

QUALITY OF AN ASSISTIVE TECHNOLOGY APP FOR OLDER ADULTS WITH DISABILITIES: PRIMARY CARE PHYSICIAN'S PERSPECTIVE

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ABSTRACT

PURPOSE: Lack of information has been reported to be the main barrier to access assistive technology (AT) among older Hispanic living in Puerto Rico. This study aimed to assess the quality of My Assistive Technology Guide (MATG) among Primary Care Physicians (PCPs) to increase older Latinos' access to AT and describe the PCPs experiences using the MATG. **METHODS:** In this pilot usability project, ten PCPs were trained in the use of the MATG prior to using it for 30 days. At the end of the usage period, a mixed method design was used to simultaneously collect quantitative data using the User Mobile Application Scale (uMARS) and qualitative data through interviews. Data analysis included descriptive statistics and a thematic content analysis. **RESULTS:** The overall uMARS mean score was high (4.4 ± 0.61). Functionality domain obtained the highest rating (mean 4.8 ± 0.53) while customization domain obtained the lowest (mean 2.3 ± 0.43). Subjective quality was rated high (mean 3.0, IQR 1.0). The PCPs reported a positive experience using the MATG to learn and inform older adults about AT and provided recommendations to improve the MATG and support its use as part of their medical practice. **CONCLUSIONS:** The results indicated a high quality and usefulness of the MATG, suggesting that it might be a useful tool for PCPs' management of older adults' functional disabilities. Future research is recommended to assess the effectiveness of the MATG in the prevention and management of older adults' functional disabilities.

INTRODUCTION

- Function in daily activities is an important determinant of health¹
- Older Latinos living in Puerto Rico (PR) account for one of the highest rates of functional disabilities (FDs) (27.6%) compared to older Latinos (17.2%) and Whites (13.0%) living in the continental US.²
- Assistive technologies (AT) can improve older adults' function in daily activities, leading to improved wellbeing, allowing older adults to live longer at home or in the community.³
- A lack of knowledge and awareness about assistive technology devices and services has been reported among health care professionals.⁵
- Primary Care Physicians (PCPs), are essential in the provision of AT role given their important role in addressing the FDs that result from older adults' chronic diseases.⁵
- This study aimed to:
 - Assess the quality of My Assistive Technology Guide (MATG)⁶ web app among Primary Care Physicians (PCPs) to increase older Latinos' access to AT
 - Describe the PCPs experiences using MATG web app.

