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Life in lockdown: Living with vision impairment during Covid-19

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1.
Aims &
Objectives

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Survey aims and objectives

Aims
are to survey people with vision impairment on:

- Support received from essential services during Covid-19
- Engagement with lockdown measures: isolation and social distancing
- Constraints faced during Covid-19
- How constraints are negotiated
- Wellbeing during Covid-19

Objectives
are to:

- Describe barriers and challenges to maintaining independent lives and accessing essential services
- Investigate levels of constraint, negotiation and wellbeing during Covid-19
- Compare experiences during Covid-19 by personal characteristics
- Inform support and intervention strategies for vulnerable populations


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2.
Background

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Covid-19 timeline

January

- 4th - World Health Organization (WHO) reports on a novel respiratory virus in China
- 12th – Covid-19 identified
- 13th – cases confirmed outside of China
- 31st – first cases of Covid-19 recorded in UK, government recommends self-isolation for those returning from travel in specific areas and launches “Catch it, Bin it, Kill it” campaign

February

- 11-12th - WHO convenes a Covid-19 Research and Innovation Forum

March

- 11th – Covid-19 declared a pandemic
- 13th – “herd immunity” strategy explained by UK Government Chief Scientific Adviser
- 23rd – UK government initiates lockdown, including specific isolation and social distancing rules

April

- 22nd – peak of pandemic deaths declared in UK

May

- 13th – first round of easing of lockdown measures


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3.
Approach

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Conceptual framework

- A constraint is any factor that acts as a (perceived or actual) barrier or hindrance to participation in an activity (Crawford & Godbey, 1987)

- They are encountered hierarchically:
  - **Intrapersonal** constraints (personality, individual wants, etc.) are the first hurdle to participation
  - **Interpersonal** constraints (other people, relationships, responsibilities, etc.), are next
  - **Structural** constraints (time, money, access, etc.) are often the final barrier to overcome

- **Constraints Negotiation Theory** (CNT) aims to understand how various constraints interact with one another and the extent to which individuals negotiate constraints based on the strength of their motivation and the resources available to them (Jackson, Crawford & Godbey, 1991, 1993)

- CNT has since been expanded into recreational studies, disability studies, research on educational and occupational environments, and transportation and tourism research, among others

- Because Covid-19 presents specific constraints to everyday life, we have expanded CNT to include analysis of related variables: **wellbeing, support services, 2-metre social distancing rule**

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Conceptual framework

- Perceived social isolation is a risk factor for, contributing to a range of negative effects, including poorer overall cognitive performance, faster cognitive decline and depression (Cacioppo & Hawkley, 2009). Evidence suggests that vision impaired adults are more at risk from loneliness and the effects of social isolation than the general population (Hodge & Eccles, 2013). Because isolation is a component of lockdown measures, we have incorporated **wellbeing** indicators into the survey to complement the participation, constraints and negotiation variables

- While vision impairment itself is not a condition that adds vulnerability to Covid-19, vision impairment is often co-morbid (McLean et al. 2014), suggesting more people with vision impairment will be isolating longer than the general population. As a result, they may also need greater **support** from government, medical, transport and delivery services in order to overcome the constraints of isolation

- More specifically, the **2-metre social distancing rule** may present quite specific constraints to people with vision impairment, if the rule is only enforced through visual means

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Survey design

- Self-completion survey
- Designed using Qualtrics with accessibility features turned on
- Anonymised to ensure privacy
- Tested for screen reader compatibility 6th May
  - 16 closed questions, 3 open response
  - Average completion time with screen reader 30 minutes
  - Average completion time without screen reader 10 minutes
- Piloted by four people 8-12 May
- Accessibility test overestimated compatibility and underestimated completion time
- Pilot respondents were averaging 1+ hours to complete
- Screen readers were having trouble with profile matrices used (the suggested “accessible” matrix by Qualtrics)
- Survey format changed to all multiple-choice questions
- Number of items reduced from 86 to 44

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Survey distribution and analysis

- 19th May: Email invitation
  - Guide Dogs' Data Team identified clients within their organisation
  - Approximately 1600 people reached

- On the 22nd May:
  - Link was sent to Visionary, a vision impairment charities organisation. The potential reach of Visionary is unknown
  - Sent via email to Campaigns Team email list, which includes about 8000 people

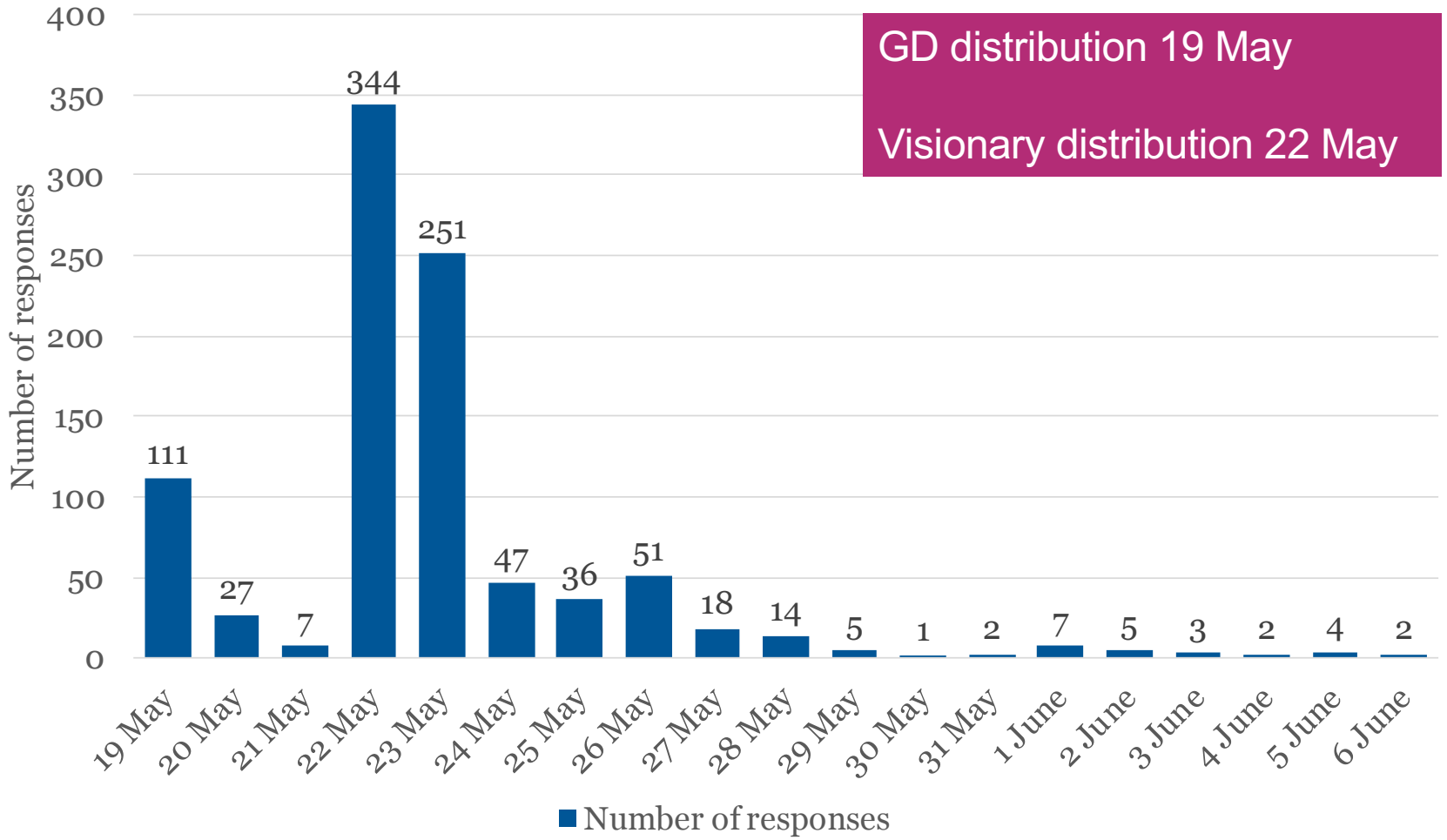
- Survey closed 7th June
  - Data set downloaded from Qualtrics, imported into SPSS for quantitative analysis
  - Responses to the free text questions were aggregated for qualitative analysis in Textometrica

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4. Respondents

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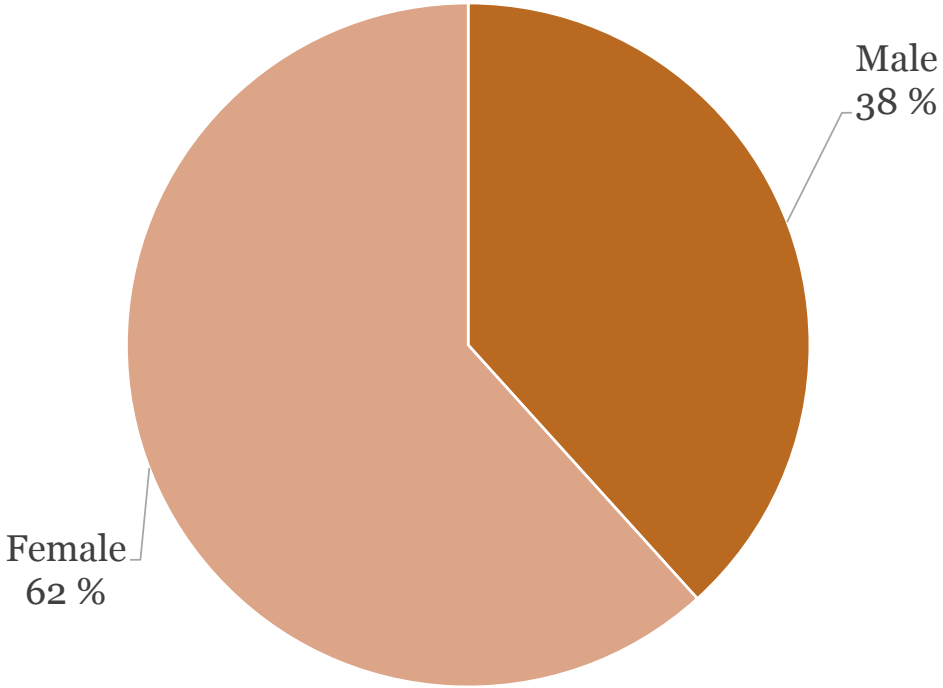
937 responses received between 19th May to 6th June 2020 (an additional 245 were non-complete and removed for the analysis)



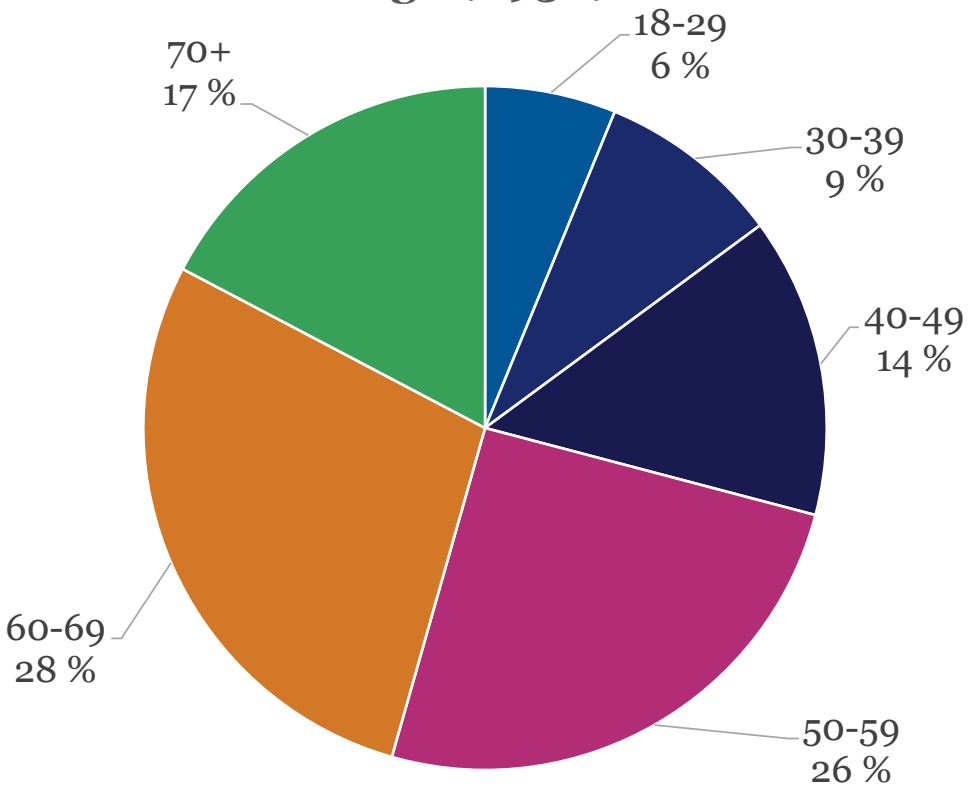
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62% of respondents are female. 17% are in the “at risk” age category (70+)

Gender (n928)



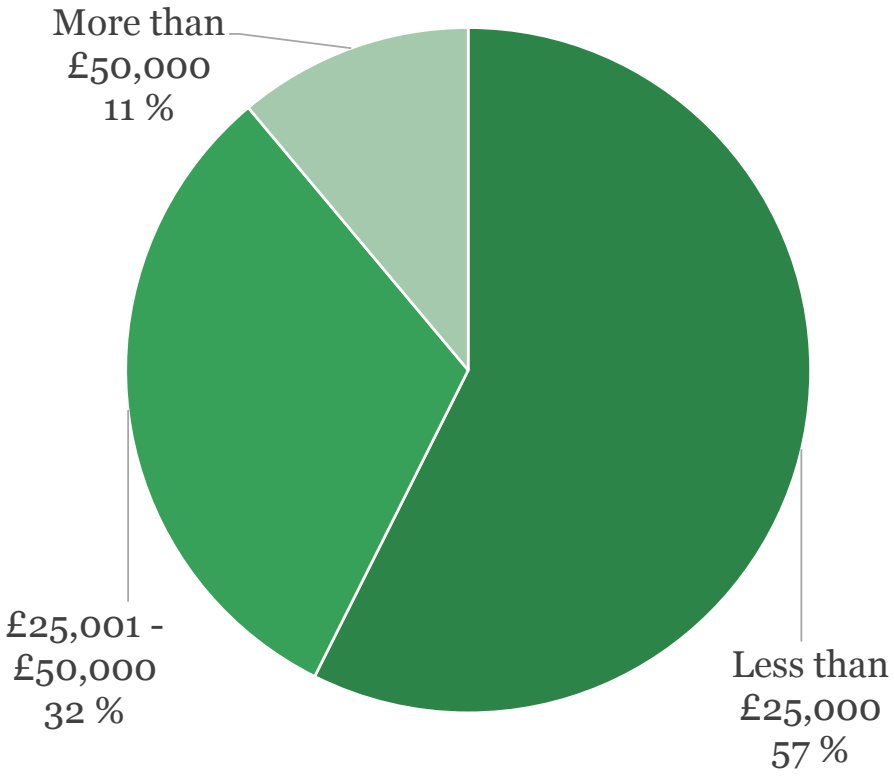
Age (n930)



