

Research Paper

**Actual use of and satisfaction associated with rollators and “shopping carts” among frail elderly Japanese people using day-service facilities**

[Author list]

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## **ABSTRACT**

Purpose: This study aimed to clarify the actual use of and satisfaction with rollators and “shopping carts” (wheeled walkers with storage) among frail elderly people, who were certified by a long-term care insurance system as users of facilities that provide day-service nursing care and rehabilitation.

Methods: We identified 1,247 frail elderly people who used day-service facilities, and evaluated their actual use of, and satisfaction with, rollators and shopping carts.

Results: Forty-four (3.5%) individuals used rollators, and 53 (4.3%) used shopping carts. The shopping cart group contained more individuals who were certified as care level 1 (26.4%), compared to the rollator group (20.5%), and 52.8% of the shopping cart group was certified as care levels 1–3. The scores for “repairs & services” and “follow-up” from the Quebec User Evaluation of Satisfaction with assistive Technology second version (QUEST 2.0) survey were significantly higher in the rollator group than in the shopping cart group.

Conclusions: The QUEST 2.0 scores revealed that shopping cart users exhibited insufficient “repairs & services” and “follow-up” scores. As frail elderly people with poor care status accounted for > 50% of the shopping cart group, these individuals urgently need walking aids that are tailored to their care status.

**Key words:** rollator, shopping cart, QUEST 2.0, frail elderly people

## 1 INTRODUCTION

2 Elderly people often experience difficulty in walking that results from a number of factors,  
3 including cerebrovascular disease, knee osteoarthritis, and Parkinson's disease, all of which are likely  
4 to develop later in life. Further, age-related declines in muscle strength, balance function, visual acuity,  
5 and cognitive function contribute to difficulty in walking. Therefore, the risk of falls among elderly  
6 people is between 10% and 25% [1], with approximately 5% of all elderly people experiencing a  
7 fall-related fracture [2]. Therefore, it is critical to ensure safe walking, in order to encourage  
8 independent daily living and maximization of participation potential in the elderly population.

9 Walking aids are commonly used to support independent walking and participation among elderly  
10 people [3]. For example, rollators are exceptionally good at improving stability and walking efficacy.  
11 For these reasons, the use of rollators has increased substantially in the elderly population [4]. In  
12 Western countries, occupational and physical therapists are involved in ensuring that walking aids are  
13 customized to elderly people and are suitable for improving the user's walking ability [5]. Northern  
14 Europe has the most satisfactory public welfare service in the world [5], and rollators are frequently  
15 fitted by therapists in this region [6]. In addition, most assistive technologies (including assistive  
16 devices) are provided for free in Northern Europe if an individual has a walking disability that  
17 significantly affects daily living [7].

18 In Japan, a long-term care insurance system has been implemented to provide public access to  
19 walking aids among frail elderly people whose requirement for an assistive device has been certified.  
20 This long-term care insurance system is a social insurance system that was initiated in 2000 to support  
21 frail elderly people within the society, and the use of this service has rapidly expanded, especially for  
22 home care services [8,9]. Home care services include the rental of welfare equipment, such as rollators  
23 (Figure 1) [9]. In ISO 9999, rollators are defined as "Devices with handgrips and two or more wheels,  
24 possibly in combination with tips; Included are rollators with a seat for resting." [10] In Japan,

25 however, rollators are restricted to devices that "function to assist ambulation for persons who have  
26 difficulty walking, possessing a structure that supports body weight during travel, and has wheels,  
27 handles, or other structures that surround the body in front and on both sides." Such devices are  
28 covered by welfare equipment services under the long-term care insurance system. This construction  
29 consists of right and left frames that are connected by the pipes of the central part, forming a frame  
30 that surrounds the user's body and is stable even without support. Its center of gravity when the user is  
31 included normally falls within the base of support. Based on a decision by the Long-term Care  
32 Approval Board, applicants are categorized as having a care status of unqualified (self-reliant), support  
33 (levels 1 and 2), or long-term care (levels 1–5). Table 1 shows the characteristics of each long-term  
34 care requirement level in the Japanese Long-term Care Insurance System [11].

35 Once a person has been approved for an assistive device, guiding officers provide fittings to  
36 confirm that the device is customized to the user. This system of approval and fitting has reduced the  
37 effects of misfitting, misuse, or malfunction. According to the rental statistics for rollators (April 2014),  
38 elderly people who are certified as support levels 1–2 have the highest rate of use (28.6%), compared  
39 to those having a care level of 2 (26.7%) [12].

