Method: The Rapid Assistive Technology Assessment

WHO implemented the Rapid Assistive Technology Assessment in 2021. This is a household survey on self-reported use, need and barriers for accessing AT in 35 countries globally. To obtain comparable data, all surveys followed guidelines developed by WHO, including national two-stage random sampling of households [3]. While some of the studies were implemented in special populations, most of the studies were representative for the respective countries or in some cases regions within countries. Based on the list of LMICs developed by OECD, the 2021 rATA survey included 31 of a total of 140 LMICs globally², including more than 300 000 respondents from all WHO regions. Of these, most were representative studies at national or regional level. The rATA data presented in this paper also includes three high income countries. A few countries' data did not distinguish between urban/rural mainly due to use of telephone for data collection. Because of the dominance and character of spectacles as assistive products, some of the analyses were done with and without spectacles.

3. Method: The Rapid Assistive Technology Assessment

Respondents using assistive products were asked to estimate travel distance to get their main assistive product. While this is not a direct question about barriers, it is used here to represent a potential barrier for people with limited resources. Around 40% of the total respondents (all countries) estimated travel distance to be < 5 km, varying from less than 10% to almost 60% among the countries. Around 15% had to travel more than 50 km, varying from 1.3% to 37.5%. Taking spectacles out of the analyses, the proportion of respondents reporting < 5 km to get their main assistive product increases from 40% to 49%, varying among the countries from 21.6% to 67.1%. A total of 11.5% travel more than 50 km, varying from 2.1% to 39.1%. More individuals living in rural as compared to urban areas travelled less than 5 km (Figure 1)

² Including Upper- and Lower Middle-Income countries and Low-Income Countries according to World Bank classification:
<https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups>

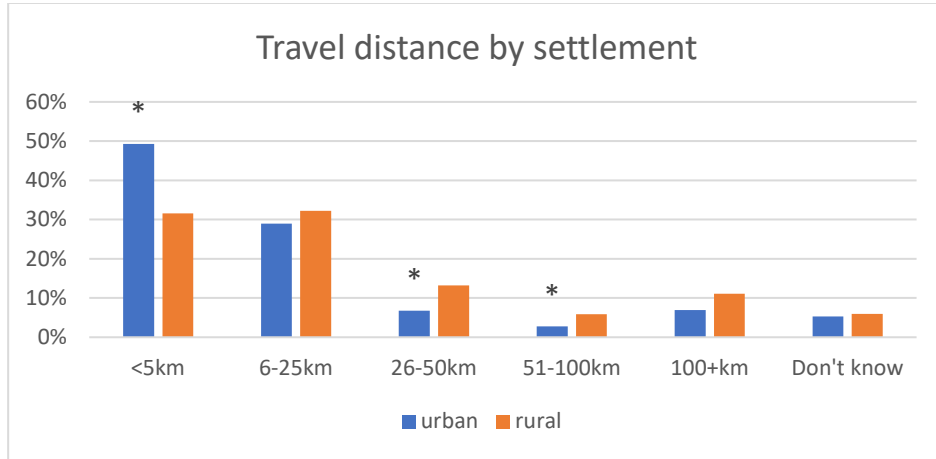


Figure 1. Travel distance to get main assistive product by location (26 countries, N = 49779)

Gender differences were generally small, although a tendency was found for more males to travel longer than females to get their main assistive product.

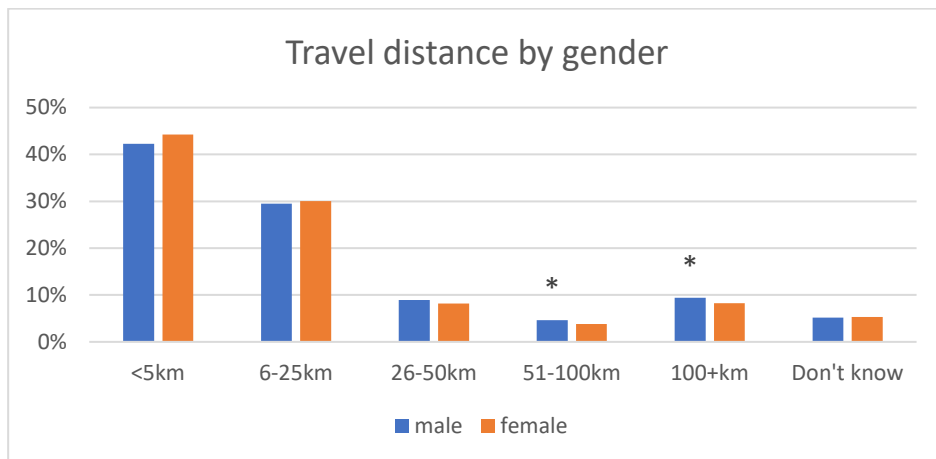


Figure 2. Travel distance to get main assistive product by gender (31 countries, N = 53492)

The survey included the Washington Group Short Set and thus allowed for comparison of travel time between individuals with different levels of functional limitations. Figure 3 compares individuals with "No difficulty" with individuals with at least "Some difficulty". Figure 4 compares individuals with "No difficulty" or "Some difficulty" with individuals with "A lot of difficulty". There is no significant difference when using "Some difficulty" as a threshold, while a weak tendency is present for individuals with severe disability to travel longer than individuals with "No difficulty" or "Some difficulty" (Figure 4), although this was significant only for 100 + km.

