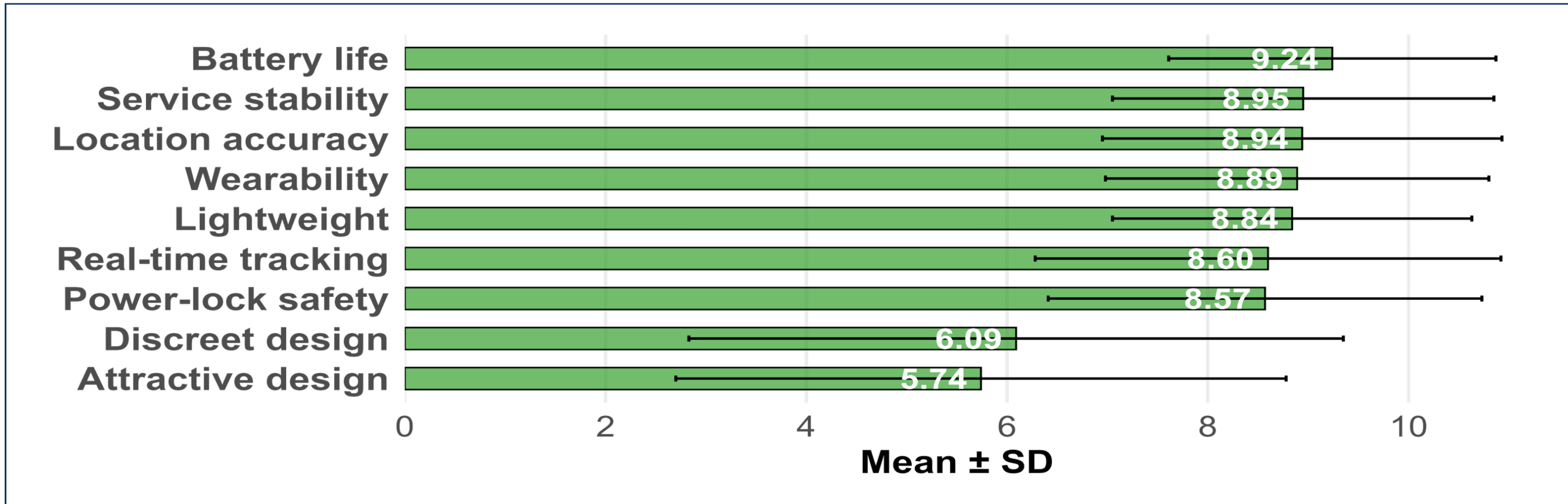
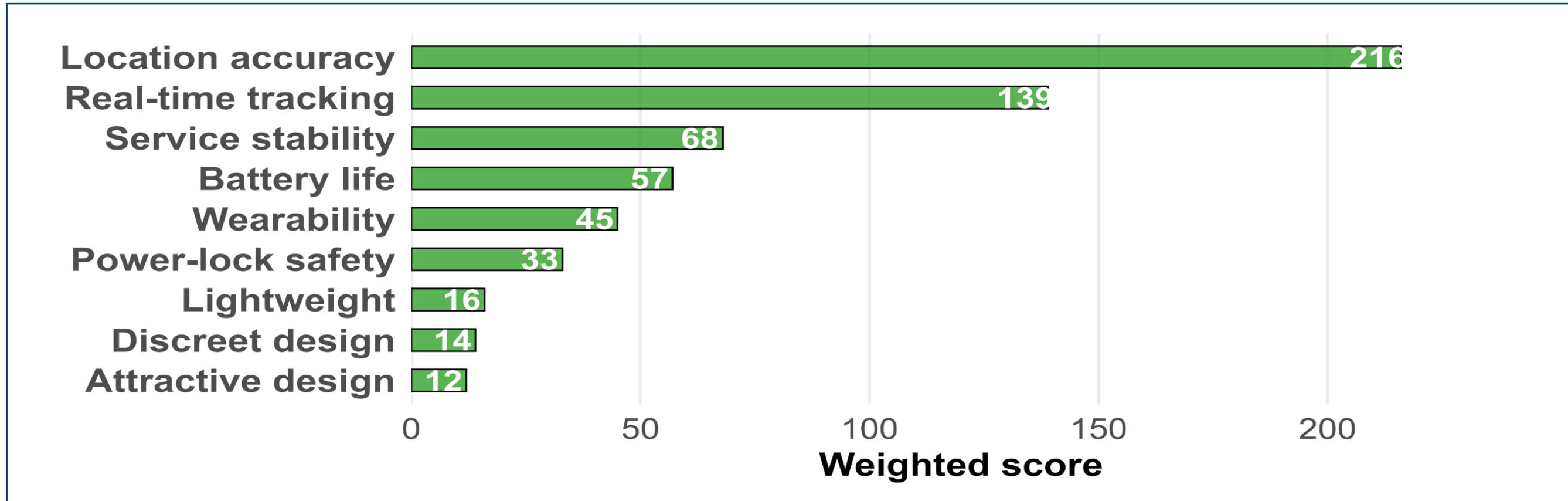


Caregivers’ Priorities in Selecting Location-Tracking Devices for Persons with Dementia

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Caregivers value safety and performance over design when selecting location-tracking devices for persons with dementia.

