Passive commuting and partners' mental health: The analysis of the UK Household Longitudinal Study

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Extended Abstract

Background

Previous research has found that passive commuting – traveling to and from work by a motorized private vehicle or public transportation – can be costly for couples' social relationships (Nisic and Kley 2019), partnership stability (Kley and Feldhaus 2018; Rüger et al. 2017), and fertility (Huinink and Feldhaus 2012). To date, most research assessing commuting's impact on health has focused on commuters' self-reported health measures and mental health (Chatterjee et al. 2020; Feng and Boyle 2014; Goerke and Lorenz 2018; Karlström and Isacsson 2010; Künn-Nelen 2016), and studies of physical health are mostly cross-sectional (Hansson et al. 2011; Hoehner et al. 2012; Koslowsky, Kluger, and Reich 1995).

There is growing evidence suggesting that these impacts vary across social groups. For example, men and minority groups are more likely to commute than women and Whites (Crane 2007; Mclafferty and Preston 2019). Commute time was negatively correlated with labor force participation among married women, especially those with children and immigrant women (Farré, Jofre-Monseny, and Torrecillas 2020; Marcén and Morales 2021). A study in Germany showed that after the transition to first parenthood women decreased their commuting distance by about 33%, while no substantial change was observed among men (Skora, Rüger, and Stawarz 2020). Women also experienced a larger motherhood penalty than men, 23% of which can be attributed to changing to jobs that require a shorter commute and less suitable to their skills (Skora et al. 2020).

Research investigating the link between commute time and partnership instability also showed mixed findings by gender. German-based studies have found a higher risk of partnership dissolution among women with long commutes (at least 1 hour per journey between home and workplace) than among their peers with shorter commuting time, but no such relationship was observed among men (Kley 2015; Kley and Feldhaus 2018). In contrast, an analysis of the Swedish register found an increased risk of separation among commuting men (Sandow 2014).

Studies investigating gender-specific relationship between long commutes and mental health are inconclusive. Using Understanding Society, Clark et al. (Clark et al. 2020) found that commute time was negatively related to job satisfaction, leisure time satisfaction, self-reported health, strain, mental health and life satisfaction, but these effects were similar for men and women. In contrast, based on similar data from the British Household Panel Survey (BHPS), Roberts et al. found that a higher commuting time was negatively related to the women's psychological health, whereas no significant effect was found among men (Roberts, Hodgson, and Dolan 2011).

Although these findings provide very helpful insights into the relationship between long commutes and mental health and well-being of commuters, research examining the link between long commutes of a family member and their non-commuting partners' (Brömmelhaus, Feldhaus, and Schlegel 2020) and how this relationship vary across social contexts is limited.

Long passive commuting to work and the health of family members

Passive commuting is likely to affect not only an individual alone but may have consequences for other members of the household. Theories about the life course and social stress provide a useful framework for understanding why a long commute may harm a partner's health and well-being. As the linked lives principle of the life course framework suggests, the life pathway of one person is intertwined with and has implications for the pathways of their nearest others (Elder 1994, 1998). Social stress theory highlights that major stressors can give rise to secondary sources of stress through a process known as stress proliferation (Pearlin 2010; Pearlin et al. 2005). Linking these perspectives, stress related to long commutes, such as having reduced time for family life, may act as initial stressors that give rise to issues such as family conflict or poor health behaviors, resulting in chains of adverse outcomes for family members.

Commuting may reduce opportunities for everyday discussions of family matters and time for shared activities, negatively impacting partnership quality (Gerstel and Engel 1982). Supporting this proposition, research documents a negative effect of long commutes on partnership stability among long-commuters compared to their peers with shorter travels to work (Kley 2015; Kley and Feldhaus 2018; Sandow 2014). Other research shows that longer commutes are negatively associated with partners' life satisfaction (Stutzer and Frey 2008).

Long commutes may also diminish relationship quality by creating imbalances in domestic duties. Because partners with long commutes are often absent, non-commuting partners may need to take on most household and childcare responsibilities. Findings from a German survey indicated that long-distance commuters had less time for their partners and children (Limmer and Rüger 2010). Especially in dual-career dyads, the increased domestic demands on one partner may act as additional chronic stressors and result in work-family conflict, which has also been linked to negative mental and physical health outcomes (Allen et al. 2000; Greenhaus, Allen, and Spector 2006). Given that social roles are normatively regulated (George 1993) and women already take more responsibility for domestic activities, we expect that having a commuting male partner will be especially harmful to women with no or shorter commutes to work. On the other hand, because male partners of commuting women may take on additional domestic duties that are stereotyped as female and find less acceptance of their lifestyle within their social networks, non-commuting men may also have poorer mental health than men with female partners who have shorter commutes to work. Male partners may also find increased childcare demands to be more stressful than their female partners (Brömmelhaus et al. 2020).

Drawing on the life course framework – specifically the linked lives principle – and social stress theory, this study investigates the relationship between commuting and partners' mental health and well-being.

Materials and methods

Study Population

The present study utilizes the data from the UK Household Longitudinal Study (UKHLS) Understanding Society. It is the successor of the British Household Panel Survey (BHPS), which began in 1991 and ended in 2009. The analytical sample is based on data from 2009, as only around 8.000 of the original BHPS households were included in the UKHLS and limited to 2019, i.e. pre-COVID time (University of Essex 2024). It includes couples who are married or individuals living together as a couple. Based on both the theoretical framework and prior empirical findings that the relationship between commuting and partners' health and well-being vary for men and women, we conduct the analysis separately by gender.

