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Access to Assistive Technology: Preliminary Results from the Implementation of the rATA Survey in Italy

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Abstract. The present contribution reports on the preliminary results from the implementation of the rapid Assistive Technology Assessment (rATA) con in Italy. The target population of the survey included residents in Italy aged 0+. The interviews have been conducted through the two mixed interview techniques: CATI (Computer Assisted Telephone Interviewing), and CAWI (Computer Assisted Web Interviewing). In total, 10170 individual responses (52.2% females; 47.8% males) were collected in the period June-September 2021. Prevalence of AT use resulted 58% of the total sample. Only 6.9% of the total population reported an unmet AT need. No differences were observed for what concerns the use of AT according to gender or living conditions (i.e., rural vs. urban). The majority of AT users resulted at least satisfied with their products (83.6%), less so with assessment and training (58.3%) and maintenance (37.8%) services. On the ground of the present results, actions will be undertaken in Italy to promote a continuous collection of data on AT access and quality to ensure that AT systems across the country are capable of maintaining high standards of AT provision over time.

Keywords: Assistive Technology Access, Provision, Procurement, Quality, Rights

1 Introduction

Assistive technology (AT) products, from spectacles to social robots, enable people to live healthy, productive, independent, and dignified lives by facilitating their participation in education, the labor market and civic life [1]. Given the benefits brought about AT for the individual and society, access to AT has been recognized as a fundamental
human right by the Convention on the Rights of Persons with Disabilities (CRPD). Yet only 10% of the people in need of an AT product have access to it [2].

To date, no data have been systematically collected on a global scale about access to AT products. The reason for such lack of data may include the high variability of AT provision practices across systems and countries, which in turn may have prevented the development of tools that could be used to collect comparable information about AT access in different contexts. To overcome this challenge and allow direct comparisons between AT systems across countries and populations, GATE has developed the rapid Assistive Technology Assessment (rATA) questionnaire [3].

On February 2021, a consortium of Italian governmental and non-governmental institutions has partnered with WHO to conduct a nation-wide survey using the rATA with a view to provide governmental authorities (e.g., Ministry of Health) as well as non-governmental organizations (e.g., AT users associations) with a specific tool to collect baseline data and continuously monitor AT access at national as well as regional level.

1.1 The Italian Context

Italy has a population of about 60 million inhabitants, and it is the third-largest national economy in the European Union. The country has a tax-funded universal national health service (Servizio Sanitario Nazionale, SSN) that guarantees the universal provision of comprehensive care throughout the country. Responsibility for the organization and delivery of services, including AT provision, is attributed to its 20 regional authorities. The provision of AT and prostheses is regulated by the ‘Nomenclatore Tariffario’: a law of the Italian state (DPCM 12/01/2017) establishing essential level for assistance (LEA) within the SSN. Roughly described, the decree includes a list of Assistive products (organized by category, code) that can be financed by the SNN. Health professionals in force of the SNN may take advantage of the expertise of independent professionals working in specialized Centres for AT belonging to the GLIC network. These Centres constitute a point of reference for SSN professionals, other stakeholders (e.g. families; school teachers) and for people with disabilities. They offer a variety of AT-related services, in collaboration with professionals from the relative local health authority, social services and, in the case of children, the school system. The Centres for AT are managed at a local and regional level, with the objective of helping the users and the professionals to identify the most suitable AT. Usually, Centres for AT belong to a more complex network of public services, and are part of the rehabilitation, education, and assistance pathways which are addressed to the person with disabilities and which provide the involvement of different, but mutually integrated, professional profiles. Despite the maturity of the AT service delivery system in Italy, no data have been systematically collected on the need and unmet need for AT in the Italian population, as well as on the overall perceived quality of the associated services.
2 Method

2.1 Participants

The target population of the survey included residents in Italy aged 0+. The stratification of the sample (see below) allowed to obtain information on the inhabitants of the 4 subnational areas (North-East, North-west, Center and South) and of different living contexts (urban and rural, small and large cities). People with functional limitations or disabilities were randomly intercepted based on their different prevalence in the population.