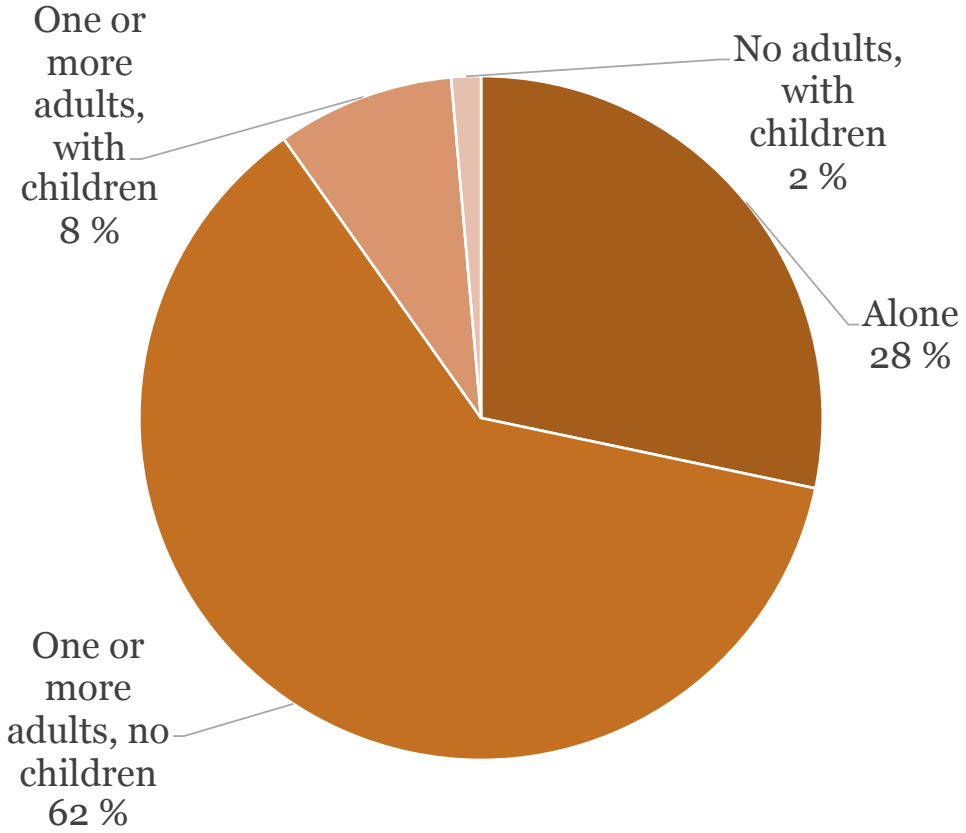
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Almost 90% have a household income of £50,000 or less. 28% live alone

Household income (n692)



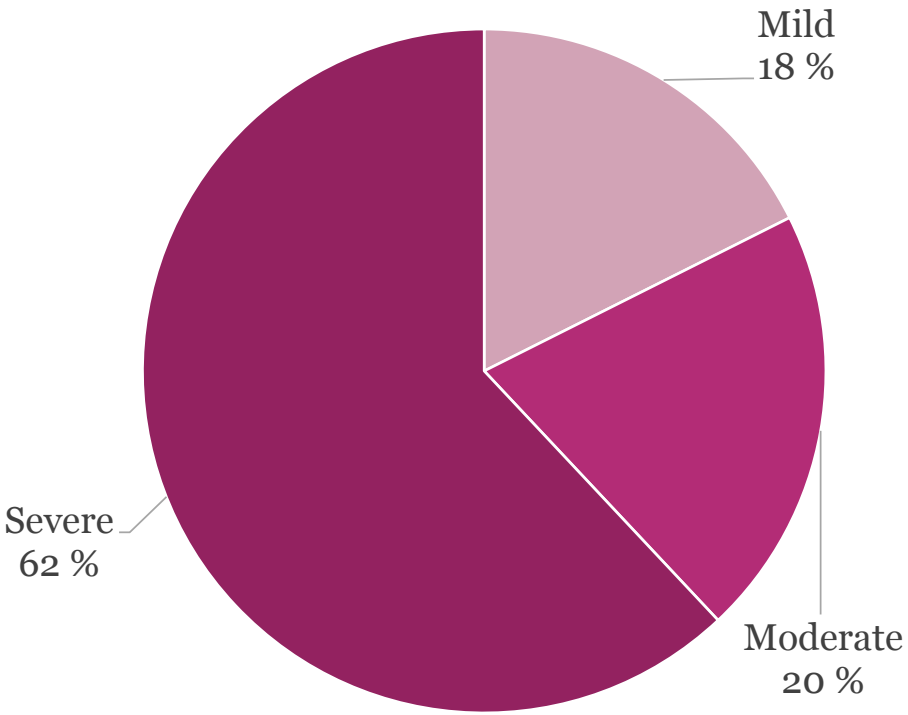
Household composition (n908)



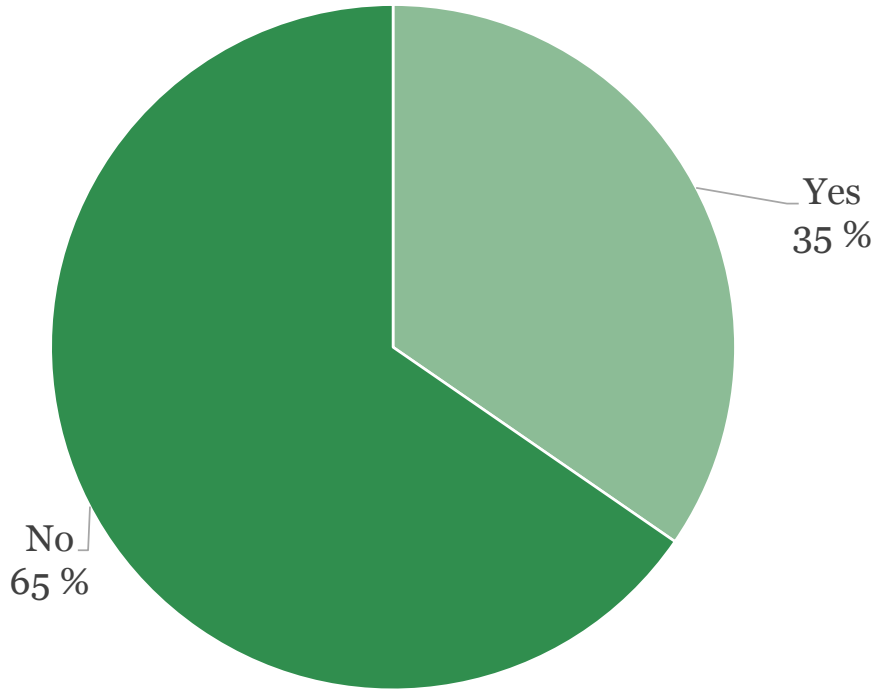
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62% have a severe impairment. Just over one third own a guide dog

Severity of impairment (n808)

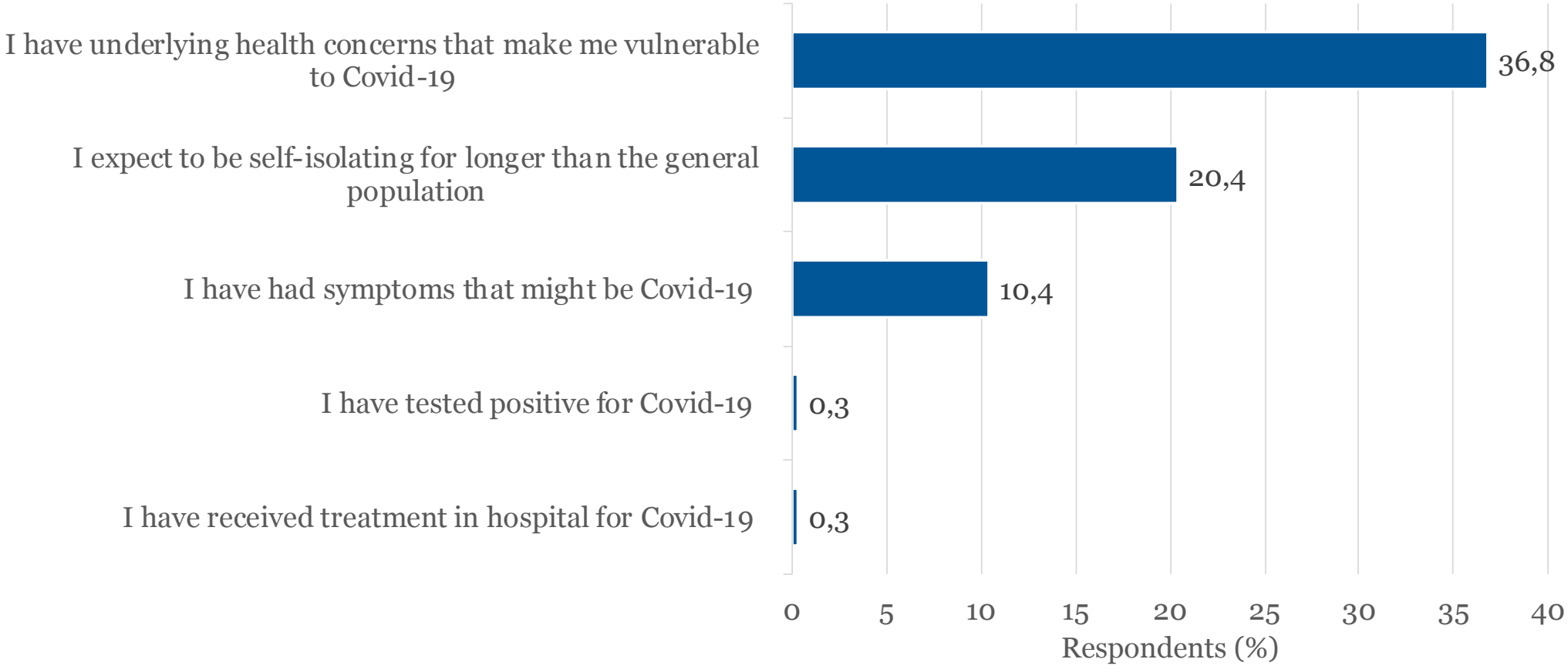


Guide dog owner (n887)



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Almost 40% have underlying health problems that make them vulnerable to Covid-19. Over 10% feel they may have had symptoms. Three respondents (0.3%) have tested positive and received hospital treatment for Covid-19



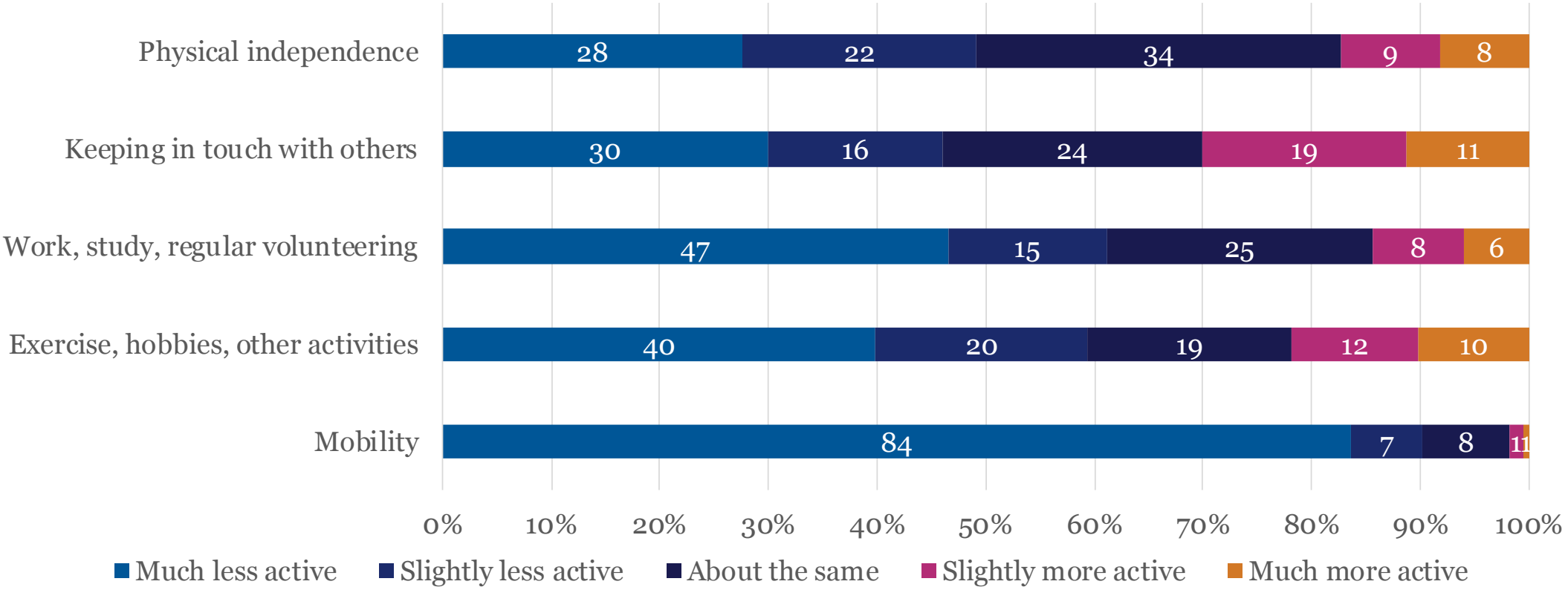
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5. Participation