40

41 *Insert figure 1 about here*

42

43 *Insert table 1 about here*

44

45 In Japan, "shopping carts" or "silver cars" (wheeled walkers with storage) are also widely used as  
46 walking aids by the elderly; the production volume for shopping carts in 2009 was approximately  
47 430,000 units [13]. However, shopping carts are not covered by the insurance system, because they are  
48 intended for elderly people who can walk independently and carry baggage when leaving home.

49 Consequently, they are not available for rent as an assistance device, but are sold directly to  
50 individuals by general mass-market retailers. In terms of construction, shopping carts have at least 4  
51 wheels, together with other components such as a handle, frame, and stoppers. Their center of gravity,  
52 as well as that of the user, is normally outside the base of support. Unfortunately, frail elderly people  
53 with poor care status frequently use shopping carts, with an increased risk of falls when the cart is not  
54 fitted to the individual's walking ability. For example, the Japan Assistive Products Association  
55 reported that 186 deaths/serious injuries were caused by 22 types of assistive devices between 2007  
56 and 2011 [14]. Among these assistive devices, shopping carts ranked 4th (12 accidents) and rollators  
57 ranked 7th (5 accidents). According to the National Consumer Affairs Center of Japan's Injury  
58 Surveillance System, 30 cases of injury caused by shopping carts were recorded during the 5 year  
59 period from FY2004 to FY2008, most of which (27 cases, 90%) concerned injuries due to falls caused  
60 by stumbling or losing balance, although some cases were also reported that related to shopping cart  
61 quality, such as difficulty in changing direction or inability to walk in a straight line [15]. Therefore,  
62 we aimed to clarify the quantity of actual use of rollators and shopping carts among frail elderly  
63 people who used day-service facilities, as well as their satisfaction with these devices. We believe that  
64 this information can be used to clarify the mobility challenges that this population faces.

65

## 66 **SUBJECTS AND METHODS**

67 Frail elderly people who used day-service facilities in Nagasaki City were included in this study. A  
68 total of 10 institutions agreed to participate in this study (6 in the eastern part of the city, 3 in the north,  
69 and 1 in the south), after the Nagasaki City Welfare Service Council requested their cooperation in the  
70 project and explained the research purpose. This study adhered to the tenets of the Declaration of  
71 Helsinki, and all care was taken to prevent the identification of any participant using the data collected.  
72 Ethical approval was obtained from the Nagasaki University Graduate School of Biomedical Sciences

73 Ethics Committee (approval number: 14022885).

74 To assess the actual levels of use, we first asked a representative of each institution to inform us of  
75 the number of individuals at each care needs level within their facility, according to the Long-term  
76 Care Insurance System, as well as the number of users of shopping carts and rollators. We then  
77 conducted individual interviews on the basis of the number of users of shopping carts and rollators;  
78 individuals who were interviewed were users of shopping carts or rollators who met the inclusion  
79 criteria described below. Individuals were considered eligible for the survey if they could hear,  
80 communicate verbally, did not have dementia, and consented to participate. Facility staff were asked to  
81 identify potential participants; the study flow chart is shown in Figure 2. Among potential participants,  
82 day-service staff identified confirmed users of rollators and shopping carts, and these users were  
83 surveyed for satisfaction with each assistive device.

84

85 *Insert figure 2 about here*

86

87 The Quebec User Evaluation of Satisfaction with assistive Technology second version (QUEST  
88 2.0) was used to assess user satisfaction, and the modified Frenchay Activities Index (modified FAI)  
89 was used to assess life function. Other individual characteristics (sex, age, and family status) were also  
90 assessed. The first QUEST version was designed to identify user satisfaction and sources of  
91 dissatisfaction with assistive technology [16]. Demers et al. [17] developed the first version in 1996,  
92 and then the second version in 2000 [18]; Inoue et al. [19] published the Japanese version (QUEST-J)  
93 during 2008. QUEST 2.0 consists of 8 items regarding the assistive device (including dimensions,  
94 adjustments, and effectiveness) and 4 items regarding user satisfaction with the service from the  
95 vendor/manufacture (including service delivery, professionalism, and follow-up); each item is scored  
96 on a 5-point scale. Demers et al. [20,21] have validated the test-retest reliability, inter-class reliability,

97 content validity, and construct validity of QUEST 2.0, and Kenny et al. [22] have reported that  
98 QUEST is appropriate for evaluating wheelchair and seating devices. Moreover, several studies  
99 regarding satisfaction with rollators have been conducted using QUEST [3,6,23,24].