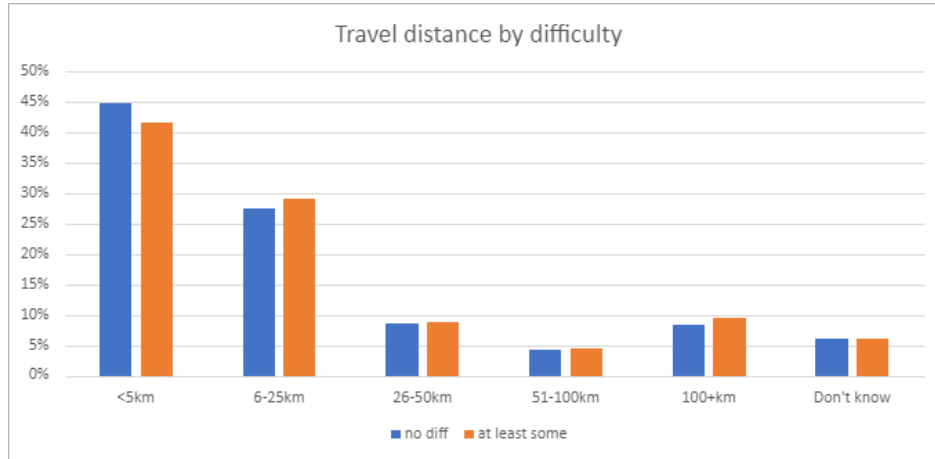


Figure 3. Travel distance by functional difficulty ("No difficulty" compared to "At least some difficulty") (31 countries, N = 53492)

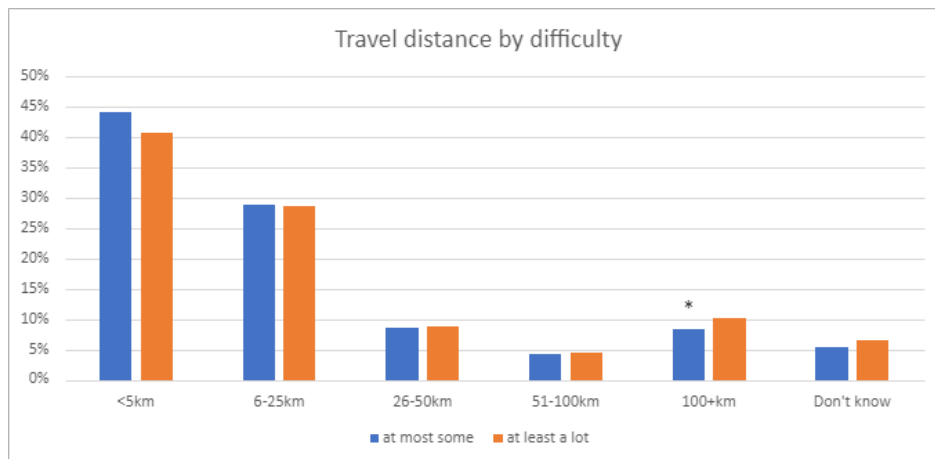


Figure 4. Travel distance by difficulty ("No difficulty" and "At least some difficulty" compared to "At least a lot of difficulty") (31 countries, N = 53492)

The direct question about barriers was "Why don't you have the assistive product that you need?". Responses were restricted to nine answer categories. By far the most prevalent response was "Cannot afford", amounting to 39.9% and varying from 6.7% to 79.1% among countries. This was followed by "No support" with 14.3% and varying from 2.3% to 36.9%, and "Not available" with 8.1% and varying from 1% to 21.5%. When excluding spectacles from the analyses, "Cannot afford" increased to 48%, varying from 11.9% to 85%, followed by "No support" and varying from 4.5% to 41.7%, and "Not available", varying from 1.3% to 40%. Figure 5 shows the overall picture and that the barriers "Not available", "Too far" and "Stigma" scored higher in rural than in urban areas.