METHODS

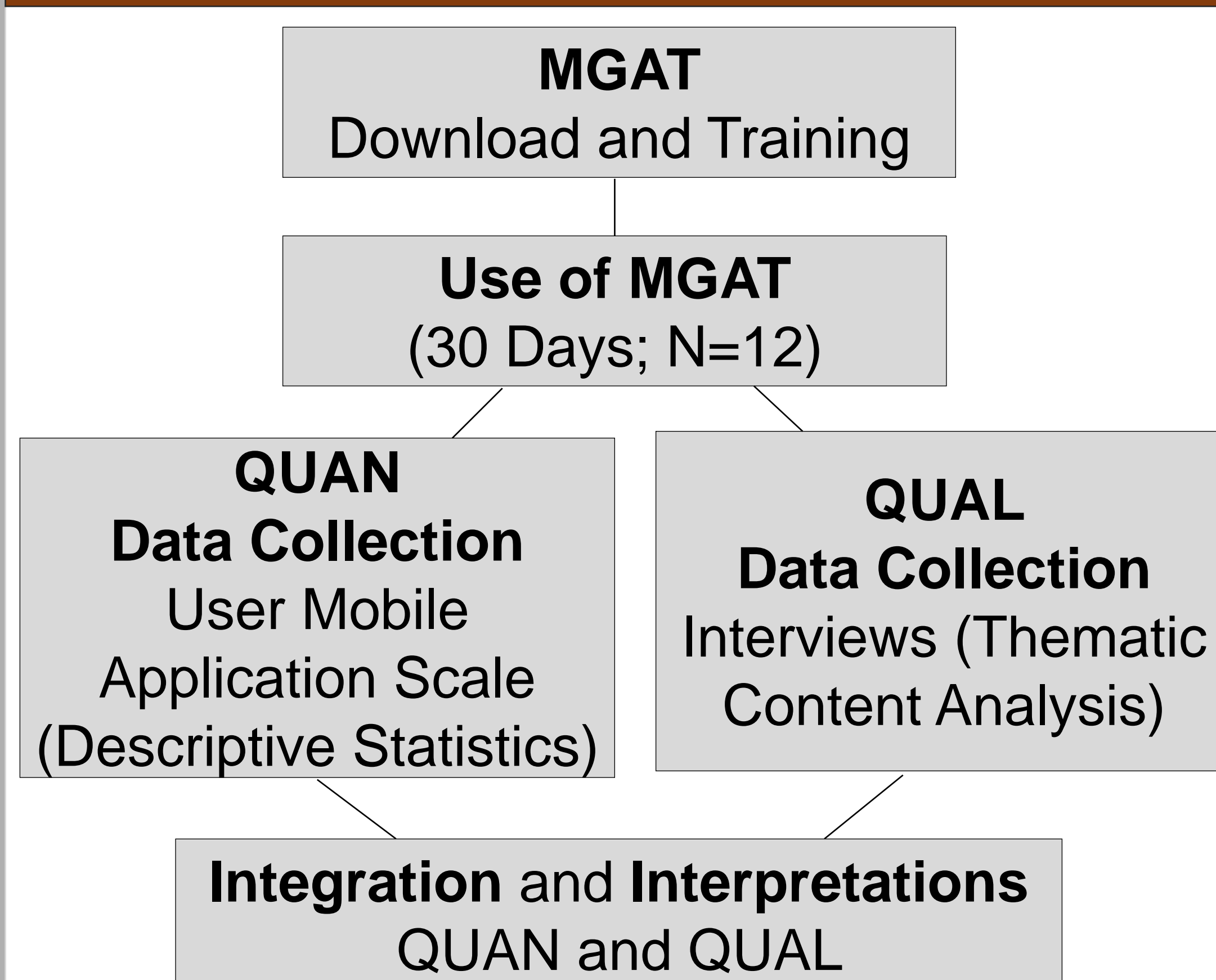


Figure 1. Study procedures and concurrent mixed method design.

