

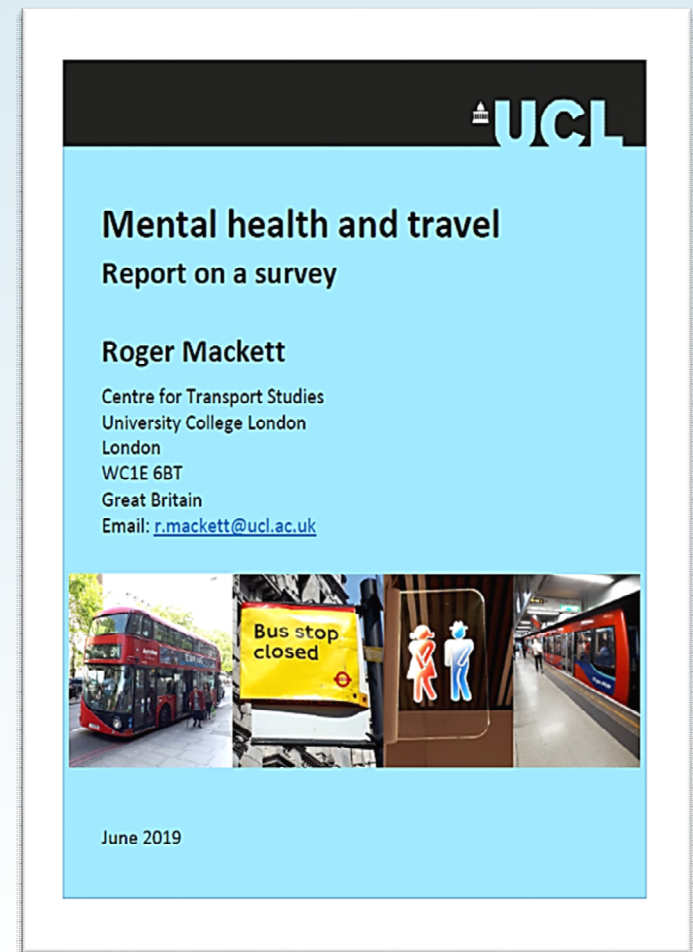
# Navigating Nervously – Gender differences in wayfinding behaviour by people with mental health conditions

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# The survey

- On-line survey of people with mental health conditions (anxiety, depression, etc.) carried out in Great Britain.
- Results weighted to match the age and gender profile of similar people in the Adult Psychiatric Morbidity Survey.
- 363 responses used here.
- Statistical significance of differences established using the Pearson Chi-Square test ( $\chi^2$ ) using 2x2 tables.



Available from:

<https://bit.ly/2lviXbs>

# The mental health of the respondents

	% of respondents		
	Male	Female	Sig.
Anxiety	87	90	-
Depression	69	77	$p < 0.10$
Post-traumatic stress disorder (PTSD)	14	23	$p < 0.05$
Obsessive-compulsive disorder (OCD)	11	17	-
Agoraphobia	10	14	-
Bipolar disorder	6	7	-
Other conditions	23	24	-
A mental health condition	100	100	

Note: 'Sig.' indicates the statistical significance of the difference.  $p < 0.05$  means that there is a 95% chance that the difference between the genders is statistically significant,  $p < 0.10$ , a 90% chance, etc.

## Symptoms of mental health conditions

- **Anxiety** can make decision-making more difficult and cause forgetfulness. It can lead to changes in behaviour including being worried about being in new situations and can lead to avoidance of places and situations that stimulate anxiety.
- **Depression** can make thinking, concentrating and decision-making difficult
- All these symptoms can affect route choice and wayfinding.

# The effects of the mental health conditions

	% of respondents		Sig.
	Male	Female	
Social anxiety	87	87	-
<b>Panic attacks</b>	<b>51</b>	<b>76</b>	<b>p &lt; 0.01</b>
<b>Communication difficulties</b>	<b>56</b>	<b>45</b>	<b>p &lt; 0.05</b>
Impaired memory	43	45	-

What causes these differences?

- **Physiology:** Ingahlalikar et al. (2014) examined differences in the brains of men and women. They found that males had better motor and spatial abilities, whereas females had superior memory and social cognition skills.
- **Lifestyle:** Novaco and Collier (1994) found that commuting caused more stress and depression for women compared with men. They suggested this was due to women having to juggle more complex labour market and home working responsibilities.
- **Society:** Andrews et al. (2003) showed that women tend to have higher levels of PTSD because of the higher prevalence of sexual violence to which women are exposed.

# The effects of having a mental health condition on travel

	% of respondents		
	Male	Female	Sig.
Have become lost, experienced severe anxiety or needed to seek help when travelling	41	55	p < 0.01
Are sometimes prevented from leaving home	78	96	p < 0.01
Are prevented from buying rail tickets in advance because of uncertainty about their mental health on the day of travel	54	73	p < 0.01

## Causes of travel anxiety

	% of respondents		
	Male	Female	Sig.
<b>Interacting with fellow travellers</b>	<b>79</b>	<b>88</b>	<b>p &lt; 0.05</b>
<b>Needing support</b>	<b>74</b>	<b>87</b>	<b>p &lt; 0.01</b>
Feeling out of control	55	69	p < 0.01
Feeling claustrophobic and unable to escape	45	62	p < 0.01
Not being able to obtain help	27	37	p < 0.10
<b>Wayfinding</b>	<b>60</b>	<b>71</b>	<b>p &lt; 0.05</b>
Having to take decisions about where to go	24	41	p < 0.01
Failure of the bus, train or car	39	50	p < 0.05

Note: Only anxieties which have a statistically significant difference between males and females are shown.

# What can be done?

		% of respondents		
		Male	Female	Sig.
	Have received travel training	3	3	-
<b>General</b>	Of those who have not received travel training, respondents who think that this type of training would encourage them to travel more	31	46	$p < 0.01$
<b>Walking</b>	Less clutter on the street	32	15	$p < 0.01$
<b>Bus</b>	Clearer information on board the bus about the route and the next stop	35	55	$p < 0.01$
<b>Rail</b>	Clearer information on board the train about the route and the next stop	23	39	$p < 0.01$
	Being able to contact a member of staff in person when on the train	28	50	$p < 0.01$

Note: Only strategies and policies which have a statistically significant difference between males and females are shown.



# Conclusions

- Women have more mental health conditions than men which means that their travel behaviour and wayfinding are affected more.
- Possible causes of these differences include the physiology of the brain, and greater stress in women's lives because they tend to have a greater share of caring responsibilities and suffer more sexual violence.
- Many more women than men have panic attacks, are prevented by their mental health condition from leaving home and are prevented from buying rail tickets in advance.
- More women than men suffered from travel anxieties that affect wayfinding and route choice such as taking decisions, feeling claustrophobic, and interacting with fellow travellers.
- For women, the greatest need seems to be policies and strategies that will increase their confidence when travelling such as access to staff when assistance is required and clear information when travelling, plus the opportunity to receive travel training.

## For further information

- See the main report: Mackett R L (2019) Mental health and travel: Survey report, Report, Department of Civil, Environmental and Geomatic Engineering, University College London, <https://bit.ly/2lviXbs>.
- See Mackett, R.L. (2021) Mental health and wayfinding, **Transportation Research Part F**: (forthcoming).
- See Mackett, R.L. (2021) Policy interventions to facilitate travel by people with mental health conditions, **Transport Policy**, 110, 306–313, <https://doi.org/10.1016/j.tranpol.2021.06.014>.
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