100 The modified FAI includes 15 items that are related to daily living and activities of social living  
101 (preparing main meals, washing up after meals, washing clothes, light housework, heavy housework,  
102 local shopping, social occasions, walking outside for > 15 min, actively pursuing hobbies, driving a  
103 car/going on the bus, travel outing/car ride, gardening, household maintenance, reading books, and  
104 gainful work). This tool's reliability and validity have been confirmed in Japan [25]. For the present  
105 study, the interviewer assessed each item using a 3-point scale, according to the frequency of  
106 performing each activity during the last 3 and 6 months.

107 Descriptive statistics were used to describe the proportion of walking aid users according to care  
108 status. The chi-square test was used to compare the sex, care needs levels, family status, and  
109 environment around the home, for the rollator and shopping cart groups. The *t* test was used to  
110 compare the groups' age and modified FAI scores. The total satisfaction score (total score) was defined  
111 as the total QUEST 2.0 score, and the assistive device satisfaction score (assistive device score) and  
112 service satisfaction score (service score) were calculated for each group; these scores were compared  
113 using the Mann-Whitney U test. Furthermore, we stratified the answers as 1–3 and 4–5, based on the  
114 methods of Wressle et al. [26], and compared the scores for 12 subscales using the chi-square test. All  
115 analyses were performed using the JMP<sup>®</sup> 10(SAS Institute Inc., Cary, NC) software, and differences  
116 were considered statistically significant at a p-value of < 0.05.

117

## 118 **RESULTS**

119 Between June 2014 and March 2015, responses were obtained from 10 day-service facilities in  
120 Nagasaki City (6 in the eastern region, 3 in the northern region, and 1 in the southern region). These

121 responses identified 1,247 facility users; individuals according to care needs levels are shown in Table  
122 2. The most common care needs level among the facility users was care level 1 (24.9%), which was  
123 followed by support level 2 (23.3%) and support level 1 (21.4%); only 1% of facility users were care  
124 level 5. Rollators were used by 44 (3.5%) facility users, and shopping carts were used by 53 (4.3%)  
125 facility users. We next calculated the proportions of individuals requiring each level of care among 44  
126 users of rollators and 53 users of shopping carts. The most common care needs level in the rollator  
127 group was support level 2 (29.5%), which was followed by care level 2 (27.3%) and care level 1  
128 (20.5%); the most severe care level associated with rollator use was care level 4 (2.3%). The most  
129 common care needs level in the shopping cart group was support level 2 (30.2%), which was followed  
130 by care level 1 (26.4%) and care level 2 (18.9%); the most severe care level associated with shopping  
131 cart users was care level 3 (7.5%).

132

133 *Insert table 2 about here*

134

135 Of the 44 rollator and 53 shopping cart users, 20 in each category met the inclusion criteria.  
136 Characteristics of the 40 participants who received individual interview are shown in table 3 (6 men,  
137 34 women, mean age: 85.4, SD: 7.9 years, range: 64–99 years). The rollator group included 5 men and  
138 15 women (mean age: 83.2, SD: 9.6 years, range: 64–99 years), and the shopping cart group included  
139 1 man and 19 women (mean age: 87.6 SD 5.2 years, range: 76–94 years). No significant differences  
140 were observed according to age, sex, care needs levels, family status, or environment around the home  
141 between groups. However, the modified FAI score was significantly higher in the shopping cart group,  
142 compared to that of the rollator group.

143

144 *Insert table 3 about here*



145

146 With respect to QUEST 2.0 scores, no significant inter-group differences were observed for the  
147 total and assistive device scores. However, the service score was significantly higher in the rollator  
148 group (Table 4). In the item-by-item analysis for the 12 subscales, no significant inter-group  
149 differences were observed for the assistive device, service delivery, and professional service scores.  
150 However, the repairs & services and follow-up scores were significantly higher in the rollator group,  
151 compared to those in the shopping cart group (Table 5).

152

153 *Insert table 4 about here*

154 *Insert table 5 about here*

155

## 156 **DISCUSSION**

157 In this study, we investigated the actual use of and satisfaction with rollators and shopping carts  
158 among frail elderly people, according to their care status.

