

Author Year Country Research Design Score Total Sample Size	Methods	Outcome
<p>Amosun et al. 2016 South Africa Observational N=75</p>	<p>Population: Age range: 16-65 yr; Gender: N/R; Level of injury: N/R; Mean time since injury: 9.3 yr. Intervention: Participants filled out a four-part questionnaire to assess the extent to which wheelchairs met the activity and participation needs of users, as well as the users' level of satisfaction with the provision, repair and maintenance of these wheelchairs. Outcome Measures: Four-part questionnaire: Demographic and background information; Functioning Everyday in a Wheelchair (FEW) instrument; Quebec User Evaluation of Satisfaction with Assistive Technology (QUEST 2.0) instrument; 6 questions by Samuelsson and Wressle.</p>	<ol style="list-style-type: none"> 1. Participants had used wheelchairs for an average period of 9.3 years. Most participants (61%) had sustained spinal cord injuries, and used three-wheeler chairs (76%). 2. > 90% reported that their wheelchairs positively influenced their activity and participation needs, and 85% were satisfied with their ability to carry out daily activities. 3. Participants expressed satisfaction with the durability of the wheelchairs (89%), and the professional services received (71%), but not with follow-up services (77%). 4. There was difference in satisfaction with features of 3-wheeler and 4-wheeler rigid chairs ($p=0.030$).
<p>Gil-Agudo et al. 2013 UK Observational N=6</p>	<p>Population: Mean age: 32 yr; Gender: males=6, females=0; Level of injury: T1=1, T3=2, T8=1, T11=2; Mean time since injury: 62 mo. Intervention: Participants used three different wheelchairs (Kuschall Champion®, Otto bock Voyager®, and Invacare Action®) to complete evaluation circuits consisting of: 1) Activities of Daily Living driving course including corridor, ramp, curb, tile surface, sand surface, bumps, potholes, turning, figure- 8 and 360° wheelie, 2) activities including making a bed, toilet and car transfers which included lifting the w/c into the car and 3) sprint distance of 25 m. Outcome Measures: 1) 5 point rating scale for w/c manoeuvrability, stability, comfort, ease of propulsion 2) 10 point Visual Analogical Scale (VAS) rating perceived level of satisfaction.; 3) Kinetic data using a SMART wheel to measure average total push force, average speed, average contact angle, average cadence.</p>	<ol style="list-style-type: none"> 5. Compared to the Invacare wheelchair, the Kuschall and Otto Bock wheelchairs had significantly better manoeuvrability scores ($p=0.05$ for both) and VAS scores ($p<0.05$ for both). 6. Cadence was the only noted kinetic difference with the Kuschall cadence being greater than all other w/c's tested ($p<0.05$) 7. Significant differences were noted between the various chairs for toilet transfers, 360° wheelie rotation, bed transfer, and car transfer. 8. No differences were noted in physiological variables between wheelchairs

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de Groot et al. 2011 Netherlands Observational N=109	<p>Population: Mean age: 40.4 yr; Gender: males=80, females=29; Level of injury: tetraplegia=30, paraplegia=79; Level of severity: complete=78, incomplete=31; Mean time since injury: 708 days.</p> <p>Intervention: Participants were administered the Dutch version of the Quebec User Evaluation of Satisfaction with Assistive Technology (D-QUEST).</p> <p>Outcome Measures: Satisfaction with assistive technology.</p>	<ol style="list-style-type: none"> 1. No differences in the subscale scores were found between age groups, gender, lesion level and those with a high or low UAL score ($p < 0.05$ for all). 2. Participants with an incomplete lesion, lower SIPSOC score, and/or were more active had higher satisfaction with service-related aspects ($p = 0.05$, $p < 0.001$, and $p = 0.03$, respectively) Compared to participants with a complete lesion, participants with an incomplete lesion were more satisfied regarding wheelchair-related aspects ($p = 0.02$).
Rushton et al. 2010 Canada Observational N=51	<p>Population: Mean age: 43.7 yr; Gender: males=43, females=8; Level of injury: tetraplegia=33, paraplegia=18; Level of severity: complete=18, incomplete=33; Mean time since injury: 16.1 yr.</p> <p>Intervention: Participants completed a questionnaire.</p> <p>Outcome Measures: Wheelchair outcome Measure (WhOM), Quebec User Evaluation of Satisfaction with assistive Technology (QUEST).</p>	<ol style="list-style-type: none"> 1. There were 258 indoor and 257 outdoor participation outcomes identified by this sample with most outcomes falling into the “community, social, and civil life” (36.5%), “domestic life” (23.7%), and “mobility” (18%) domains. 2. All domains had a mean satisfaction score of 7.1/10 or greater except for the indoor “mobility” domain which had a mean satisfaction score of 6.1/10.
Chan & Chan 2007 China Observational N=31	<p>Population: Mean age: 41.7 yr; Gender: male=25, females=6; Level of injury: C1-C4=9, C5-C8=8, T1-T9=8, T10-S=6; Severity of injury: AIS A=22, B=3, C=1, D=5; Mean time SINCE injury=3.8 yr.</p> <p>Intervention: Participants completed a set of questionnaires.</p> <p>Outcome Measures: Chinese version of the Quebec User Evaluation of Satisfaction with Assistive Technology (C-QUEST), World Health Organization Quality of Life Questionnaire (WHO QoL-BREF (HK)), “Participation Restriction” and “Environmental Factors” of the International Classification of Functioning Disability and Health (ICF).</p>	<ol style="list-style-type: none"> 1. Transportation and driving were moderately and highly correlated, respectively, with QoL. 2. Participation in societal functions, such as traveling in the community and participating in leisure activities were related to higher QoL. 3. A moderate association between perception of interpersonal relationships and QoL in the paraplegia population. 4. Wheelchair satisfaction was better associated with QoL than with perception of community participation and environmental factors. 5. Mild association between the C-QUEST Services scores and the ICF sub score of Health-related Professionals.

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<p>Fitzgerald et al. 2005 USA Observational N=110</p>	<p>Population: Mean age: 49.2 yr; Gender: male=94, females=16; Injury etiology: SCI=75, MS=9, Cp=6, amputation=7, muscular dystrophy=2%, spina bifida=2%, TBI=1, post-polio=1, Other=7; Mean time since injury=19.6 yr.</p> <p>Intervention: Participants completed a questionnaire about their wheelchairs, number of repairs and satisfaction in 10 areas (durability, use, simplicity of use, overall appearance, dimensions, delivery, transportation, overall fit, and owner's manual).</p> <p>Outcome Measures: Visual analog scale for satisfaction, Number and type of wheelchair repairs.</p>	<ol style="list-style-type: none"> 1. 26% of the participants had wheelchair repairs in the prior 6 month; 43% reported regular maintenance (manual wheelchairs were more likely to be regularly maintained than power) 2. Power wheelchairs required significantly more repairs than manual wheelchairs ($p < 0.001$). 3. Participants using manual wheelchairs were significantly more satisfied ($p < 0.05$) according to the VAS in 7 of 10 satisfaction categories. 4. Participants who had performed no repairs were significantly more satisfied than participants performing one or more repairs.