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Learning to drive in young adults with language impairment

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ABSTRACT

Language impairment (LI) is a common developmental disorder which affects many aspects of young people's functional skills and engagement with society. Little is known of early driving behaviour in those with this disability. This longitudinal study examines early driving experience in a sample of young adults with LI, compared with a sample of typically developing age-matched peers (AMPs). At age 24 years, significantly fewer participants with LI had acquired a driving licence. A crucial hurdle for those with LI appeared to be the Theory part of the (UK) test. Logistic regression analysis indicated that language ability and a measure of independence at age 17 contributed to the prediction of licence possession at age 24. There was no evidence of differences in traffic violations or accident rates between those with and without LI. There is little evidence that young people with LI are at greater risk on the roads than peers without LI, but some individuals with LI might benefit from support in the course of preparation for driving and in the driving test.

1. Introduction

Learning to drive is an important dimension of achieving independence and self-sufficiency for many adolescents and young adults (Barkley & Cox, 2007). It affords or improves access to a larger geographical environment, it expands opportunities for employment and leisure, and it signals adult autonomy. It also places the young person at disproportionate risk of accidents: in most countries, young drivers are the highest risk group for road accidents and fatalities (World Health Organization, 2013). Hence, driving is at once a valuable skill, an indicator of social inclusion, and a source of major public health issues. For these reasons, there is considerable research and policy interest in the adequacy of preparation of young people for participation in road traffic, in the inclusion/exclusion of particular groups of potential transport users (Lamont, Kenyon, & Lyons, 2013), and in the factors that help to predict safe versus risky driver behaviour (Bina, Graziano, & Bonino, 2006; Durkin & Tolmie, 2010; Romer, Lee, McDonald, & Winston, 2014; Shope & Bingham, 2008).

One factor which might be anticipated to bear on young people's driving-related choices and competence is whether or not they have developmental disabilities. For example, much of the literature on young drivers has focused on those with Attention Deficit Hyperactivity Disorder (ADHD). A large body of evidence indicates that individuals with this condition are at greater risk than non-affected peers of violating traffic safety regulations, receiving citations for driving offences, and having road accidents (Barkley & Cox, 2007; Barkley, Murphy, & Kwasnik, 1996; Chang, Lichtenstein, D'Onofrio,

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Sjölander, & Larsson, 2014; Woodward, Fergusson, & Horwood, 2000). The symptoms characteristic of ADHD, including poor attention, impulsivity, hyperactivity and weak inhibitory control (Barkley, 1997) clearly present challenges to driver performance (although the extent of the risk is controversial, cf. Oliver, Han, Bos, & Backs, 2015; Vaa, 2014).

Researchers have also begun to address the difficulties of individuals with dyslexia, drawing attention to the fundamental but widely neglected observation that these 'are transport users, too' (Lamont, 2009). Lamont and colleagues' in-depth qualitative analysis demonstrates that the difficulties faced by people with dyslexia with spoken and written language impact on their uses of travel information, presenting obstacles to planning and executing journeys (Lamont et al., 2013). Brachacki, Nicolson, and Fawcett (1995) tested the abilities of adults with dyslexia to differentiate real and false traffic signs and found that the participants with dyslexia were less able to perform the task than were typical adults.

Less attention has been paid to the substantial proportion of young people who have language impairment (LI). These individuals are also transport users and, in many cases, will become drivers at some point. In this study, we present what we believe to be the first investigation of how young adults with LI progress towards becoming drivers.

1.1. Language impairment and driving

LI is a disability that is often unnoticed in everyday life yet can have pervasive consequences for the young person concerned. The major clinical symptoms of this disorder are deficits in the comprehension and/or production of language in the context of nonverbal intelligence within the normal range and the absence of any hearing impairment or frank neurological damage (Leonard, 2014). The condition is heterogeneous (different children have different combinations of characteristics) but many individuals with LI have receptive difficulties detecting subtle features of everyday talk, such as the small parts of speech (e.g., plural markers, inflections, past tense expressions) that contribute importantly to the exchange of meaning. Many have expressive difficulties in producing these details and appear stilted in speech. Many have both receptive and expressive difficulties. As a result, young people with LI find it difficult to keep up with conversations and to process complicated instructions. Approximately 7% of children have LI at the point of school entry (Tomblin et al., 1997) and, although it can resolve during the school years, for many LI continues into adolescence and adulthood (Conti-Ramsden, St Clair, Pickles, & Durkin, 2012; Nippold & Schwarz, 2002).

Why should LI be relevant to the tasks of the novice driver? LI can be expected to bear on transport use for reasons similar to those identified in young people with other, related, developmental disorders. Importantly, it is well-established that there are overlaps and comorbidities among ADHD, dyslexia and LI (Bishop & Snowling, 2004; Newbury et al., 2011; Redmond, 2016). For example, children with LI tend to manifest levels of hyperactivity and emotional difficulties that are significantly higher than those of typical comparison groups (Beitchman, Nair, Clegg, Ferguson, & Patel, 1986; Cardy, Tannock, Johnson, & Johnson, 2010; St Clair, Pickles, Durkin, & Conti-Ramsden, 2011). High proportions of children with LI have reading difficulties (Bishop & Snowling, 2004; Conti-Ramsden, Botting, Simkin, & Knox, 2001; St Clair, Durkin, Conti-Ramsden, & Pickles, 2010).

Young people with LI have also been found to lag behind peers with typical development in the achievement of independence in many aspects of daily life (Conti-Ramsden & Durkin, 2008). For example, Conti-Ramsden and Durkin found that virtually all (99%) of the parents of a control sample of typically developing 16-year-olds reported that their children were fully able to look after themselves in respect of everyday life tasks, that their children were able to travel independently (i.e., using public transport), and could organize their own going out; however, the corresponding parental endorsements for 16-year-olds with LI on the same three measures were 64%, 78%, and 62%, respectively. Although using a very different methodology and with a different sample, this dovetails with the findings of Lamont et al. (2013) concerning people with dyslexia who reported that they sometimes needed help executing their travel plans and sometimes, if help was not readily available, avoided or abandoned journeys. This suggests that, as a group, adolescents with LI achieve less familiarity with the daily tasks of transport use and are less equipped with the general level of personal independence that could form the backdrop to a desire to learn to drive.

In sum, the entry barriers to driving – such as learning how to drive, taking driving tests – normally involve listening to instructions, articulating plans, and reading texts and signs; all of these pose potential obstacles to those with language difficulties. Learning to drive is an important developmental task for many young people, but those with LI tend to be delayed in addressing developmental tasks and in achieving autonomy. Taken together, these factors lead to the expectation that entry into driving will be later in young people with LI than in typically developing comparison peers.

1.2. The present study

The present study investigates the uptake of driving and the early driving records of a sample of young people with histories of LI, and compares them to a group of peers with typical development. In the light of the above, we focussed on two aspects, each of which has theoretical and practical importance. These are: developmental readiness for entry into driving (i.e., seeking and acquiring a licence, confidence in driving) and safety indicators (i.e., rule violations and accidents). Developmental readiness is of theoretical interest in helping to understand how different abilities – in the present case, language abilities – impact on tasks associated with entry into adulthood. It is also of practical importance, in that access to driving mobility is a measure of social inclusion (Lamont et al., 2013). It would be of concern, for example, if a substantial minority of