INTRODUCTION	METHODS	RESULTS	CONCLUSIONS																																								
- Wandering in dementia is associated with serious safety risks, including missing incidents. - Location-tracking devices may support safe mobility, but their adoption depends on family caregivers' acceptance. - Although previous studies have identified desirable device features, limited evidence exists regarding caregivers' relative priorities among device characteristics. - This study examined caregivers' intention to use location-tracking devices and their priorities for device features in dementia care.	Design: Cross-sectional study Participants: 100 family caregivers of community-dwelling persons with dementia Data collection: Online survey conducted in Nov–Dec 2025 Measure: - Intention to use (2 items; 5-point Likert; range 2–10) - Importance of 9 device features (0–10 scale): real-time tracking, location accuracy, service stability, attractive design, discreet design, power-lock safety, wearability, battery life, and lightweight - Ranking of top 3 priorities Analyses: Descriptive statistics, Weighted ranking (3–2–1 scoring)	Intention to use: High intention to use location-tracking devices (7.93 ± 1.80). Importance Ratings of Device Features - Battery life (9.24 ± 1.63), service stability (8.95 ± 1.90), location accuracy (8.94 ± 1.99), and wearability (8.89 ± 1.91) received the highest ratings. - Attractive design (5.74 ± 3.04) and discreet design (6.09 ± 3.26) were rated as less important. Priority Rankings of Device Features - Location accuracy was the highest priority (weighted score = 216), followed by real-time tracking (139) and service stability (68). Figure 1. Importance Ratings of Device Features <table><tr><th>Device Feature</th><th>Mean ± SD</th></tr><tr><td>Battery life</td><td>9.24 ± 1.63</td></tr><tr><td>Service stability</td><td>8.95 ± 1.90</td></tr><tr><td>Location accuracy</td><td>8.94 ± 1.99</td></tr><tr><td>Wearability</td><td>8.89 ± 1.91</td></tr><tr><td>Lightweight</td><td>8.84 ± 1.91</td></tr><tr><td>Real-time tracking</td><td>8.60 ± 1.91</td></tr><tr><td>Power-lock safety</td><td>8.57 ± 1.91</td></tr><tr><td>Discreet design</td><td>6.09 ± 3.26</td></tr><tr><td>Attractive design</td><td>5.74 ± 3.04</td></tr></table> Figure 2. Priority Rankings of Device Features <table><tr><th>Device Feature</th><th>Weighted score</th></tr><tr><td>Location accuracy</td><td>216</td></tr><tr><td>Real-time tracking</td><td>139</td></tr><tr><td>Service stability</td><td>68</td></tr><tr><td>Battery life</td><td>57</td></tr><tr><td>Wearability</td><td>45</td></tr><tr><td>Power-lock safety</td><td>33</td></tr><tr><td>Lightweight</td><td>16</td></tr><tr><td>Discreet design</td><td>14</td></tr><tr><td>Attractive design</td><td>12</td></tr></table>	Device Feature	Mean ± SD	Battery life	9.24 ± 1.63	Service stability	8.95 ± 1.90	Location accuracy	8.94 ± 1.99	Wearability	8.89 ± 1.91	Lightweight	8.84 ± 1.91	Real-time tracking	8.60 ± 1.91	Power-lock safety	8.57 ± 1.91	Discreet design	6.09 ± 3.26	Attractive design	5.74 ± 3.04	Device Feature	Weighted score	Location accuracy	216	Real-time tracking	139	Service stability	68	Battery life	57	Wearability	45	Power-lock safety	33	Lightweight	16	Discreet design	14	Attractive design	12	- Family caregivers prioritize safety and performance features over design aspects when selecting location-tracking devices for persons with dementia. - Although multiple features were rated as important, location accuracy emerged as the highest priority. - Stakeholders should consider these caregiver priorities when designing location-tracking devices, and healthcare professionals should suggest such devices when family caregivers need monitoring technologies.
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