159 When studying the day-service facilities, the most common care needs level observed for rollator  
160 and shopping cart users was support level 2. However, more shopping cart users were care level 1  
161 (26.4%), when compared to rollator users (20.5%); 52.8% of shopping cart users were care levels 1–3.

162 The average walking ability among frail elderly people is defined by multiple local governments in  
163 Japan [27–29]. In this context, care level 1 is defined as unstable standing-up or walking (with support  
164 required in some instances), care level 2 is defined as occasionally being unable to independently  
165 stand-up or walk, and care level 3 is defined as being unable to independently stand-up or walk. In the  
166 present study, we found that > 50% of shopping cart users were frail elderly people within care levels  
167 1–3. Unfortunately, these individuals may have unknowingly continued to use a shopping cart, which  
168 does not accommodate their walking ability, without being advised to switch to a rollator. The fact that

169 there is no significant difference in assistive device score between people who use walking aids and  
170 those who use shopping carts suggests that users are continuing to use shopping carts without having  
171 received any instruction or advice from a specialist, and that they may not be aware of changes in the  
172 way they use them or of the risks entailed. Intervention by specialists to fit frail elderly people with  
173 poor care status who are using shopping carts as walking aids is thus an urgent task.

174 Japan's Consumer Product Safety Association has indicated that shopping carts (or "silver cars")  
175 are not suitable for people who require assistance while walking or climbing stairs [30]. Therefore,  
176 frail elderly people who require support during walking may have an increased risk of falls or other  
177 accidents with continued shopping cart use. To reduce their risk of falling, these people should receive  
178 an appropriate walking aid with a fitting that is tailored to their walking disability. As mentioned  
179 above [6], therapists play an important role in fitting walking aids for elderly Northern European  
180 people. However, the Japanese long-term care insurance system does not support in-home therapist  
181 services; thus, therapists are only involved in fitting patients who are evaluated at their hospital.  
182 Therefore, we believe that the long-term care insurance system should be adjusted to include therapist  
183 fitting, which may help provide the benefits that are observed in Northern European countries.

184 With respect to the individual interviews, given the original intended purpose of shopping carts,  
185 their users could naturally be expected to be of a lower care status, compared with users of rollators. In  
186 this study, however, the only significant difference observed between the 2 groups was in FAI, which  
187 was significantly higher for shopping cart users; there were no significant differences between the 2  
188 groups in terms of age, sex, care needs levels, family status, or home environment.

189 When we evaluated assistive device satisfaction, the service, repairs & services, and follow-up  
190 scores were significantly higher in the rollator group, compared to those in the shopping cart group.  
191 The only similar study was conducted by the Association for Technical Aids (ATA) [31], which used  
192 QUEST 2.0 to evaluate 311 frail elderly people who used rollators, and reported that the mean total,

193 assistive device, and service scores were 4.1, 4.0, and 4.2, respectively. Therefore, those results  
194 indicated higher satisfaction among rollator users, and our results confirm those findings. However,  
195 our results also indicate that shopping cart-related service (i.e. repairs & services and follow-up)  
196 should be improved, as the scores for these items were lower in our shopping cart group (compared to  
197 the rollator group). In this context, both rollators and shopping carts experience a decline in quality  
198 and performance over time (e.g. loosening of screws and frame distortion), and elderly people may  
199 experience difficulty in performing repairs and services on shopping carts. In contrast, rollator users  
200 are provided with regular repairs, services, and follow-up from guidance officers, which can preserve  
201 the function of their assistive device. Therefore, it appears that a system for repairs, services, and  
202 follow-up is needed for shopping carts. Thankfully, Kitajima [32] has reported that the largest  
203 Japanese manufacturer/distributor of “silver cars” has implemented an information system to provide  
204 periodic inspections to its customers, and we propose that this follow-up system should become an  
205 industry standard.

206 This study included several limitations. First, our sample size for evaluating assistive device  
207 satisfaction was small. Second, the cross-sectional design precludes any analysis regarding the  
208 changes in use and satisfaction over time. Third, we did not evaluate the walking ability of the  
209 participants. Therefore, future large-scale studies should be performed to validate our findings, and  
210 these studies should consider walking ability as an evaluation item.

