



## Use of local public transport among people with cognitive impairments – A literature review



R. Risser<sup>a,b,\*,1</sup>, E.M. Lexell<sup>c,d,1</sup>, D. Bell<sup>b,1</sup>, S. Iwarsson<sup>c</sup>, A. Ståhl<sup>a</sup>

<sup>a</sup> Department of Technology and Society, Faculty of Engineering, Lund University, Sweden

<sup>b</sup> FACTUM OG, Vienna, Austria

<sup>c</sup> Department of Health Sciences, Faculty of Medicine, Lund University, Sweden

<sup>d</sup> Department of Neurology and Rehabilitation Medicine, Skåne University Hospital, Lund, Sweden

### ARTICLE INFO

#### Article history:

Received 28 May 2014

Received in revised form 15 December 2014

Accepted 5 January 2015

#### Keywords:

Cognitive impairments

Public transport

Mobility

Travel chain

### ABSTRACT

Being able to move around in the community including using different modes of transport is a prerequisite for being able to participate in activities outside home. This can be particularly challenging for people with cognitive impairments. Still, research regarding public transport for people with cognitive impairments is scarce. In this narrative review scientific literature focusing on people with cognitive impairments and their needs in public transport, was identified and summarised. All aspects in the travel chain perspective were of interest. Literature search engines Scirus, Elin and Cinahl were used during the search.

Thirty-four articles were included and analysed according to which part of the travel chain they covered in the used model. The results showed that the articles were unevenly allocated to the different parts of the model. Future studies based on real-world experiences are essential, and more user-centred approaches should be adopted. Moreover, there is a need for the development and evaluation of evidence-based rehabilitation. Finally, more research is needed to foster societal awareness of the problems and needs in the public transport of people with cognitive impairments taking the whole travel chain into consideration.

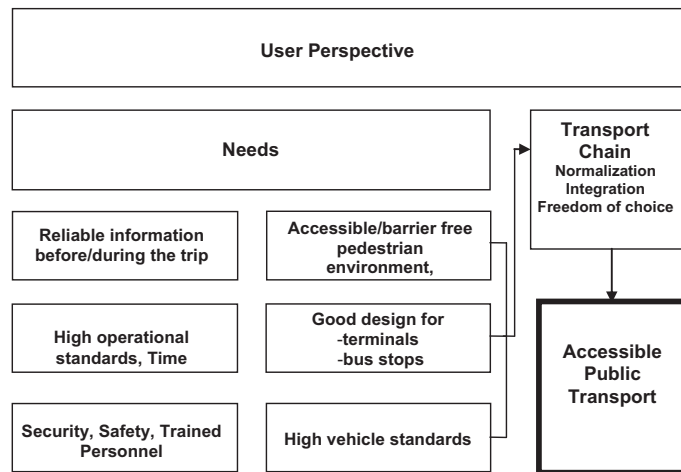
© 2015 Elsevier Ltd. All rights reserved.

## 1. Introduction

Being able to move around in the community including using different modes of transport such as walking, cycling, driving a motor vehicle as well as public transport, i.e. bus, tram and train is a prerequisite for being able to participate in activities outside home (Haak, Fänge, Horstmann, & Iwarsson, 2008; Wahl, Fänge, Oswald, Gitlin, & Iwarsson, 2009). Travelling with public transport comprises many different tasks e.g. planning the trip, getting to and from the bus stop/train station, and buying the ticket. All tasks along a travel route need to be considered as essential aspects to safely and comfortably participate in public transport (Carmien et al., 2005). Previous research within transport research has therefore emphasised the necessity of applying a travel chain perspective. That is, taking all tasks during the whole trip into account, starting with planning the trip and not ending until the final destination is reached (Ståhl, 1997; Waara, 2001; Wretstrand & Ståhl, 2008). By considering all tasks, adopting a user perspective and including all used modes of transport necessary for a certain route, all potential barriers and facilitators along the whole travel chain can be identified (Ståhl, 1997; Fig. 1).

\* Corresponding author at: Department of Technology and Society, Faculty of Engineering, Lund University, Sweden.

<sup>1</sup> Equal contribution.



**Fig. 1.** The model “User perspective on accessible public transport” (Ståhl, 1997) showing how all elements in the travel chain need to be considered when discussing accessible public transport systems.

It is well-known that many people stop driving a motor vehicle due to age and/or different disabilities, and recent studies indicate that there is a need for alternative forms of transport for people who stop driving (Adler & Rottunda, 2006; Lafont, Laumon, Helmer, Dartigues, & Fabrigoule, 2008; O’Neill, 2010; Windsor & Anstey, 2006). This fact places a great demand on the public transport system to be accessible for all. While special transport options (i.e. such as private shuttle services, dial a taxi, etc.) are usually available in most countries and become even a viable alternative in regions where no public transport is available for all user groups, focus here is on general local public transport routes. Still, being able to travel with public transport can be difficult for people with disabilities (Asplund, Wallin, & Jonsson, 2012; Marin-Lamellet, Pachiaudi, & Le Breton-Gadegbeku, 2001; Waara, 2001) not the least for those with cognitive impairments (Rosenkvist, Risser, Iwarsson, Wendel, & Ståhl, 2009; Wendel, Ståhl, Risberg, Pessah-Rasmussen, & Iwarsson, 2010). Still, research regarding public transport for people with cognitive impairments is scarce, and one contributing factor may be that studies are published according to the traditions of different scientific disciplines which make the research difficult to find. Thus, the aim of this review was to identify and summarise scientific literature focusing on people with cognitive impairments and their needs in public transport, applying a travel chain perspective.

## 2. Method

A qualitative systematic literature review was applied in order to make a comprehensive synthesis of previously published information so that gaps in the scientific literature can be identified, and recommendations for future research can be presented (Green, Johnson, & Adams, 2006). Compared to a quantitative systematic literature review, the qualitative literature review does not grade methodological rigour or statistical results in included articles. The following steps were undertaken: Research articles accessible to web-based literature search have been collected and based on the outlined criteria below, each article was screened for inclusion or exclusion. The final set of included articles were then analysed according to a chosen theoretical framework.

### 2.1. Search strategy and databases used

The literature search was carried out by using the web-based search engines Scirus, Elin and Cinahl, covering a wide range of databases.<sup>2</sup> To be eligible for inclusion, the articles had to be written in English, published in peer-reviewed medical and health, technical, or social sciences journals during 1984–2011, and address cognitive impairments in relation to the use of public transport. An overview of the computerised search process and search terms used is presented in Fig. 2.

### 2.2. Selection procedure

During the selection procedure all abstracts of the articles identified were screened in view of the search criteria. After eliminating duplicates, a sample of 198 potential articles remained and the full text versions were acquired. They were then manually screened according to our criteria; the article had to be peer-reviewed and comprise issues in relation to cognitive

<sup>2</sup> In addition to the above mentioned database search tools Lund’s online literature search engine LibHub was used (<http://libhub.sempertool.dk.ludwig.lub.lu.se/>).

Download English Version:

<https://daneshyari.com/en/article/7258393>

Download Persian Version:

<https://daneshyari.com/article/7258393>

[Daneshyari.com](https://daneshyari.com)