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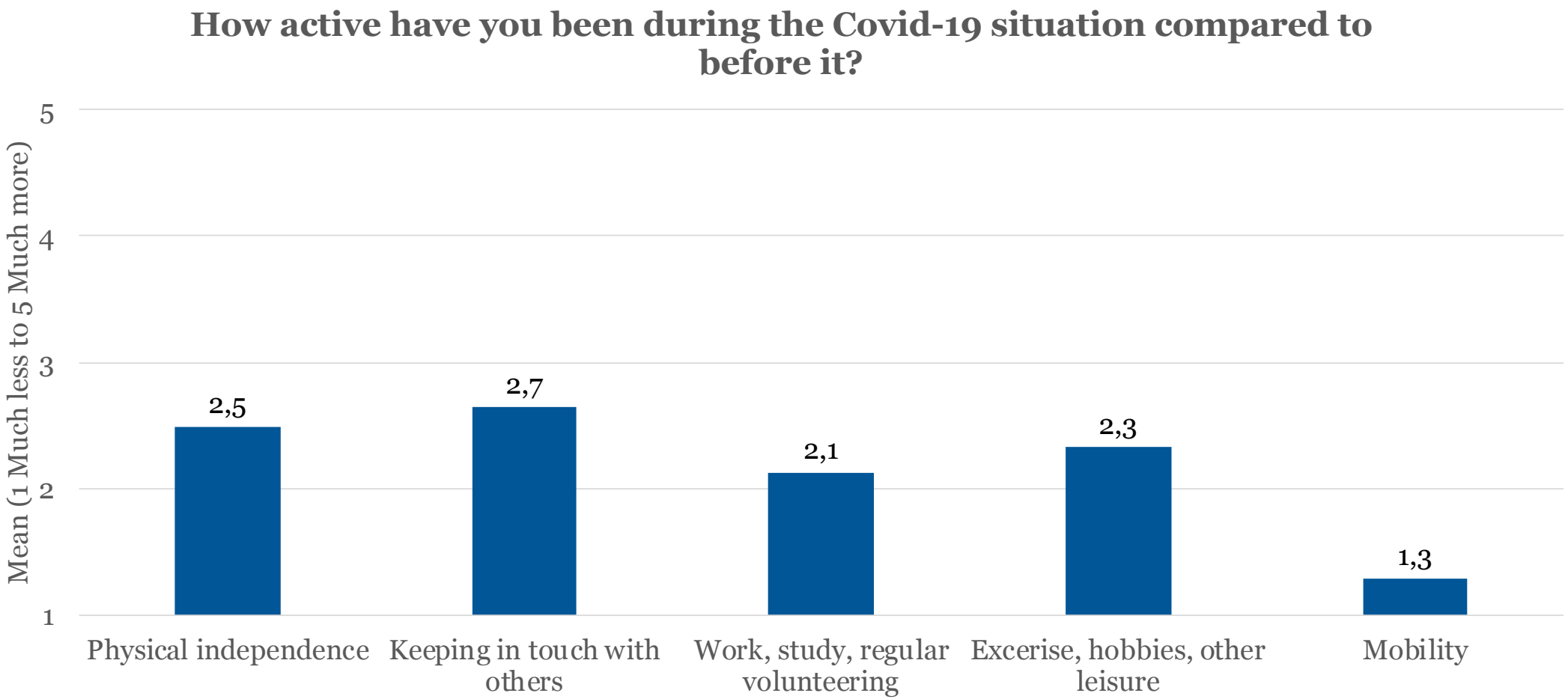
Participation

How active have you been during the Covid-19 situation compared to before it?



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Mobility is most affected by the Covid-19 situation. On average, keeping in touch with others and physical independence remains about the same



On average, respondents are “Slightly less active” during the Covid-19 situation compared to before it

2.2

(On a scale from 1 Much less active to 5 Much more active)

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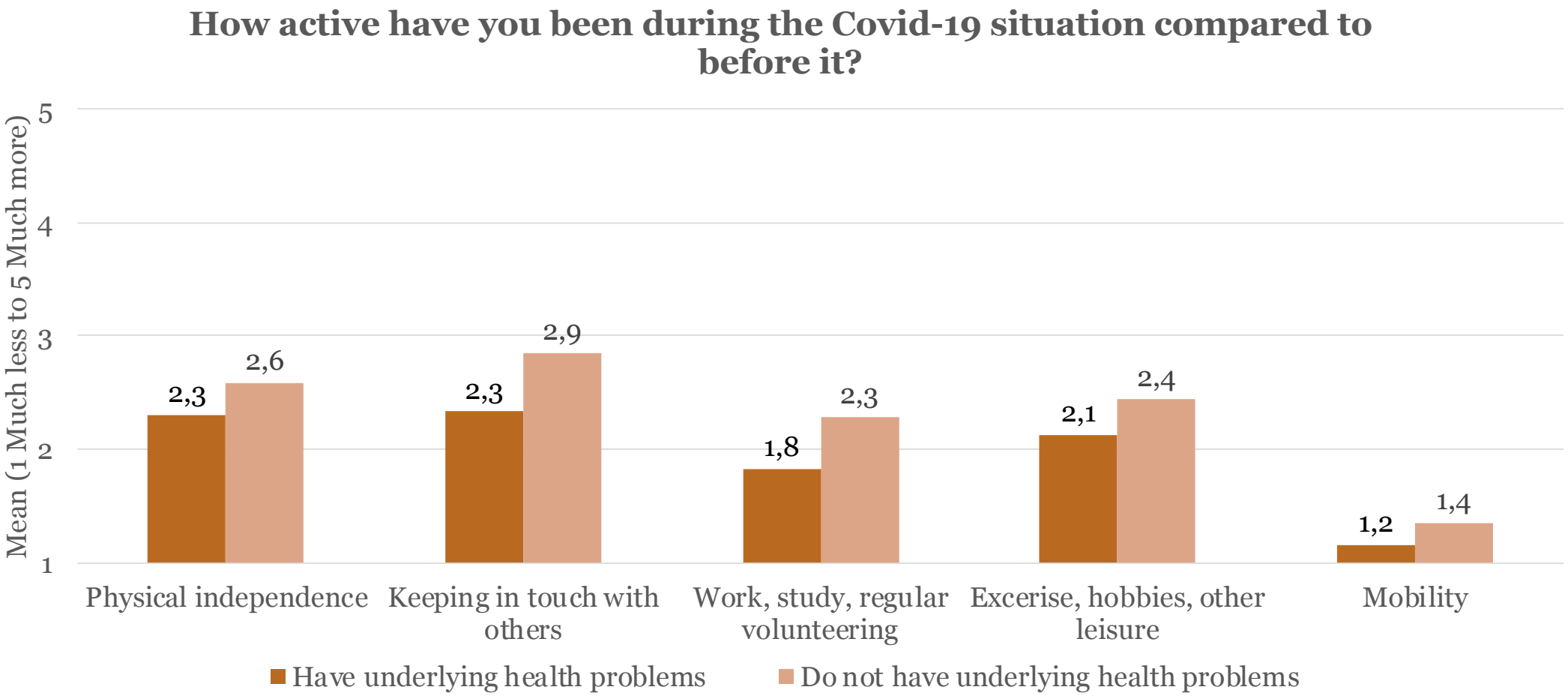
Mean participation by respondent characteristics

Variable	Characteristic	N	Mean	SD	t-test
Gender	Female	573	2.257	0.822	t 1.888, p.059
	Male	354	2.152	0.828	
Age	70+	161	2.309	0.860	t 1.543, p.123
	Under 70	768	2.198	0.821	
Underlying health problems	Yes	345	2.006	0.813	t -6.115, **p.000**
	No	590	2.343	0.811	
Household income	Over 50,000	77	2.625	0.835	t 4.754, **p.000**
	50,000 or less	615	2.156	0.814	
Household composition	Live alone	257	2.116	0.808	t -2.146, p.032
	Live with others	651	2.246	0.830	
Vision impairment	Severe	501	2.068	0.780	t -4.086, **p.000**
	Other	307	2.307	0.847	
Guide dog owner	Yes	307	2.083	0.767	t -2.932, **p.003**
	No	580	2.253	0.845	
Had Covid-19 or symptoms	Yes	99	2.174	0.785	t –0.561, p.575
	No	836	2.224	0.833	

Those with underlying health problems, a lower household income, severe vision impairment and a guide dog are significantly less active

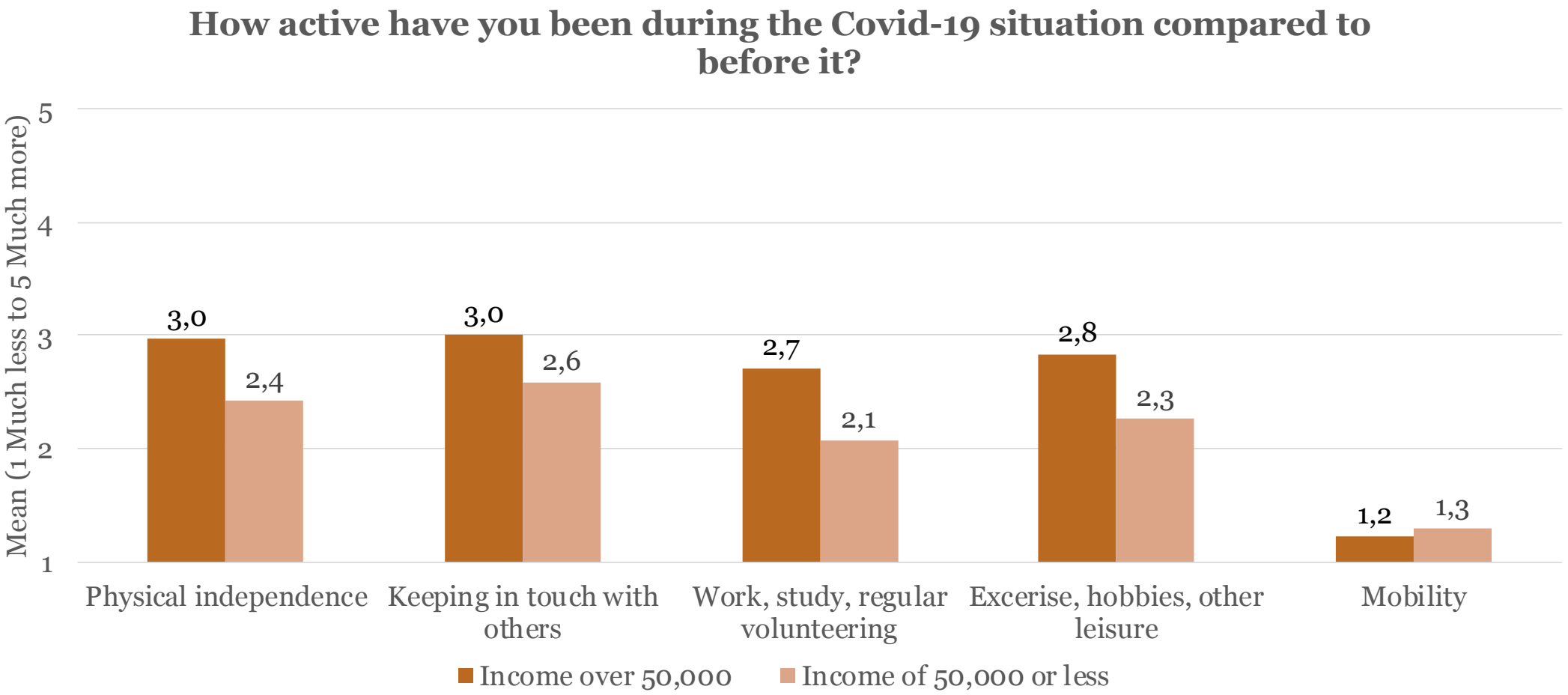
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Underlying health problems



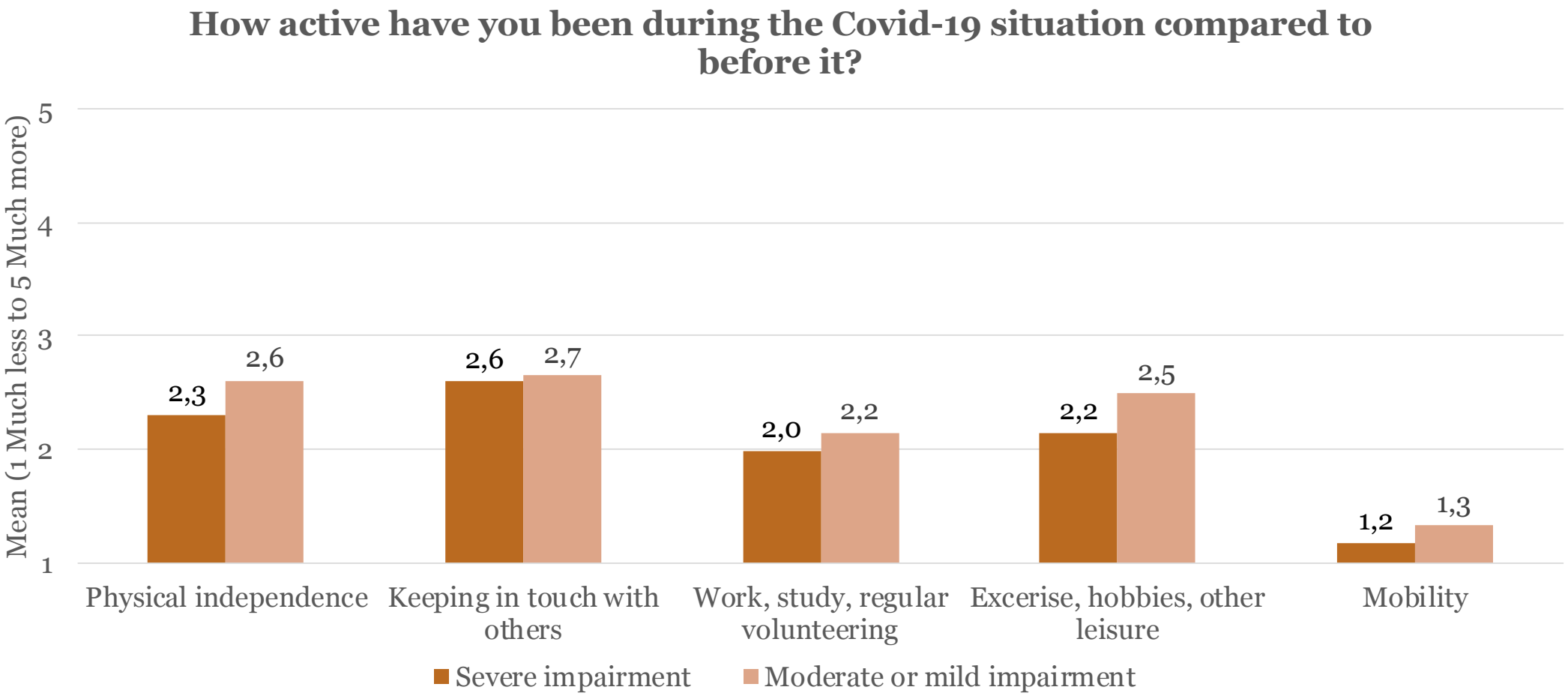
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Household income