2.2 Survey Method

The rATA has been implemented as a stand-alone questionnaire [4]. Before its administration, the rATA has been adapted and translated into Italian [5]. The interviews have been conducted through the two mixed interview techniques: CATI (Computer Assisted Telephone Interviewing), and CAWI (Computer Assisted Web Interviewing). The use of mixed techniques made it possible to limit critical issues by maximizing the potential advantages of each technique. The choice to introduce the CAWI technique in population surveys is based on the need to contain the costs of the survey, but also and above all to exploit the potential offered by technology to intercept segments of the population that are increasingly elusive compared to traditional techniques (telephone interviews), and thus improve the coverage capacity of surveys, while increasing response rates. The combination with the CATI-CAWI technique allows to obtain the responses of those who might have a low propensity to use new technologies, or find themselves unable to fill out an online questionnaire or prefer to carry out the interview with the support of a surveyor. A 2-day training course was organized to train CATI enumerators.

2.3 Sampling Strategy

The sample design has been stratified with numbers proportional to the reference universe, with respect to the variables deemed most suitable for the selection of the sample. In fact, simple random sampling (each unit has the same probability of being included in the sample) is rarely used in sample surveys because it does not use the information known a priori on the population and on the distributive characteristics of the variables. Furthermore, the extraction of the units is completely entrusted to chance, and this can lead to organizational difficulties related to the achievement of the units to be surveyed. If the structure of the universe is such as to allow the identification of homogeneous areas (clusters) with respect to the variables to be detected, it is possible to determine more efficient estimates than those obtainable with a simple random sample through the stratified sample, i.e., the sample obtained from the union of those extracted from the single cluster. The strata into which the universe is divided are determined by the combination of the variables under study (or, in the case of a single variable, by the modalities it assumes): for instance, for a sample of individuals, structural
characteristics can be considered as distinctive variables. Random samples are extracted from individual clusters with autonomous methodologies. The stratification variables that have been considered for the purpose of the current survey are: (a) the geographic area and the demographic size of the municipality of residence of the interviewees, which identifies the geographical coordinates within which the interviewee is located; (b) the gender, which can have an influence in determining opinions and behaviors relating to the issues discussed, and (c) the age, which may have an influence in determining opinions and behaviors relating to the topics covered.

2.4 Sample Size Estimation

The sample size assumed is 10,000 people and ensures, at a 95% confidence level, a sampling error of 1.0%. Furthermore, the stratification carried out guarantees more efficient estimates than simple random sampling of the same number. The sample size is based on global estimates of disability prevalence (i.e. 15%) as reported in the WHO World Report on Disability [6]. The confidence level and the sampling error indicated refers to the estimate of the key indicator represented by the people in need of AT, while the sampling error related to the access rate among the Italian population to the AT is 2.5% at a 95% confidence level.

3 Results

The analyses of the Italian dataset are currently ongoing. For this reason, in the present contribution we report only on the analysis published in the Global Health Observatory developed for the scope of the Global report on Assistive Technology (GReAT) [7]. In total, 10170 individual responses (52.2% females; 47.8% males) were collected in the period June-September 2021. Prevalence of AT use resulted 58% of the total sample (Fig. 1). As shown in Fig. 1, high levels of met needs were reported (51.7%) against an overall need of 58.6%. In other words, only 6.9% of the total population reported an unmet AT need.

![Fig. 1. Prevalence of use, need, met need, and unmet need for assistive products by function limitation with spectacles.](image)

Notably, when excluding the users of spectacles alone form the dataset, the proportion of unmet needs decreases to 4.1%. Visual inspection of the data collected revealed no
noticeable differences for what concerns the use of AT according to gender or living conditions (i.e., rural vs. urban). At a further inspection of the data, the distribution of AT users across the different geographic areas resulted well balanced, without noticeable differences across regions. The three most commonly reported AT products in use included spectacles (44.4%), pill organizers (3.8%), and magnifiers (3.2%). The vast majority of products in use (82%) were purchased out-of-pocket, likely for the high number of products for vision (i.e., spectacles) included. Indeed, when excluding the spectacles from the dataset, the proportion of AT purchased out-of-pocket decreases to 56%.

The majority of AT users resulted at least satisfied with their products (83.6%), less so with assessment and training (58.3%) and maintenance (37.8%) services. Products resulted however overall suitable in different living environments (range of satisfied users 81.3%-78.5%).

4 Conclusions

The steady increase in the number and proportion of older adults in the Italian population, combined with direct and indirect effects of the current pandemic situation on the health and social care systems, are expected to widen the challenges faced by people in need of an AT product. For this reason, strengthening access to AT for disabled persons and those who are frail can be considered a national priority to prevent social inequalities and improve the quality of life of the Italian population. On the ground of the present results, actions will be undertaken to promote a continuous collection of data on AT access and quality to ensure that AT systems across the country are capable of maintaining high standards of AT provision over time.

References