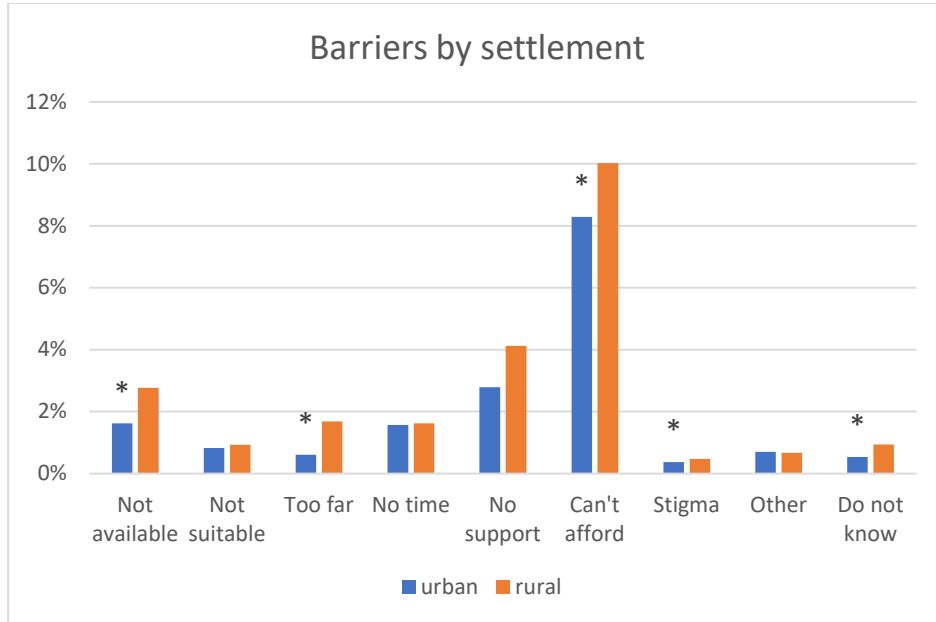


Figure 5. Barriers for accessing a needed assistive product by location (26 countries, N = 49779)

In general, females report more barriers than males. This is particularly the case for the barriers "Cannot afford", "No support", "No time", and "Too far" (Figure 6).

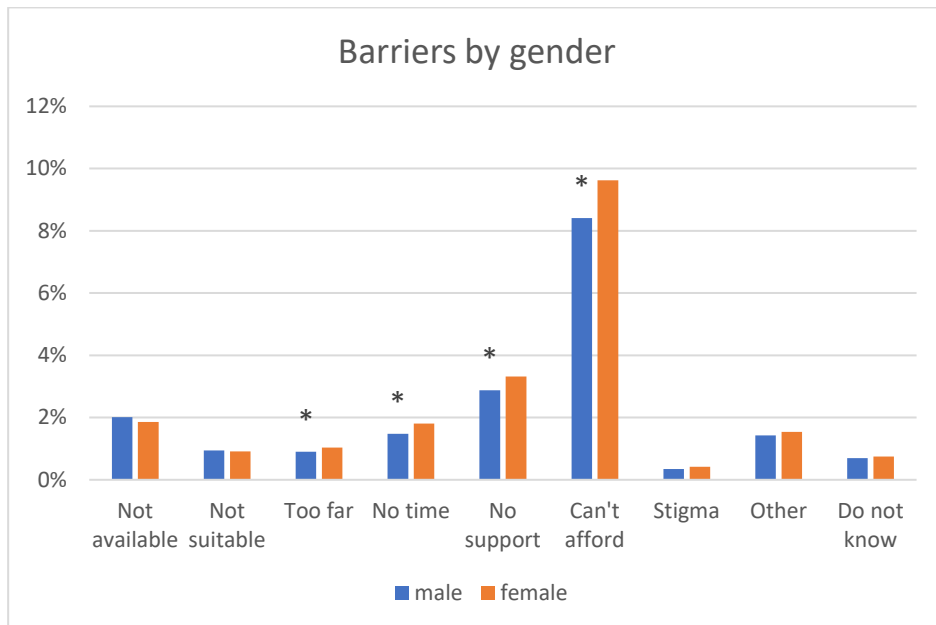


Figure 6. Barriers for accessing a needed assistive product by gender (31 countries, N = 53492)

4. Discussion

The rATA study is unique in being the first global data collection on use and need for AT globally. A thoroughly developed and implemented methodology provides us with a much better picture of the global situation than has been possible with previously limited and not well coordinated research efforts. The self-reported data and unavoidable differences in implementation across countries point to limitations of the study that need to be considered when interpreting results. One aspect worth mentioning here is that awareness about AT will vary between countries, possibly between men and women and between urban and rural locations. This may have some influence on the presented results.

Previous research has shown long travel distance as an important barrier in LMICs for accessing health services, and this applies also to accessing assistive products. As expected, rural populations largely have to travel longer distances, which is often caused by services being located in urban areas. Concerning reasons for not accessing assistive products, the cost is the primary barrier, followed by lack of support and limited availability. More women than men face barriers which is not surprising bearing in mind widespread discriminatory practices against women. Even the tendency for males to travel longer to get the assistive product that they need may be interpreted within the same explanation as women may be restricted from travelling.

The results presented here draw up a global picture. It is important to underline that the variation between countries is substantial and country-specific analyses are needed to guide service development.

References

- [1] WHO. Global Report on Assistive Technology. 2022. Geneva: World Health Organization.
- [2] Zhang W, Eide AH, Pryor W, Khasnabis C, Borg J. Measuring Self-Reported Access to Assistive Technology Using the WHO Rapid Assistive Technology Assessment (rATA) Questionnaire: Protocol for a Multi-Country Study. *International Journal of Environmental Research and Public Health*; 2021, 18(2), 3336. <https://doi.org/10.3390/ijerph182413336>