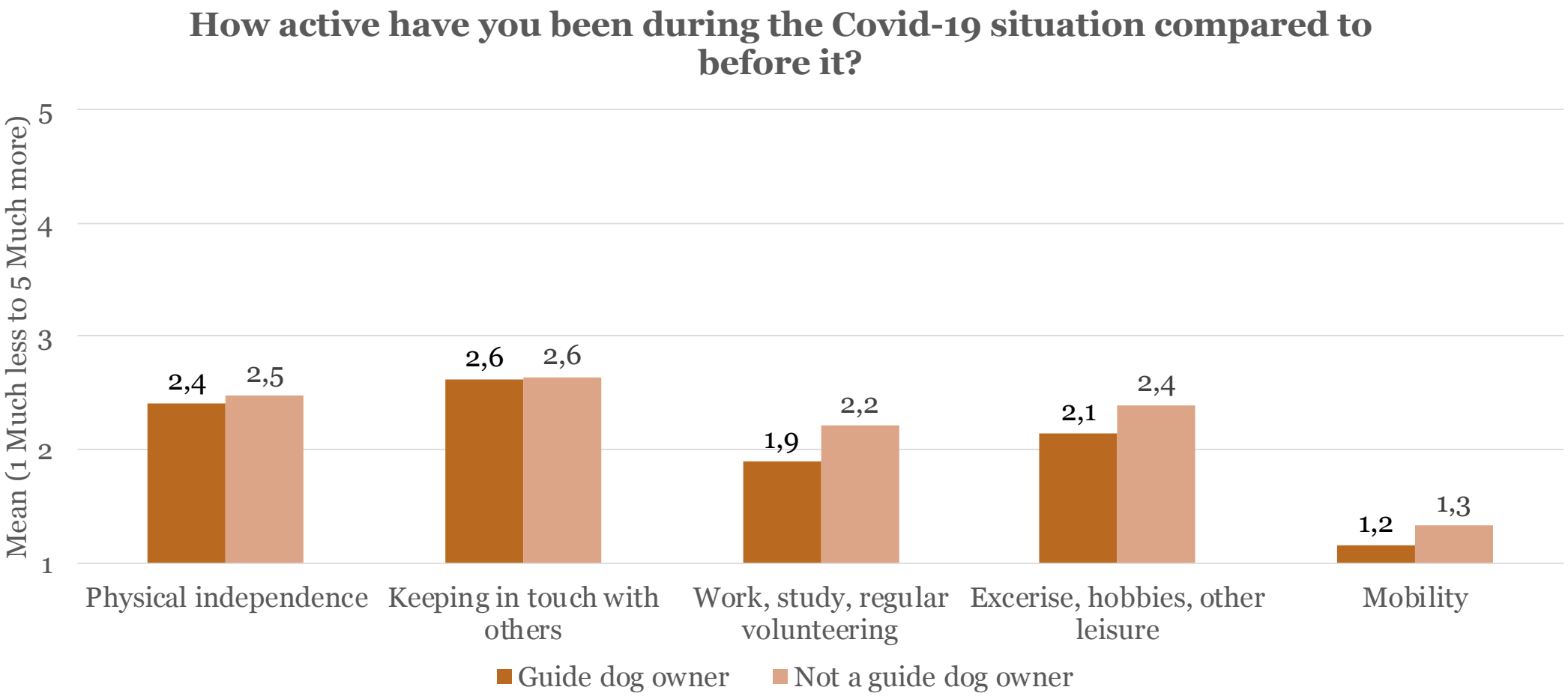
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Vision impairment



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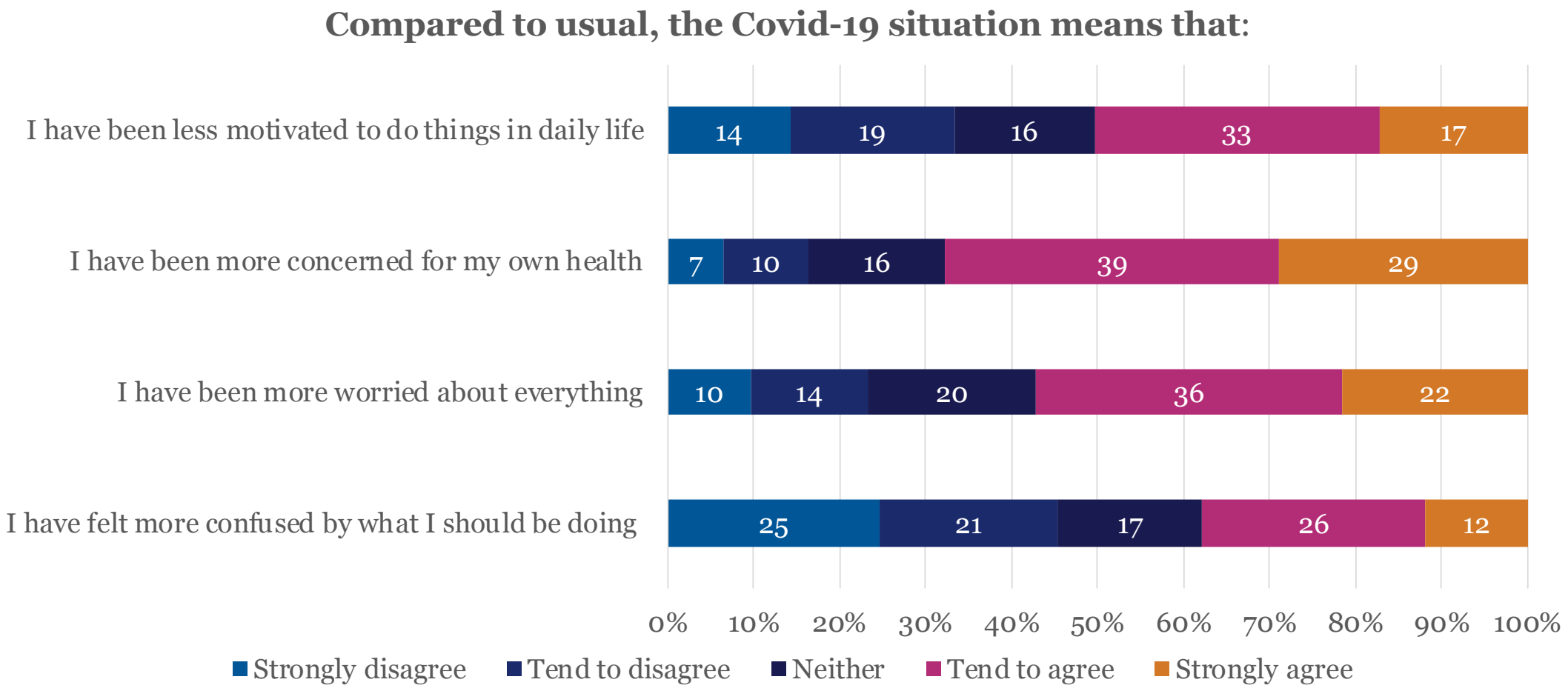
Guide dog owner




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6.
Intrapersonal
constraints

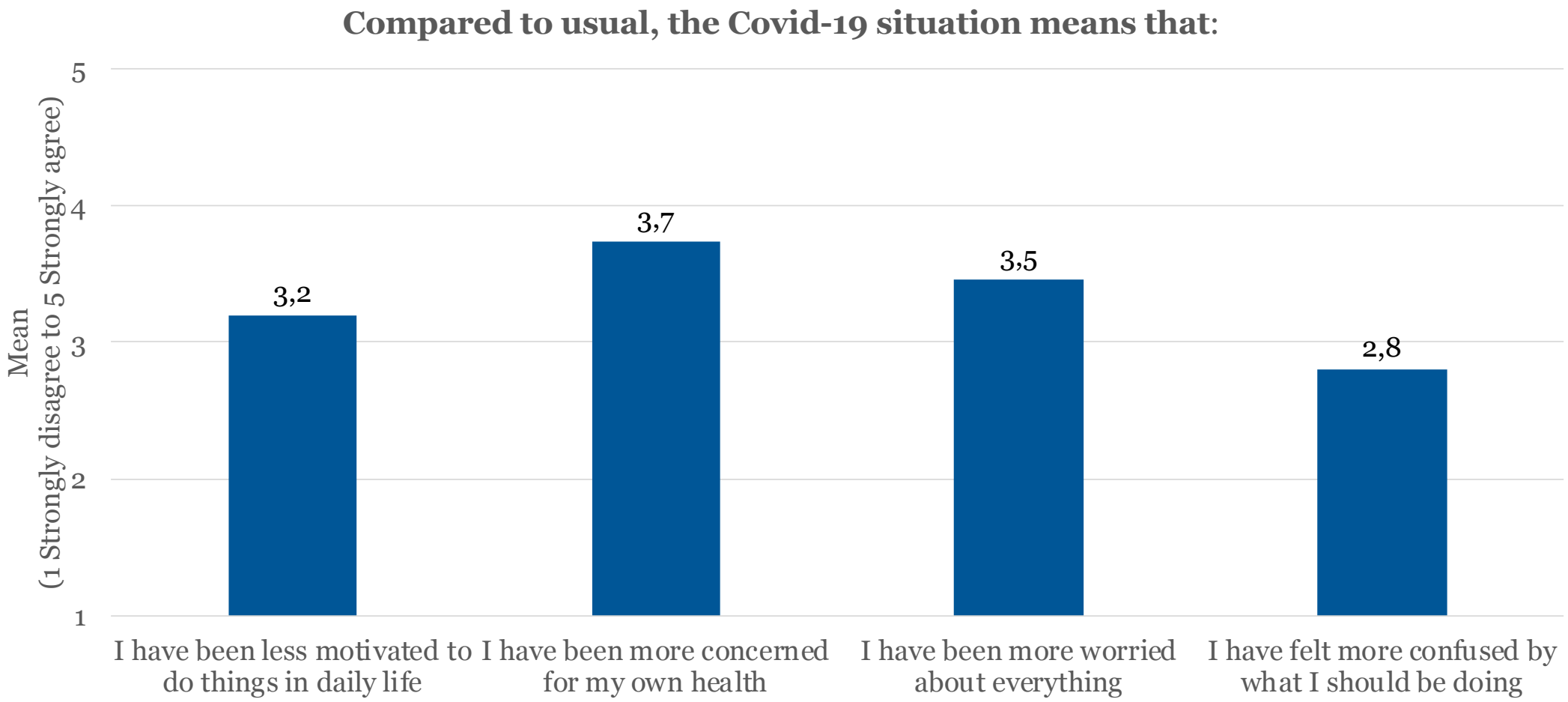
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Intrapersonal constraints



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Respondents tend to agree about being more concerned for their own health and about being more worried about everything



On average, respondents “Neither agree nor disagree” that they are more intrapersonally constrained during the Covid-19 situation compared to usual:

3.3

(On a scale from 1 Strongly disagree to 5 Strongly agree)

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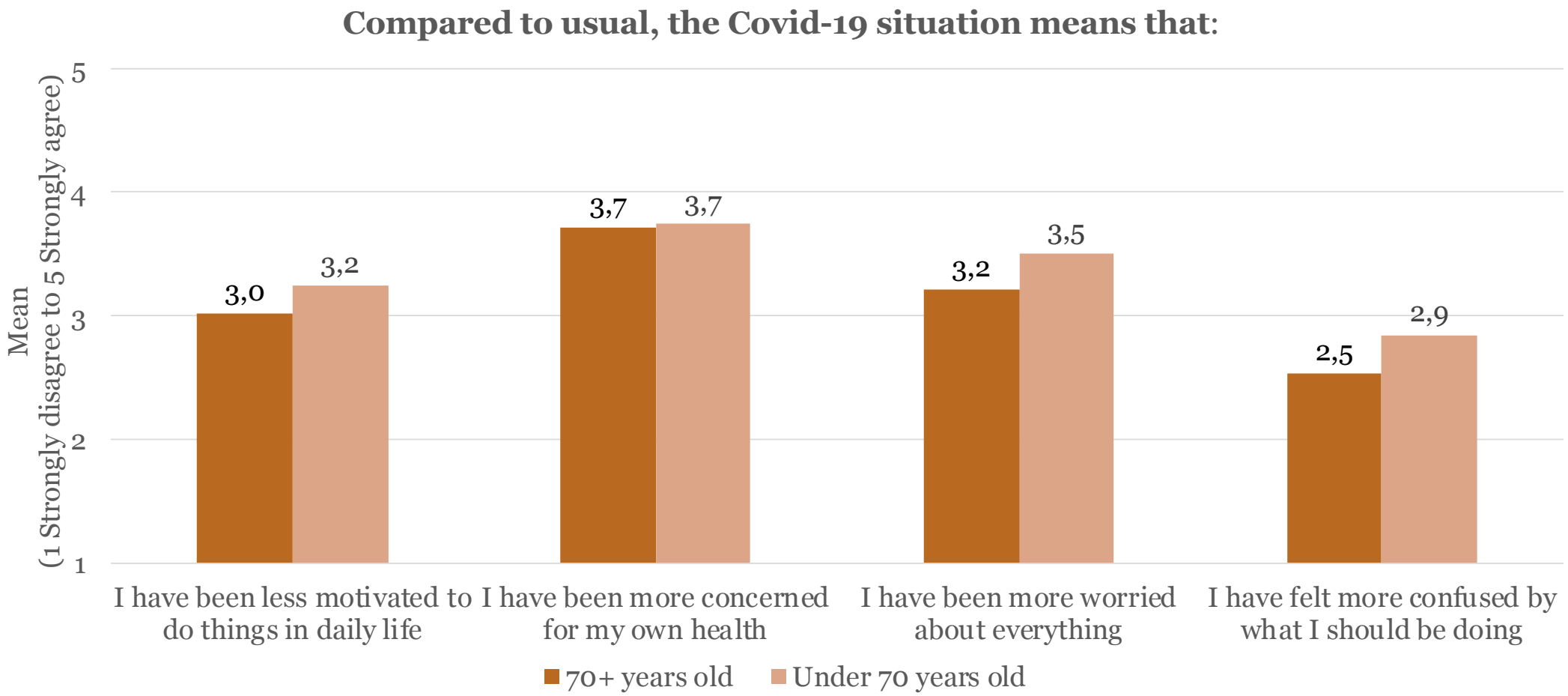
Mean intrapersonal constraints by respondent characteristics