MY ASSISTIVE TECHNOLOGY GUIDE

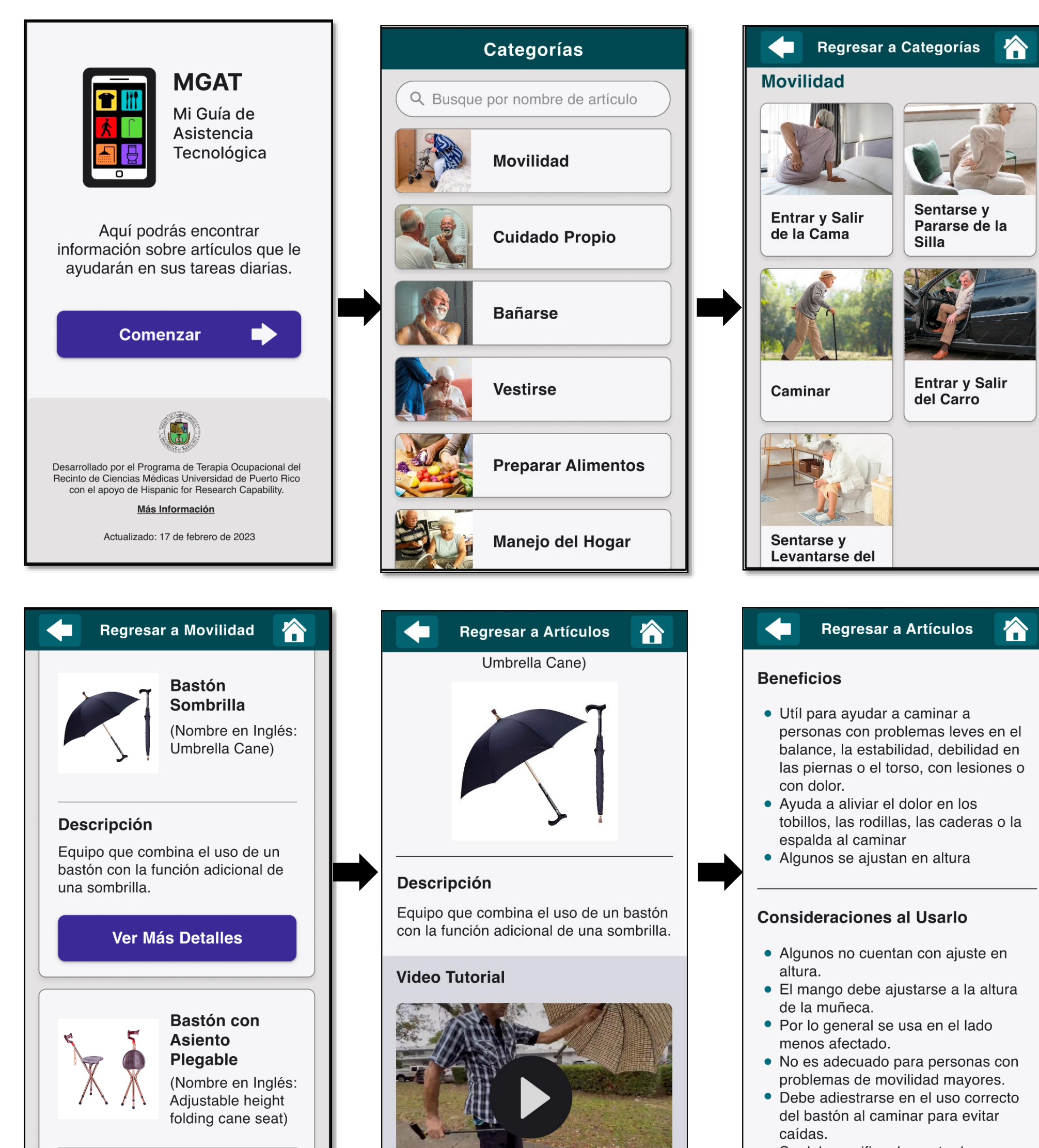


Figure 2. Screens of the MGAT Web APP

PARTICIPANTS

Characteristics	Primary Care Physicians (N=10)
Age (Mean; Range in years)	45.7; 29 - 67
Sex (n; %)	
Male	4 (40%)
Female	6 (60%)
Specialty (n; %)	
Geriatrist or fellow	6 (60%)
Family medicine	1 (10%)
Internal medicine	3 (30%)
Worksite (n; %)	
Private clinic	7(70%)
UPR Hospital Federifo Trilla	5(50%)
Medical Science Campus Clinics	3(30%)
Assistive Living Facility	3(30%)

RESULTS

- ENGAGEMENT: M = 3.34; SD = 0.82**
 - It is entertaining and interesting
 - Does not allow customization
 - Does not provide notifications or feedback
- FUNCTIONALITY: M = 4.25; SD = 0.71**
 - Intuitive and easy to use
 - Performance dependent on internet speed
- AESTHETICS: M = 4.27; SD = 0.64**
 - Layout well organized
 - Appearance should be more visually appealing
- INFORMATION: M = 4.60; SD = 0.51**
 - Concise and relevant
 - Clear pictures
 - Add a screening of function and personalized ATDs recommendations; narration to videos, CPT Codes, medical justification, and print capacity
- SUBJECTIVE QUALITY: M = 3.93; SD = 1.19**
 - Will continue using the MGAT
 - Would recommend the MGAT to PCPs, physiatrist, and rheumatologist
 - Medical equipment suppliers should pay for the MGAT
- PERCEIVED IMPACT: M = 4.82; SD = 0.39**
 - All PCPs used the MGAT with their patients with FDs or their caregivers to educate or prescribe ATDs
 - Increased awareness to explore difficulties in ADLs
 - Increased awareness and knowledge of ATDs



CONCLUSIONS

Initial testing of the MGAT web app showed that the application ranked well in assessments of Engagement and scored high in assessments of Functionality, Aesthetics, and Information Quality among the targeted population. Perceived Impact was the highest, indicating that PCPs valued the increased AT awareness and knowledge gained from using the MGAT. Additionally, they expressed intent to continue using the MGAT to inform and prescribe AT devices to older Latinos with FDs and their caregivers. Thus, we provide an opportunity to influence PCP behaviors, resulting in increased access to information and prescription of AT devices among a vulnerable population of older Latinos with high levels of FDs but limited access to AT interventions in primary care. Future work could include a longitudinal randomized controlled trial involving PCPs and their patients to assess whether dyads using the MGAT show improved function in daily activities compared to the control group.

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MGAT WEB APP

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