We excluded couples, where both partners were constantly or retired and who had zero commuting time over the whole observation period. The age of the study participants varied

between 17 and 65 years. We limited out sample to the individuals at ages between 18 and 65 years as long commutes are rare at these ages. The final study population included 13,568 men (57,785 observations) and 13,594 women (57,970 observations) over the nine waves. Table 1 shows sociodemographic characteristics of the study population.

Mental Health Measure

Mental health is measured using the SF-12 Mental Component Summary. This score is derived from responses to twelve different questions including assessment of general health, health limits connected to different activities, physical health limits, and pain. The mental functioning score ranges from 0 to 100, with higher scores representing better mental health (University of Essex 2024).

Commuting Time

Commuting time is assessed with the help of a single question: "About how much time does it usually take for you to get to work each day, door to door (in minutes)" (University of Essex 2024). Next to the commuting time of the partner, we also control for the own commuting time (Clark et al. 2020). We limited commuting time to a maximum of 200 minutes one-way as an attempt to restrict our analysis to work travels that can reasonably done on a daily basis. For make the interpretation of the relationship between commuting time and mental more intutitive, we divided the original commuting time by 10, so that a unit increase in commuting time represents the increase by 10 minutes.

Control Variables

Our analysis includes age, squared age, employment (unemployed, part-time employed, full-time employed, and retired), and household income (wave-specific quartiles) as time-varying covariates. Additionally, we examine two variables relating to parental status: the number of children (0, 1-2, or 3+) and the presence of a child under the age of six. Couples with adult children are included in the category zero children. We also included education (low, middle, and high) as a time-invariant covariate.

Analytical Strategy

We employed random-effects (RE) models to assess the relationship between commuting time and partners' mental health. To address our research question, the main model, Model 1, shows relationships between time-varying commuting time and partners' mental health over time, net of time-varying and time-invariant controls. We then added sociodemographic characteristics to examine whether education, income and employment status conditions the relationship between commuting time and partners' mental health. In Model 3, we further add parental status characteristics to investigate whether the number of children and the age of the youngest child play role in the relationship between commuting time and partners' mental health. The final Model 4 additionally includes respondents' own commuting time.

(Preliminary) Results

Figures 1 and 2 show the predicted mental health score by partners' commuting time for women and men, respectively. Figure 1 suggests that there is no significant relationship between women's mental health and their partners' commuting time. However, our analyses show that women's mental health is significantly linked to their own commuting time. Figure

2 indicates that men's mental health is negatively related to their partners' commuting time. Also, men's commuting time is significantly related to their mental health.

Next Steps
In sensitivity analysis, we plan to differentiate between employees and self-employed because self-employed may have a greater flexibility in the workplace and distribution of work over the working days, and to limit the sample to only parents.

Figure 1. Predicted mental health score by partners' commuting time for men

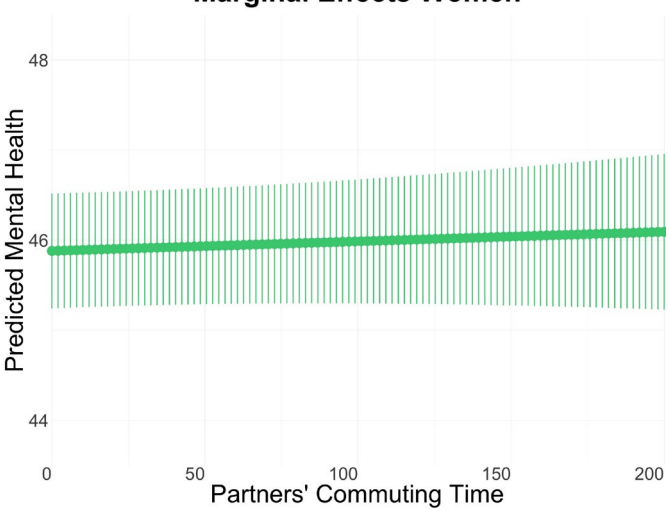
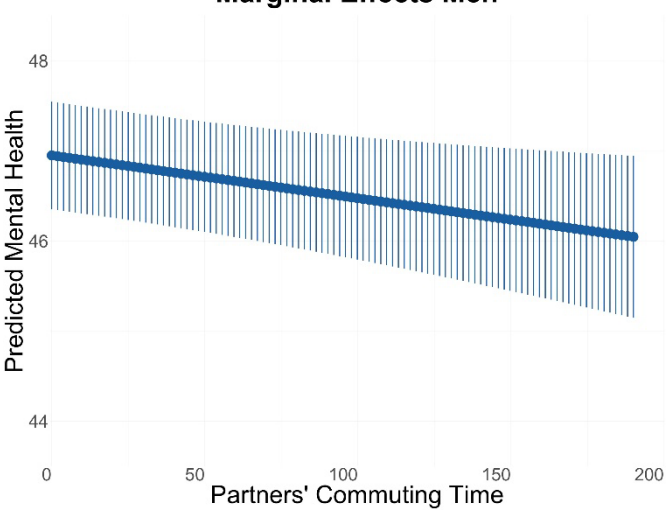


Figure 2. Predicted mental health score by partners' commuting time for men



Funding

Anna Oksuzyan is supported by the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation program (grant agreement No 101125503).

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