Variable	Characteristic	N	Mean	SD	t-test
Gender	Female	573	3.300	0.906	t 0.273, p.785
	Male	353	3.283	0.947	
Age	70+	160	3.110	0.894	t -2.776, **p.006**
	Under 70	768	3.332	0.925	
Underlying health problems	Yes	345	3.498	0.893	t 5.228, **p.000**
	No	589	3.176	0.917	
Household income	Over 50,000	77	2.984	0.869	t -3.046, **p.002**
	50,000 or less	615	3.322	0.923	
Household composition	Live alone	256	3.305	0.924	t 0.172, p.864
	Live with others	651	3.293	0.920	
Vision impairment	Severe	501	3.259	0.932	t -1.566, p.118
	Other	307	3.364	0.924	
Guide dog owner	Yes	307	3.205	0.936	t -2.317, p.021
	No	579	3.355	0.908	
Had Covid-19 symptoms	Yes	99	3.434	0.909	t 1.589, p.112
	No	835	3.278	0.921	

Those aged under 70, with underlying health problems, and a lower household income are significantly more constrained personally

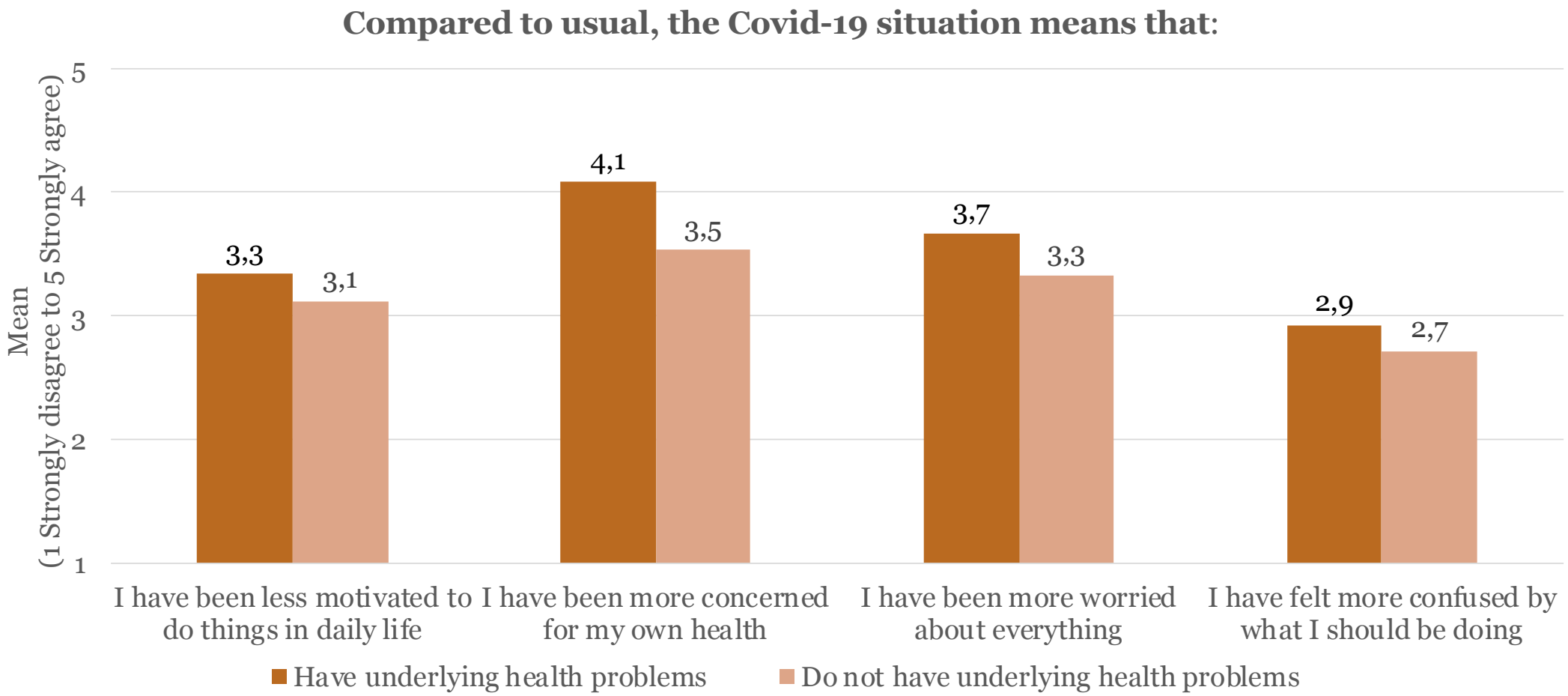
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Age



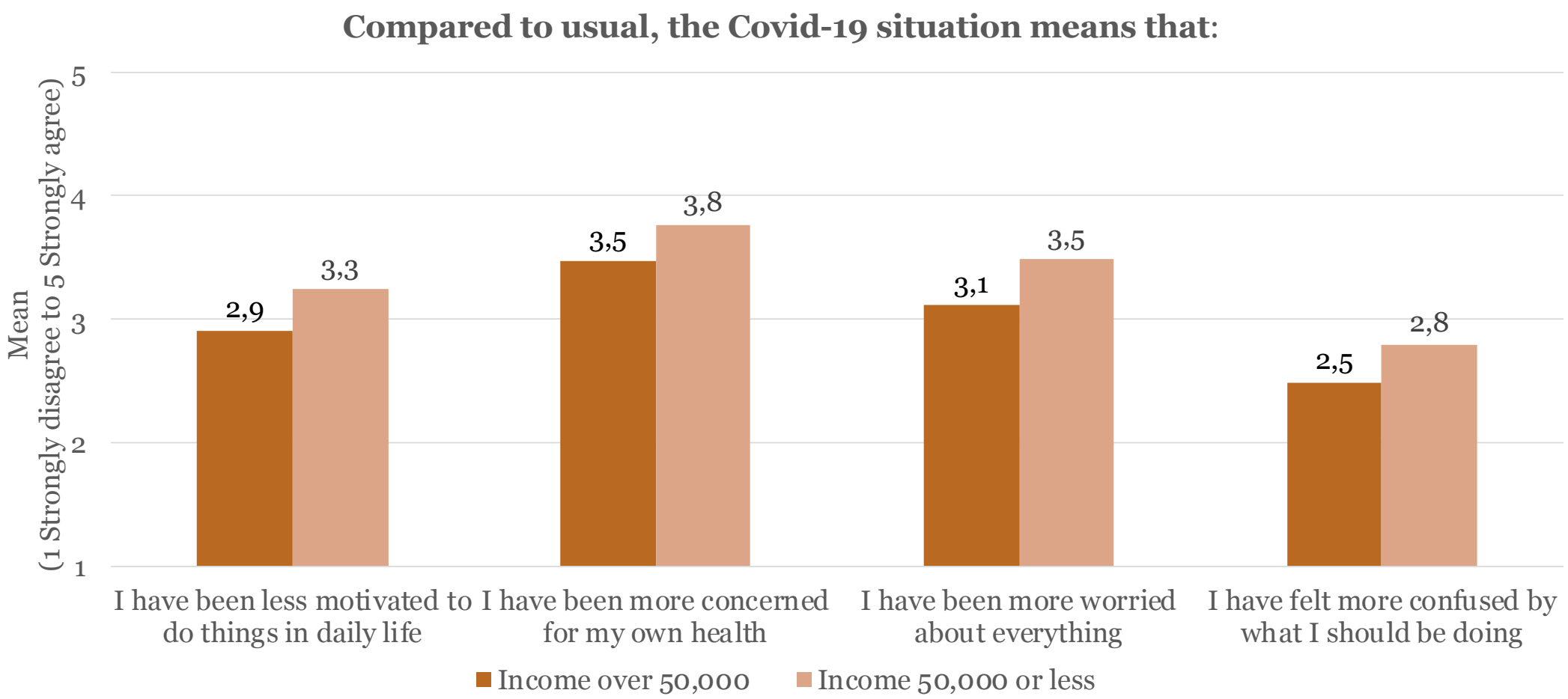
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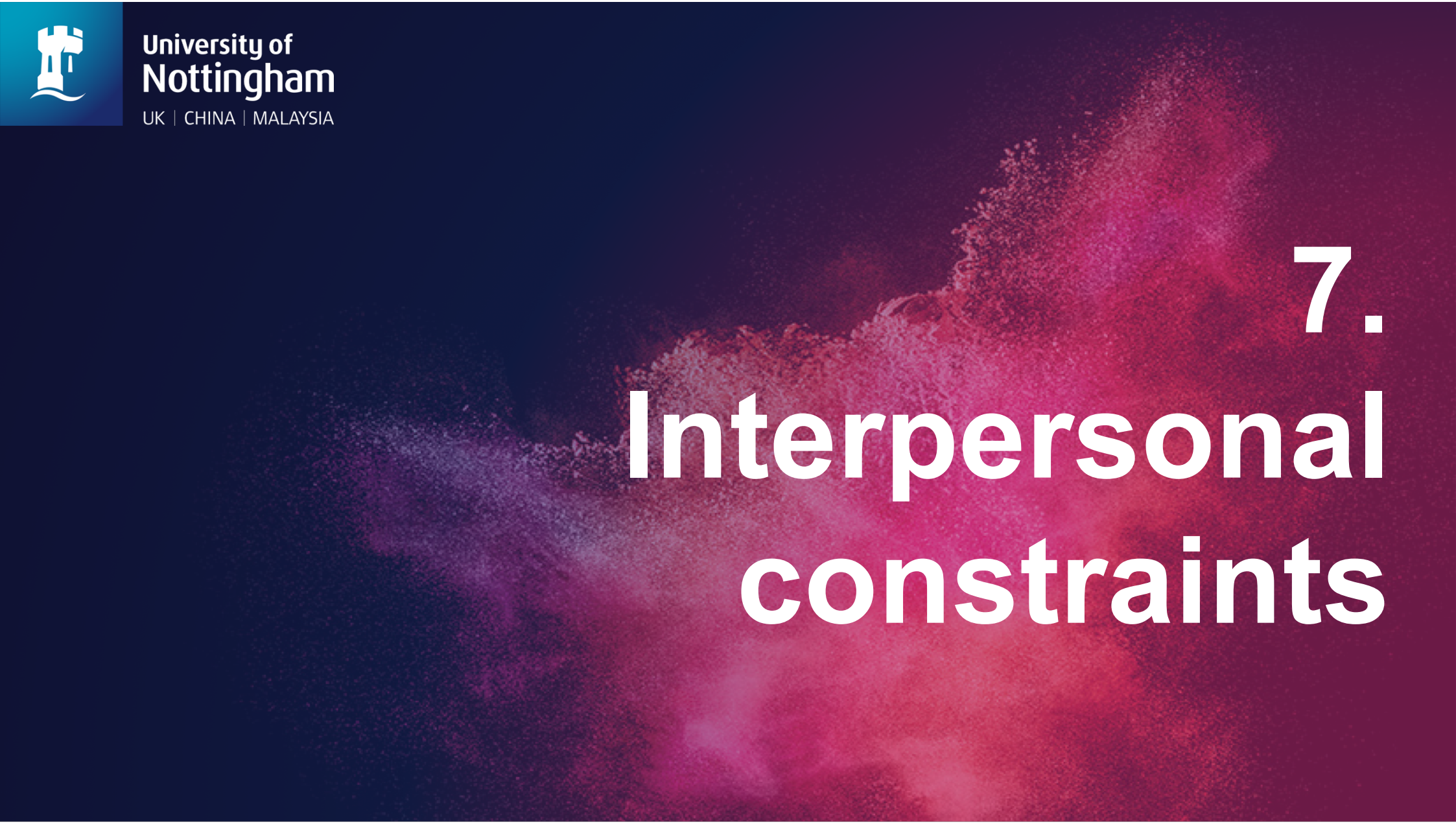
Underlying health problems



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Household income

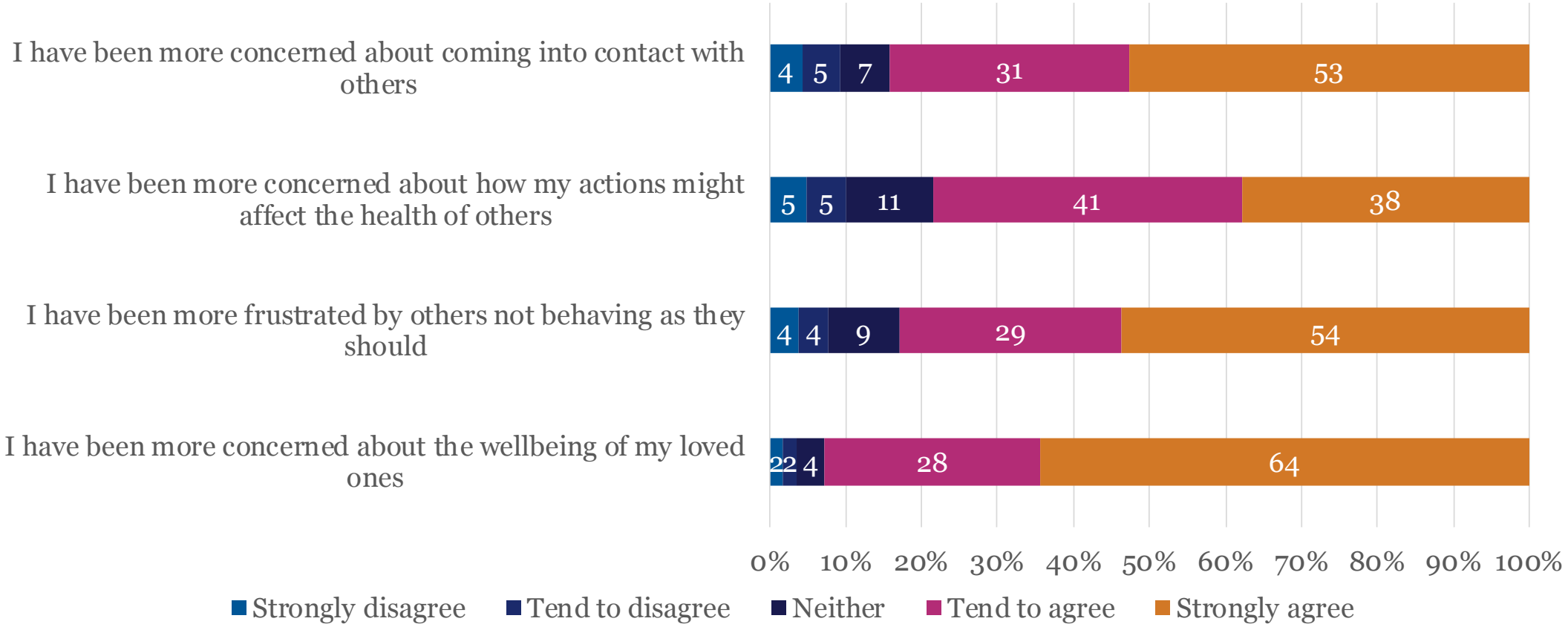



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7.
Interpersonal
constraints