211

## 212 **CONCLUSION**

213 We evaluated the actual use of rollators and shopping carts among frail elderly people who use  
214 day-service facilities. Although shopping carts should only be used by elderly people who are capable  
215 of independent walking (e.g. for carrying baggage), we found that > 50% of shopping cart users were  
216 frail elderly people with a poor care status. Therefore, we conclude that the fitting of walking aids

217 must be tailored to each person's care status, and suggest that a system should be established to allow  
218 occupational or physical therapists to provide this fitting. Moreover, our analysis of the QUEST2.0  
219 service scores revealed that repairs, services, and follow-up are insufficient to meet the needs of  
220 shopping cart users.

221

222 **Declaration of Interests**

223 This study was supported by a Grant-in-Aid for Scientific Research (C) (project no.15K01463 to  
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225 interests.

226

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308

309 **The list of the table and figure captions**

310 Table 1 Characteristics of different care needs levels

311 Table 2 Facility users' care needs levels

312 Table 3 Characteristics of the satisfaction survey from participants

313 Table 4 QUEST 2.0 scores for users of rollators and shopping carts

314 Table 5 Item-by-item analysis of rollator and shopping cart users

315 Figure 1 Rollator and shopping cart

316 Figure 2 Study flow chart

Table 1. Characteristics of different care levels

| Care Level  | Characteristics   |
|---|---|
| Support Level 1<br>Requires social support                    | Capable of most basic actions of daily living, but requires some sort of support to prevent deterioration.  |
| Support Level 2<br>Requires a greater level of social support | Ability to carry out actions involved in looking after himself or herself has further declined and requires some sort of support, but there is a high possibility that his or her condition will stay at the same level or improve. |
| Care Level 1<br>Requires partial care                         | Unstable when standing up or walking, and requires some sort of care in basic actions of daily living and with actions involved in personal care.   |
| Care Level 2<br>Requires low-level care                       | Requires partial care when standing up or walking as well as in basic actions of daily living and with actions involved in personal care.   |
| Care Level 3<br>Requires moderate care                        | Requires total care when standing up or walking as well as in basic actions of daily living and with actions involved in personal care.   |
| Care Level 4<br>Requires high-level care                      | Has a significantly reduced capacity to carry out any actions of daily life, and would have difficulty in leading daily life without care.  |
| Care Level 5<br>Requires the maximum level of care            | Has a severely reduced capacity to carry out any actions of daily life, and would be unable to lead daily life without care.  |

Table 2 Facility users' care needs levels

| Care needs levels | Facility users<br>n = 1,247 |        | Walking aids<br>(multiple answers allowed) |        |                               |        |
|-------------------|-----------------------------|--------|--|--------|-------------------------------|--------|
|                   |                             |        | Rollator<br>n = 44(3.5%)                   |        | Shopping cart<br>n = 53(4.3%) |        |
|                   | n                           | (%)    | n  | (%)    | n                             | (%)    |
| Support level 1   | 267                         | (21.4) | 2  | (4.5)  | 9                             | (17)   |
| Support level 2   | 291                         | (23.3) | 13   | (29.5) | 16                            | (30.2) |
| Care level 1      | 310                         | (24.9) | 9  | (20.5) | 14                            | (26.4) |
| Care level 2      | 222                         | (17.8) | 12   | (27.3) | 10                            | (18.9) |
| Care level 3      | 105                         | (8.4)  | 7  | (15.9) | 4                             | (7.5)  |
| Care level 4      | 39                          | (3.1)  | 1  | (2.3)  | 0                             | (0)    |
| Care level 5      | 13                          | (1)    | 0  | (0)    | 0                             | (0)    |

