

Exploring responses to public transport disruption when travelling with young children

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SUMMARY

The aim of this study was to understand how adults respond to public transport (PT) disruption when travelling with young children. A series of semi-structured interviews were conducted based on a hypothetical scenario of a 45-minute delay. Analysis of responses revealed distinct differences in how adults respond when travelling accompanied versus alone. Considering the findings a series of recommendations are made which will improve experience of PT when travelling with young children and potentially encourage greater use of PT networks.

KEYWORDS

Public transport, Disruption, Encumbered, Children

Introduction

Public transport (PT) contributes to improved environmental, economic and health conditions in urban environments (Sun & Cui, 2018) and in rural areas it is crucial to promoting accessibility and social inclusion (Berg & Ihlström, 2019). The transportation sector was the largest greenhouse gas emitting sector in the UK contributing 26% of the total emissions in 2021. Private car use is considered particularly problematic with estimates suggesting that a journey made with a typical petrol car generates four times more CO₂ per person than the same journey made by a coach (DfT, 2023). Not only do cars contribute significantly to greenhouse gas emissions they also compete for space, are responsible for congestion, noise, localised heat effects and in some cases fatal accidents (Gössling, 2020). Increasing PT ridership is considered key to a more sustainable future for transport (Spandou & Macário, 2021). Public receptiveness to using PT is directly related to their attitudes towards it (Soza-Parra et al., 2019). A key factor negatively affecting attitudes towards PT are disruption events and previous studies have demonstrated that short-term and long-term reductions in ridership follow disruption to PT networks (Nguyen-Phuoc et al., 2018; van Exel & Rietveld, 2009; Zhu et al., 2017). Life events also influence travel behaviour and having young children has been shown to increase car dependency (Prillwitz et al., 2006; Ryley, 2006). Census data showed that in 2023, 43% (8.3 million) of families in the UK had one or more dependent children (ONS, 2024). Travelling with young children represents a unique encumbrance (something that restricts or hinders freedom of movement) which can deter public transport use, for example, carrying child related paraphernalia (Price & Matthews, 2013), safety constraints, concerns around unpredictable behaviour and their effects on other passengers (McCarthy et al., 2017). Moreover, this group of passengers are particularly vulnerable to unexpected events such as disruption. The aim of this study was to understand the unique challenges faced by adults travelling with young children during a PT disruption event. Based on these findings a series of recommendations were developed, which will be of interest to policy makers and transport planners. The recommendations

offer a tangible means to improve PT experience for this substantial group of potential PT passengers.

Approach

To better understand the challenges faced by adults encumbered by young children - a series of interviews were conducted with adults who have experience of travelling with young children. A hypothetical scenario was developed, based on the results of a previously conducted survey (unpublished data). Participants were informed that on arriving at a train station that their train journey had been delayed by 45 minutes. Participants were then asked what they would choose to do when travelling with a young child in a pushchair and how this would differ to when travelling alone. Semi structured questioning was developed which probed the factors which would affect responses and decision making. A total of 20 interviews were conducted via Microsoft Teams, the interviews lasted approximately 30 minutes and were auto transcribed. Thematic analysis as set out by Braun and Clarke (2021) was used to analyse the data and generate themes which captured the data findings. An inductive approach focussing on semantic themes was used to develop themes which summarised the original research question.

Results

Thematic analysis of participant interview transcripts led to the development of eight themes; comfort, flexibility, impact, information, journey planning and decision making, practical and logistical considerations, safety and emotional and social impact. Owing to space constraints the theme of flexibility and subthemes are shown in Table 1, along with relevant descriptions and a series of recommendations. This will be expanded to cover all themes for the conference output.

Table 1: Subthemes, descriptions and recommendations for flexibility theme.

Theme	Subtheme	Description	Recommendations
Flexibility	Exclusion	Passengers travelling with children conveyed a feeling of exclusion from alternative travel modes because of accessibility issues or unsuitability.	1. Car seat provision to allow safe use of taxis 2. Improved connectivity and accessibility between services for example shuttles to connect trains and buses and lifts/travelators to improve step free access. 3. Improved visual/audio information on alternatives and accessibility to enable hands free information gathering
	Urgency	Passengers travelling alone were often concerned with journey efficiency and used private taxis as a back-up. Passengers travelling with children conveyed that they would usually be travelling for leisure, with less time pressure.	
	Adaptable	Passengers travelling alone had agency to investigate other travel modes and flexibility in their mobility. Passengers travelling with children commented that inability to access relevant information or access alternative provision would force them to wait and stick to the original plan.	

Key findings

Adults travelling with young children generally made different choices to when travelling alone based on a myriad of factors, including reduced flexibility. The recommendations suggested here focus primarily on improving the experience of adults travelling with young children. However

improved accessibility will benefit passengers with mobility issues and audio/visual information (that doesn't require access to mobile phone) will benefit a wide range of passengers. The full set of recommendations developed by this study, informed by all themes, therefore has the potential to make PT networks more inclusive and attractive to a wide range of passenger groups.

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