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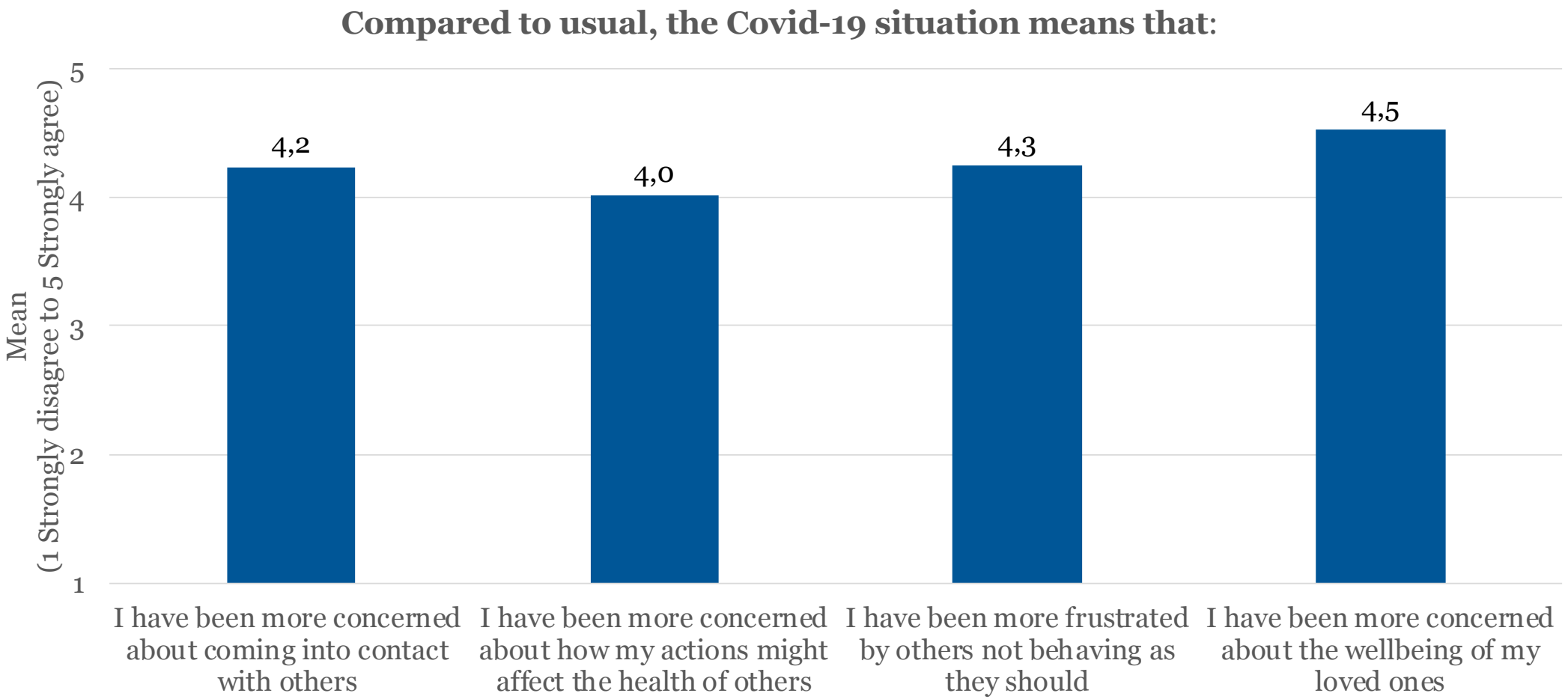
Interpersonal constraints

Compared to usual, the Covid-19 situation means that:



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Interpersonal constraints are generally high. Respondents strongly agree about being more concerned about their loved ones. They tend to agree about being concerned for the implications of their own actions as well as those of others



On average, respondents “Tend to agree” that they are more interpersonally constrained during the Covid-19 situation compared to usual:

4.3

(On a scale from 1 Strongly disagree to 5 Strongly agree)

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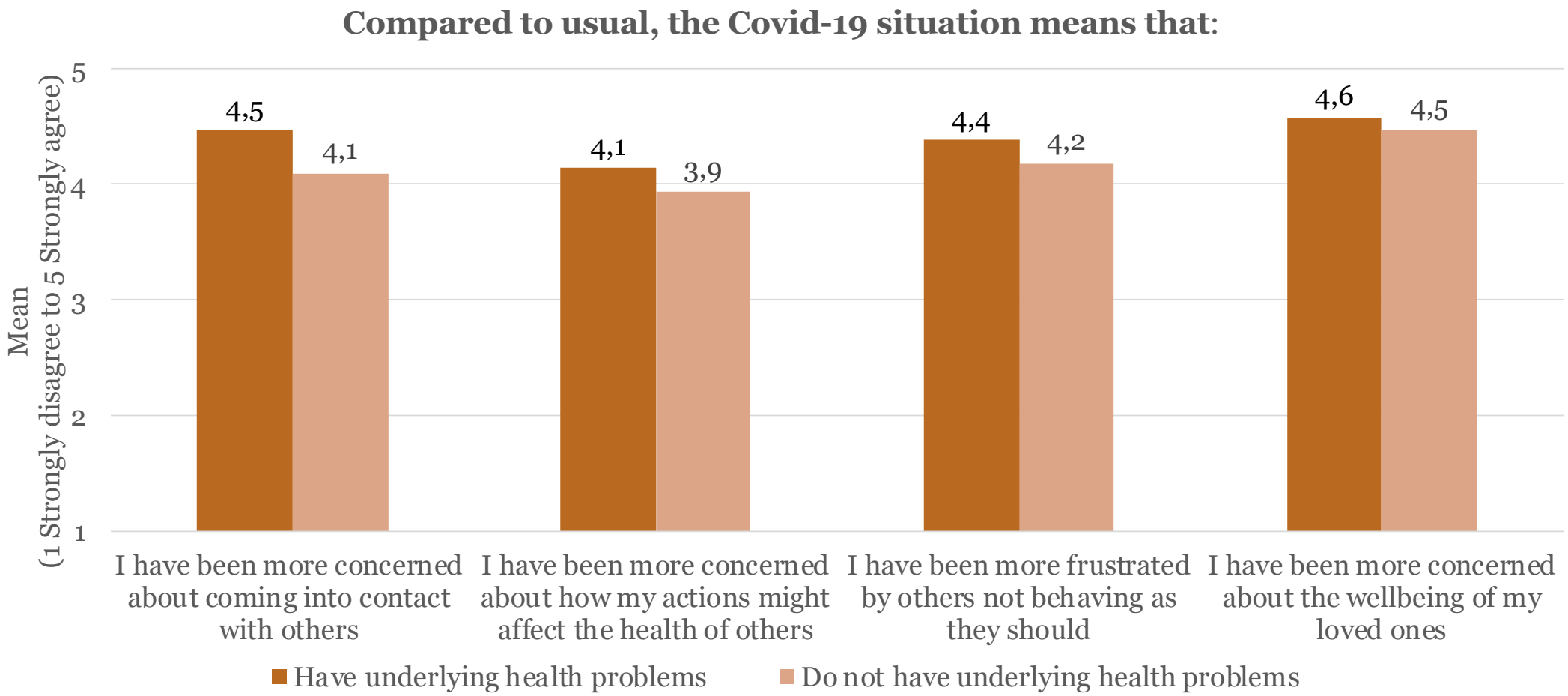
Mean interpersonal constraints by respondent characteristics

Variable	Characteristic	N	Mean	SD	t-test
Gender	Female	573	4.254	0.906	t 0.273, p.785
	Male	353	4.256	0.947	
Age	70+	161	4.206	0.802	t -0.921, p.357
	Under 70	768	4.266	0.745	
Underlying health problems	Yes	345	4.390	0.657	t 4.498, **p.000**
	No	590	4.173	0.797	
Household income	Over 50,000	77	4.331	0.702	t 0.621, p.535
	50,000 or less	615	4.275	0.751	
Household composition	Live alone	257	4.116	0.819	t -3.441, **p.001**
	Live with others	651	4.308	0.727	
Vision impairment	Severe	501	4.211	0.796	t -2.114, p.035
	Other	307	4.328	0.711	
Guide dog owner	Yes	307	4.239	0.763	t -0.256, p.798
	No	580	4.253	0.760	
Had Covid-19 or symptoms	Yes	99	4.420	0.682	t 2.330, p.020
	No	836	4.234	0.762	

Those with underlying health problems and living alone are significantly more constrained by concerns about others

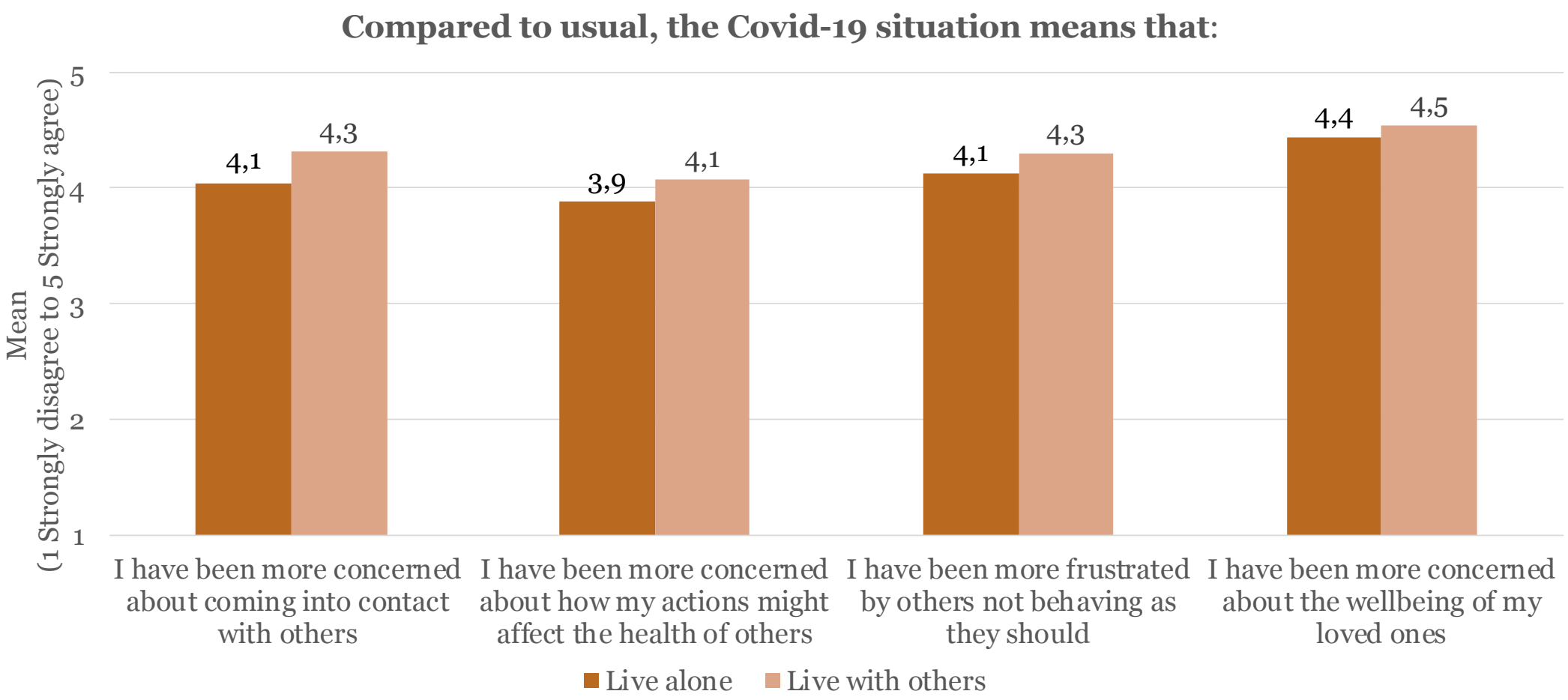
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Underlying health problems