Table 3 Characteristics of the satisfaction survey participants

|   | All<br>(n = 40) | Rollator<br>(n = 20) | Shopping cart<br>(n = 20) |
|---|-----------------|----------------------|---------------------------|
| Age (years)   | 85.4 SD 7.9     | 83.2 SD 9.6          | 87.6 SD 5.2               |
| Sex (n %)   |                 |                      |                           |
| Male  | 6 (15.0)        | 5 (25.0)             | 1 (5.0)                   |
| Female  | 34 (85.0)       | 15 (75.0)            | 19 (95.0)                 |
| Care needs levels (n %)                                     |                 |                      |                           |
| Support level 1   | 5 (12.5)        | 0 (0)                | 5 (25.0)                  |
| Support level 2   | 11 (27.5)       | 6 (30.0)             | 5 (25.0)                  |
| Care level 1  | 9 (22.5)        | 5 (25.0)             | 4 (20.0)                  |
| Care level 2  | 9 (22.5)        | 6 (30.0)             | 3 (15.0)                  |
| Care level 3  | 5 (12.5)        | 2 (10.0)             | 3 (15.0)                  |
| Care level 4  | 1 (2.5)         | 1 (5.0)              | 0 (0)                     |
| Care level 5  | 0 (0)           | 0 (0)                | 0 (0)                     |
| Family status (n %)   |                 |                      |                           |
| Living alone  | 13 (32.5)       | 6 (30.0)             | 7 (35.0)                  |
| Family consists of only persons who are $\geq 65$ years old | 9 (22.5)        | 4 (20.0)             | 5 (25.0)                  |
| Family consists of only persons who are $< 65$ years old    | 17 (42.5)       | 10 (50.0)            | 7 (35.0)                  |
| Living in a facility  | 1 (2.5)         | 0 (0)                | 1 (5)                     |
| Environment around home (n %)                               |                 |                      |                           |
| Sloping road  | 11 (27.5)       | 5 (25.0)             | 6 (30.0)                  |
| Street irregularities (not flat)                            | 8 (20.0)        | 5 (25.0)             | 3 (15.0)                  |
| Both of the above   | 6 (15.0)        | 3 (15.0)             | 3 (15.0)                  |
| None of the above   | 15 (37.5)       | 7 (35.0)             | 8 (40.0)                  |
| Modified FAI score  | 12.7 SD 7.9     | 8.9 SD 6.9           | 16.5 SD 7.1 **            |

\*P < 0.05, \*\*P < 0.01

The X<sup>2</sup> test was used for sex, stage of care needed, family status, and environment around home

The t test was used for age and modified

Frenchay Activities Index (FAI) score

Table 4 QUEST 2.0 scores for uses of rollators and shopping carts

|                  | Rollator<br>(n = 20) | Shopping cart<br>(n = 20) |         |
|------------------|----------------------|---------------------------|---------|
| QUEST 2.0 score  |                      |                           | P-value |
| Total            | 3.9 SD 0.6           | 3.6 SD 0.2                |         |
| Assistive device | 3.9 SD 0.7           | 4.0 SD 0.4                |         |
| Service          | 3.9 SD 0.7           | 2.8 SD 0.5                | ***     |

\*\*\*P < 0.001 using the Mann-Whitney U test

Table 5 Item-by-item analysis of rollator and shopping cart users

| Items                       | Rollator (n = 20)  |   |          | Shopping cart (n = 20)                                       |   |          | <i>n</i> | <i>p</i> |
|-----------------------------|--|---|----------|--|---|----------|----------|----------|
|                             | % subjects<br>'quite satisfied'<br>or<br>satisfied'<br>(4-5) | % subjects<br>'somewhat<br>'very satisfied'<br>or less<br>(1-3) | <i>n</i> | % subjects<br>'quite satisfied'<br>or<br>satisfied'<br>(4-5) | % subjects<br>'somewhat<br>'very satisfied'<br>or less<br>(1-3) | <i>n</i> |          |          |
| 1.. Dimensions              | 70   | 30  | 20       | 70   | 30  | 20       | ns       |          |
| 2. Weight                   | 65   | 35  | 20       | 80   | 20  | 20       | ns       |          |
| 3. Adjustment               | 67   | 33  | 3        | 60   | 40  | 5        | ns       |          |
| 4. Safety                   | 70   | 30  | 20       | 90   | 10  | 20       | ns       |          |
| 5. Durability               | 90   | 10  | 20       | 95   | 5   | 20       | ns       |          |
| 6. Ease of use              | 70   | 30  | 20       | 90   | 10  | 20       | ns       |          |
| 7. Comfort                  | 70   | 30  | 20       | 85   | 15  | 20       | ns       |          |
| 8. Effectiveness            | 90   | 10  | 20       | 100  | 0   | 20       | ns       |          |
| 9. Service<br>delivery      | 90   | 10  | 20       | 95   | 5   | 20       | ns       |          |
| 10. Repairs &<br>services   | 65   | 35  | 20       | 0  | 100   | 20       | ***      |          |
| 11. Professional<br>service | 65   | 35  | 20       | 35   | 65  | 20       | ns       |          |
| 12. Follow-up               | 55   | 45  | 20       | 0  | 100   | 20       | ***      |          |

\*\*\*P < 0.001, ns = not significant, using the  $\chi^2$  test



Rollator



Shopping cart



Figure 2