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Household composition

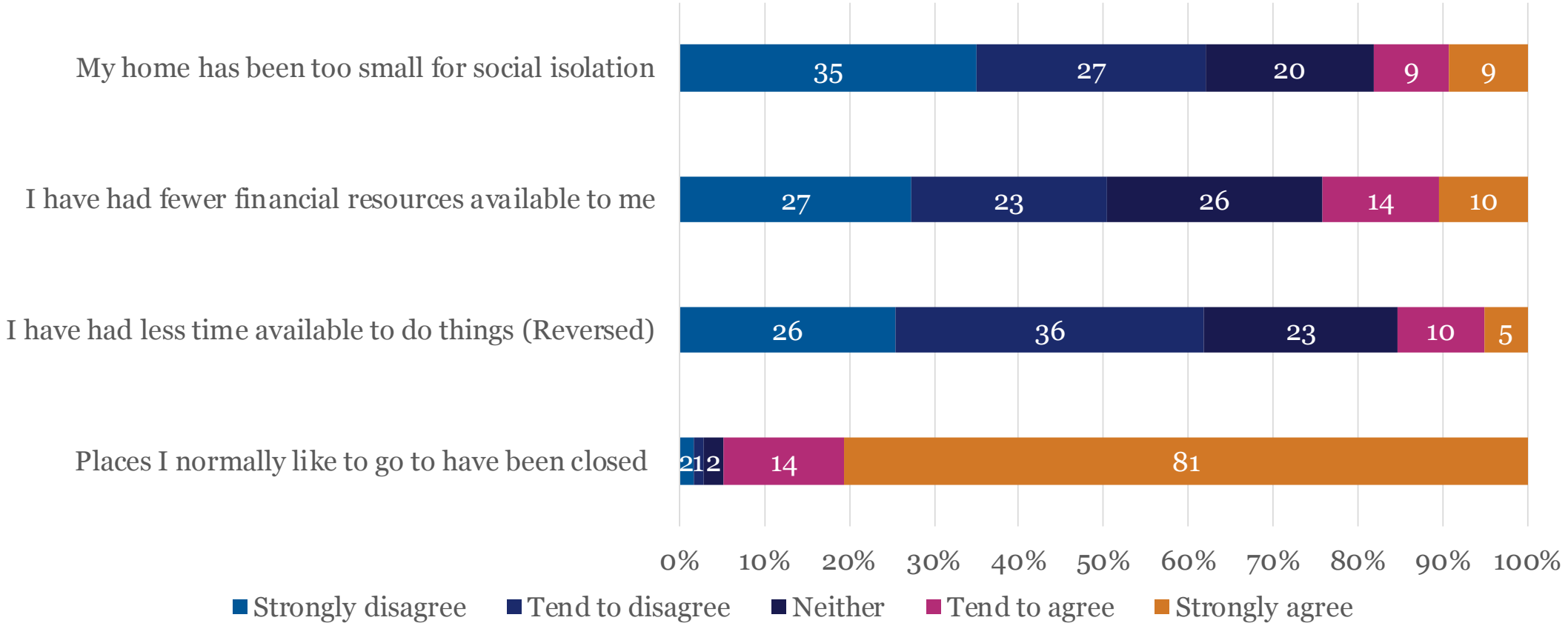



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8.
Structural
constraints

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Structural constraints

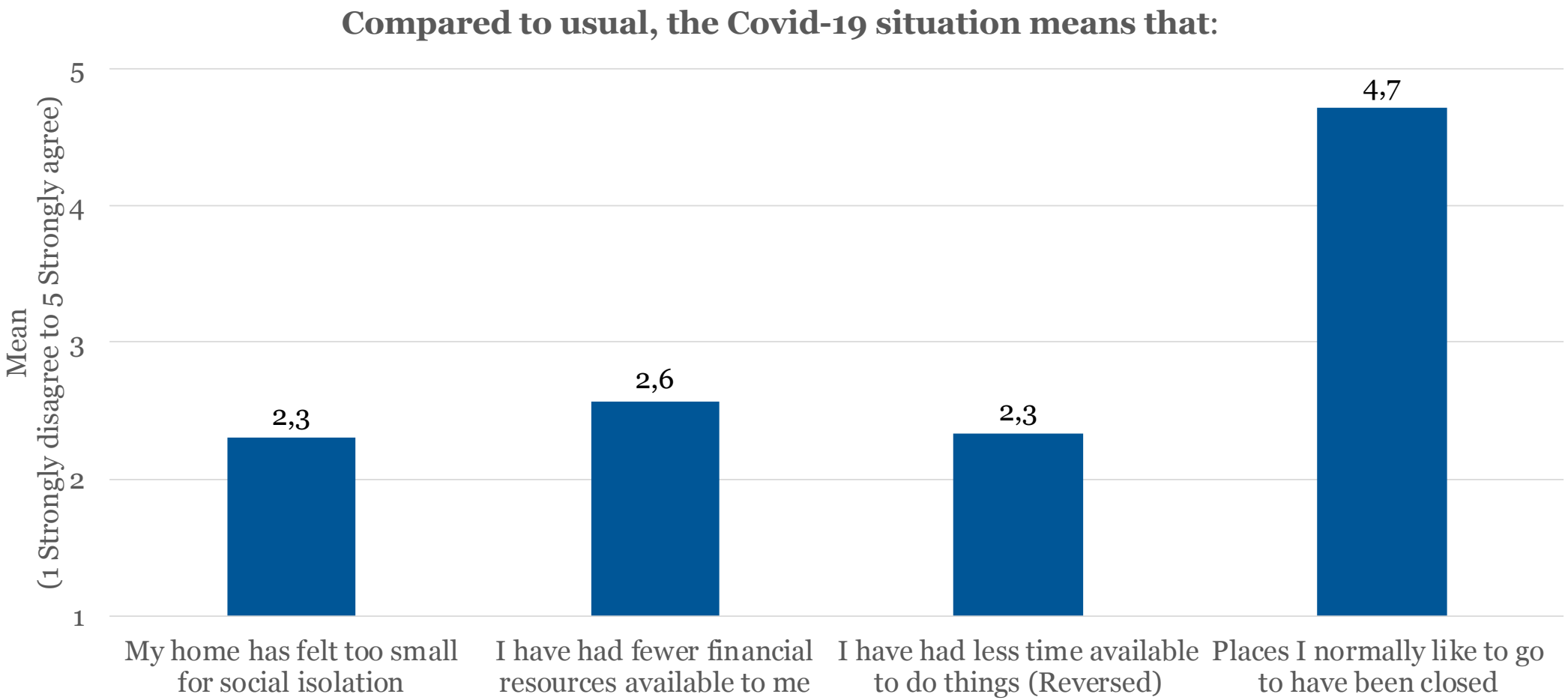
Compared to usual, the Covid-19 situation means that:



The reversed item was worded in the survey as "I have had more time available to do things" but reversed in the analysis to match the direction of the other items

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As expected, the greatest structural constraint is with closures. Otherwise, respondents tend to disagree about experiencing other constraints related to finances, time and space



On average, respondents “Neither agree nor disagree” that they are more structurally constrained during the Covid-19 situation compared to usual:

3.0

(On a scale from 1 Strongly disagree to 5 Strongly agree)

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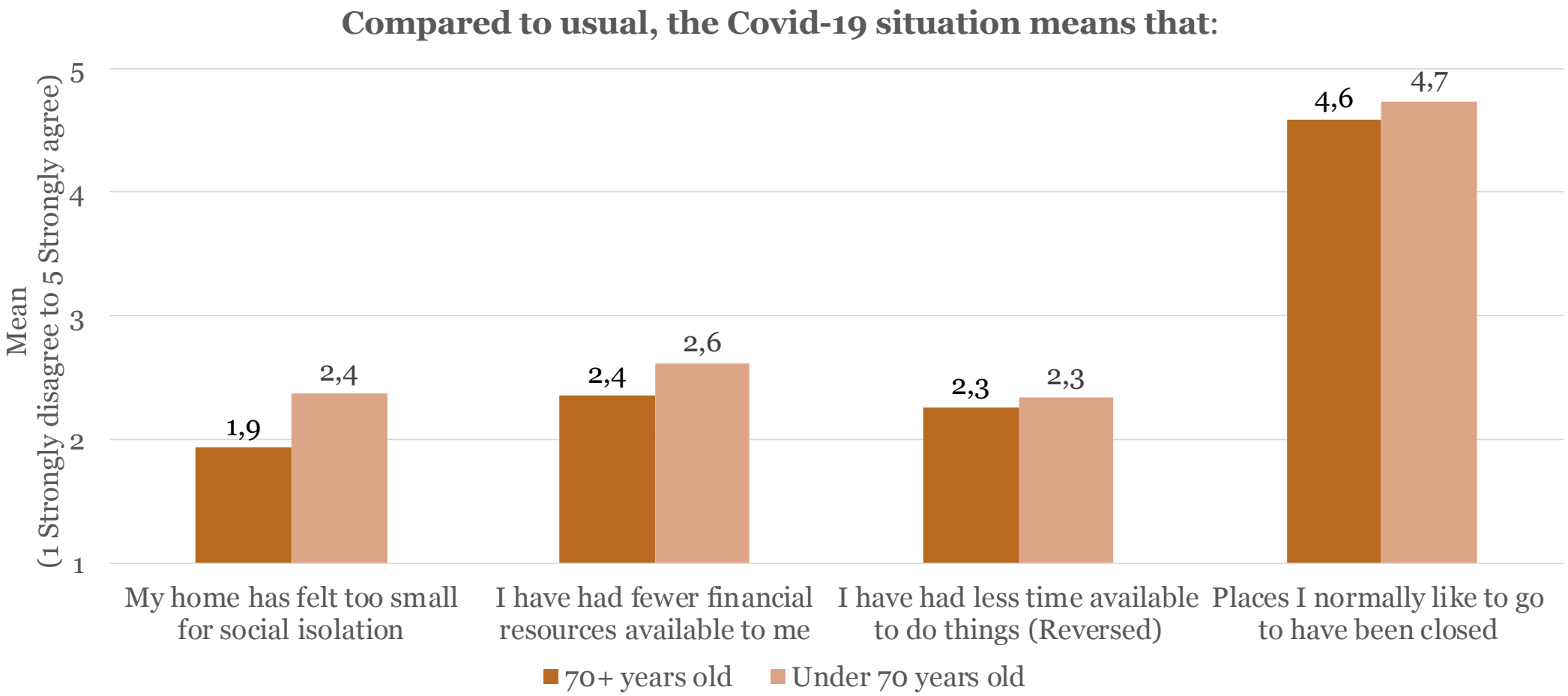
Mean structural constraints by respondent characteristics

Variable	Characteristic	N	Mean	SD	t-test
Gender	Female	573	3.014	0.687	t 0.478, p.633
	Male	354	2.993	0.640	
Age	70+	161	2.791	0.640	t -4.518, **p.000**
	Under 70	768	3.050	0.666	
Underlying health problems	Yes	345	3.000	0.694	t -0.274, p.784
	No	590	3.012	0.653	
Household income	Over 50,000	77	2.785	0.659	t -3.312, **p.001**
	50,000 or less	615	3.053	0.671	
Household composition	Live alone	257	3.036	0.659	t 0.816, p.415
	Live with others	651	2.996	0.676	
Vision impairment	Severe	501	2.990	0.698	t -0.251, p.802
	Other	307	3.001	0.626	
Guide dog owner	Yes	307	2.954	0.677	t -1.551, p.121
	No	580	3.027	0.662	
Had Covid-19 or symptoms	Yes	99	3.067	0.651	t 0.937, p.349
	No	836	3.001	0.670	

Those aged under 70 and with a lower household income are significantly more structurally constrained

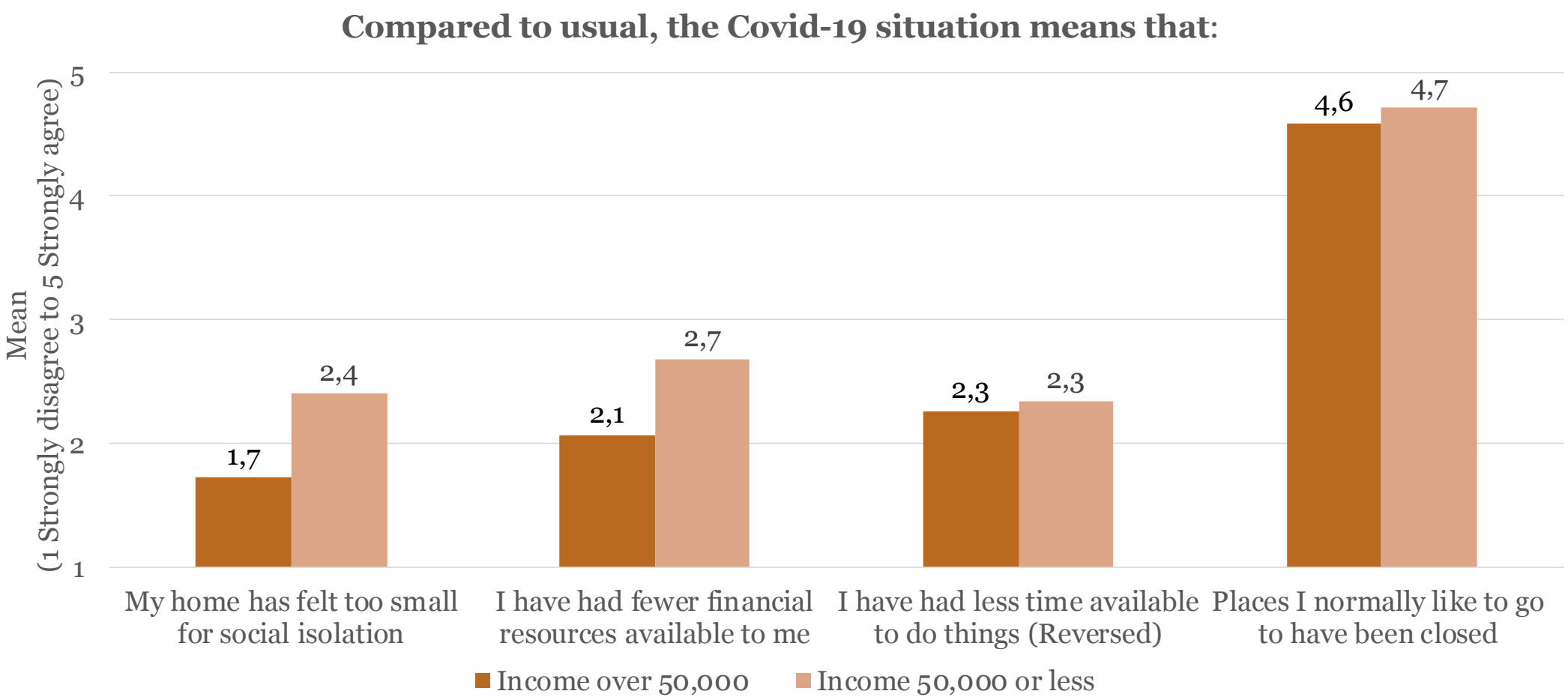
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Age



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Household income

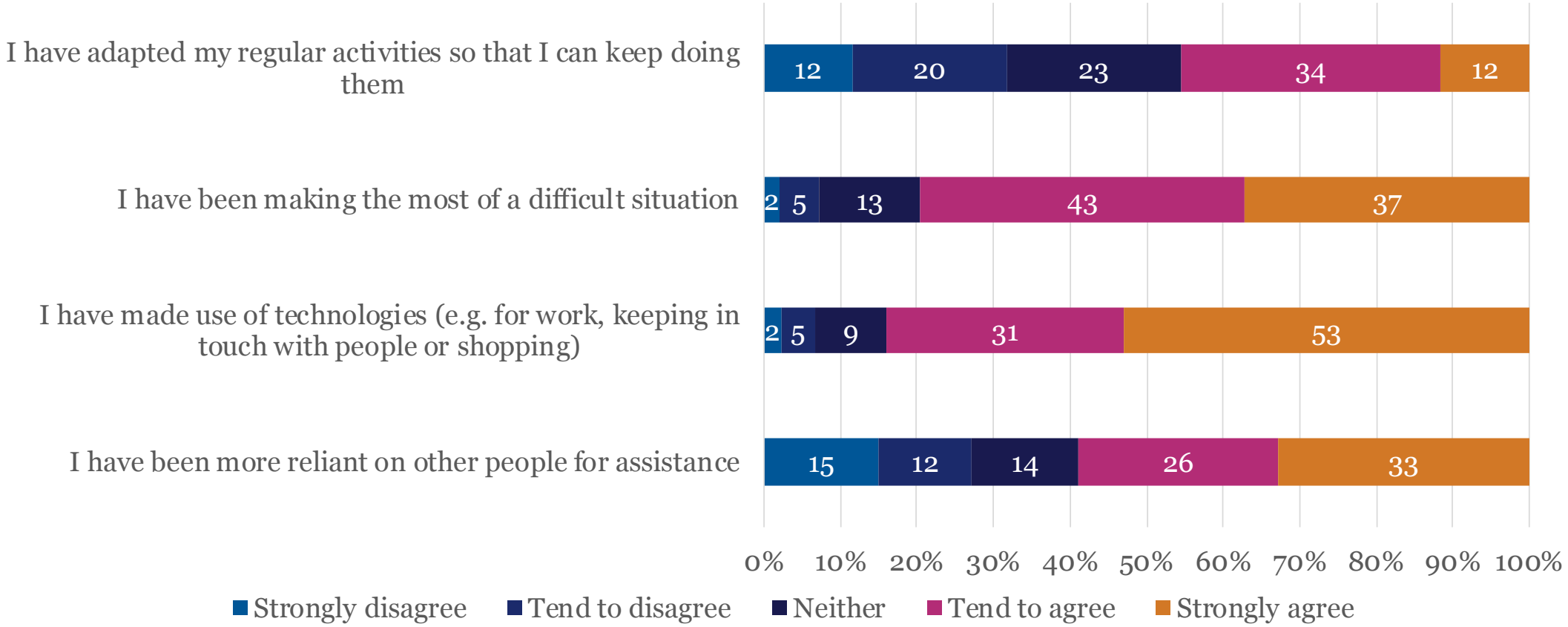



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9.
Negotiation of
constraints

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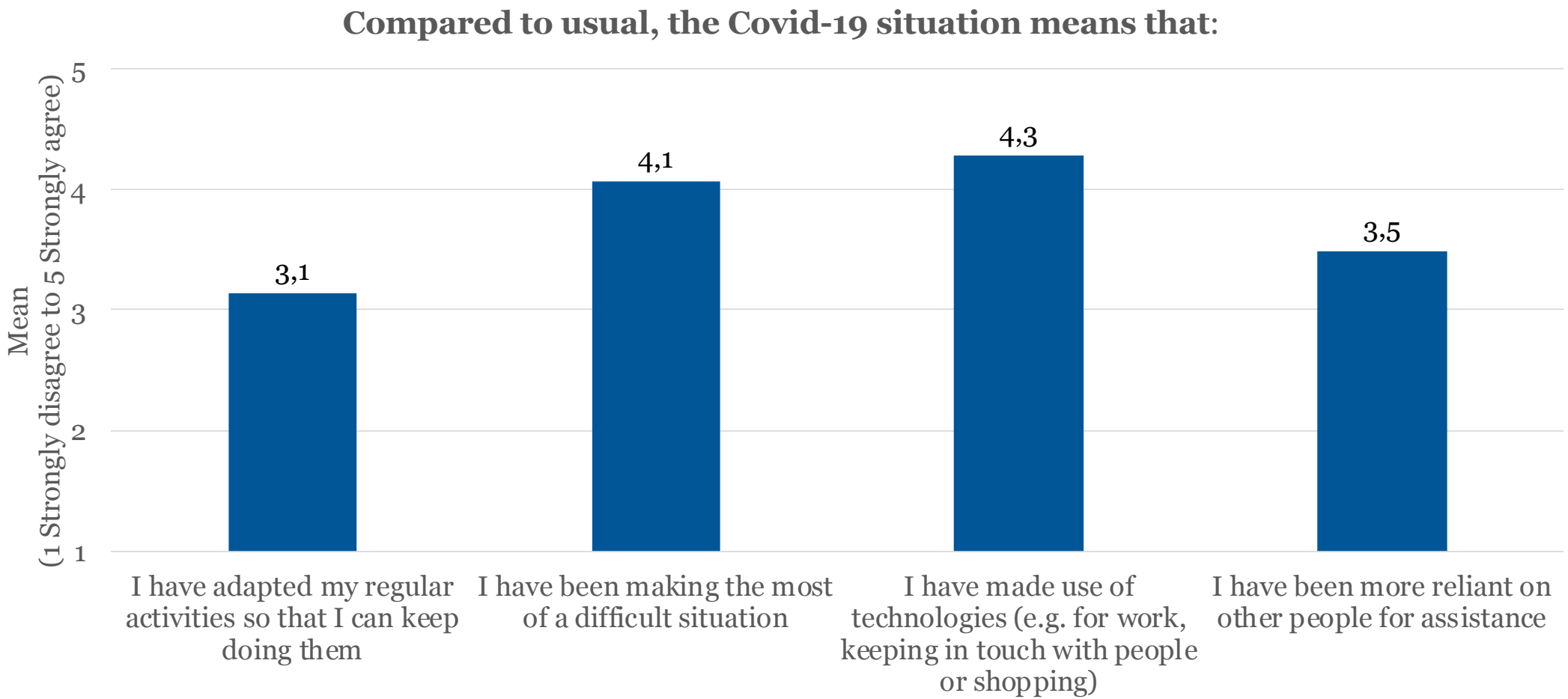
Negotiation of constraints

Compared to usual, the Covid-19 situation means that:



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Respondents tend to agree that they are making use of technologies and making the most of the situation. They also tend to agree about being more reliant of others for assistance. They neither agree nor disagree that they have adapted their regular activities



On average, respondents “Tend to agree” that they have negotiated constraints during the Covid-19 situation:

3.7

(On a scale from 1 Strongly disagree to 5 Strongly agree)

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Mean negotiation of constraints by respondent characteristics

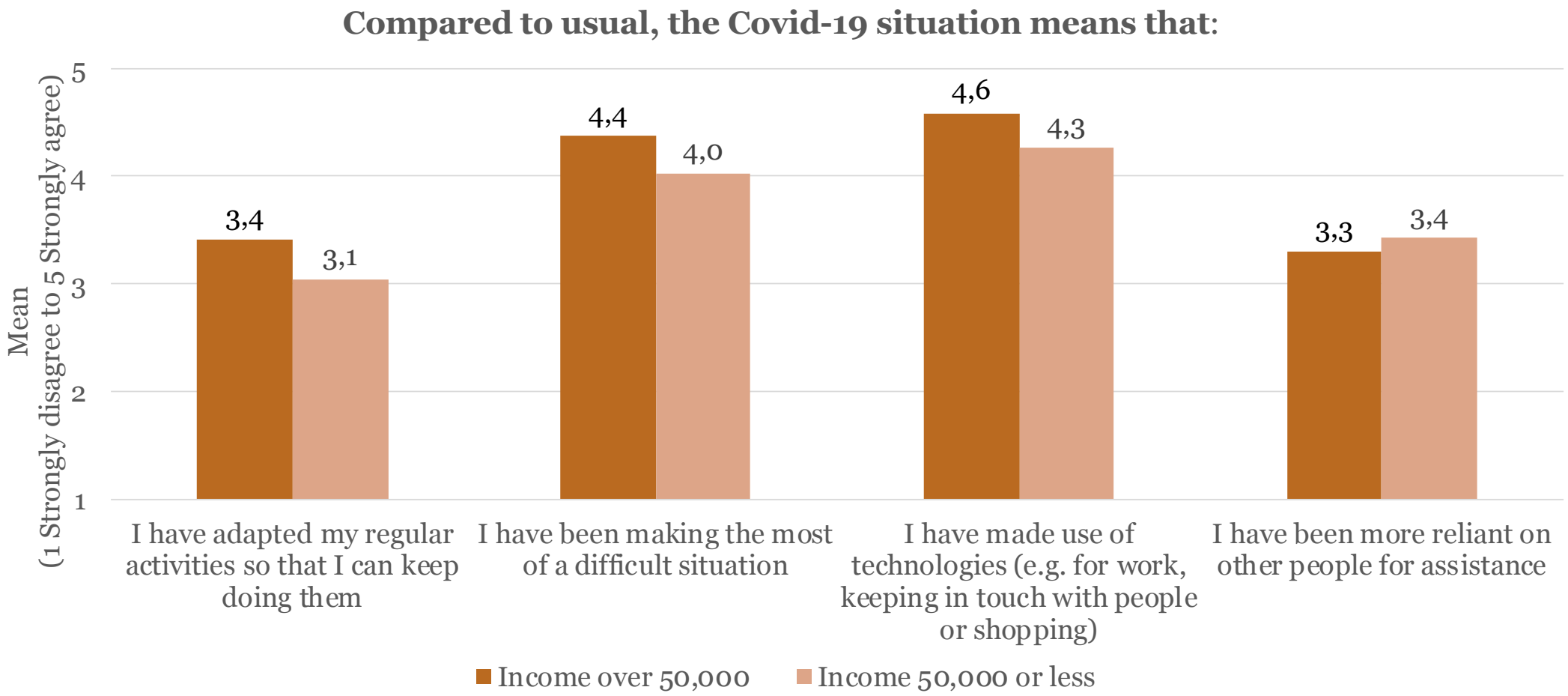
Variable	Characteristic	N	Mean	SD	t-test
Gender	Female	573	3.748	0.604	t -0.286, p.775
	Male	354	3.761	0.702	
Age	70+	161	2.791	0.640	t 0.743, p.458
	Under 70	768	3.050	0.666	
Underlying health problems	Yes	345	3.812	0.645	t 2.138, p.033
	No	590	3.719	0.640	
Household income	Over 50,000	77	3.933	0.601	t 2.958, **p.003**
	50,000 or less	615	3.702	0.652	
Household composition	Live alone	257	3.727	0.643	t -0.812, p.417
	Live with others	651	3.767	0.644	
Vision impairment	Severe	501	3.837	0.643	t 3.834, **p.000**
	Other	307	3.660	0.633	
Guide dog owner	Yes	307	3.870	0.634	t 3.761, **p.000**
	No	580	3.700	0.638	
Had Covid-19 or symptoms	Yes	99	3.703	0.614	t -0.831, p.406
	No	836	3.760	0.646	

Those with a higher household income, severe impairment and a guide dog are significantly better at negotiating constraints

Note: due to item 4, this could be due to being more "reliant on others" for assistance rather than personally negotiating constraints themselves

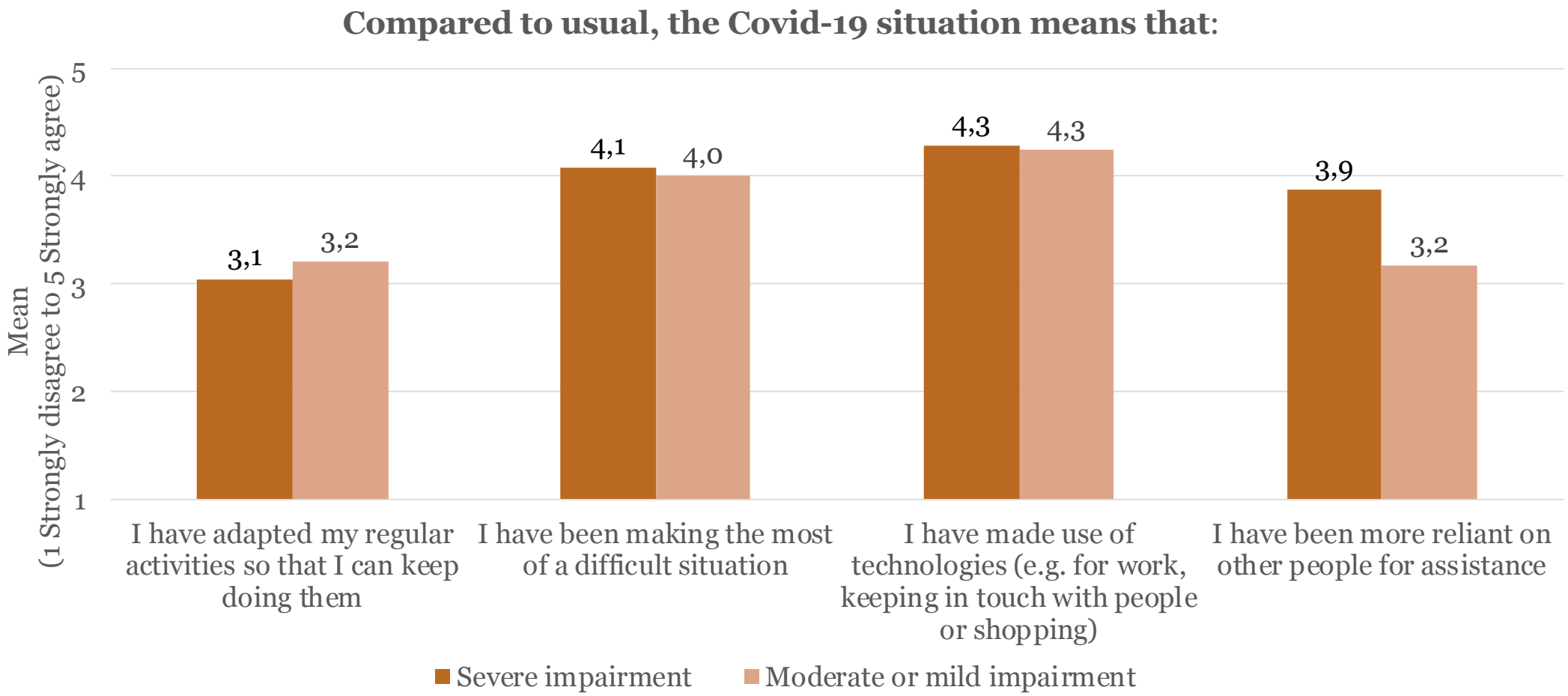
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Household income



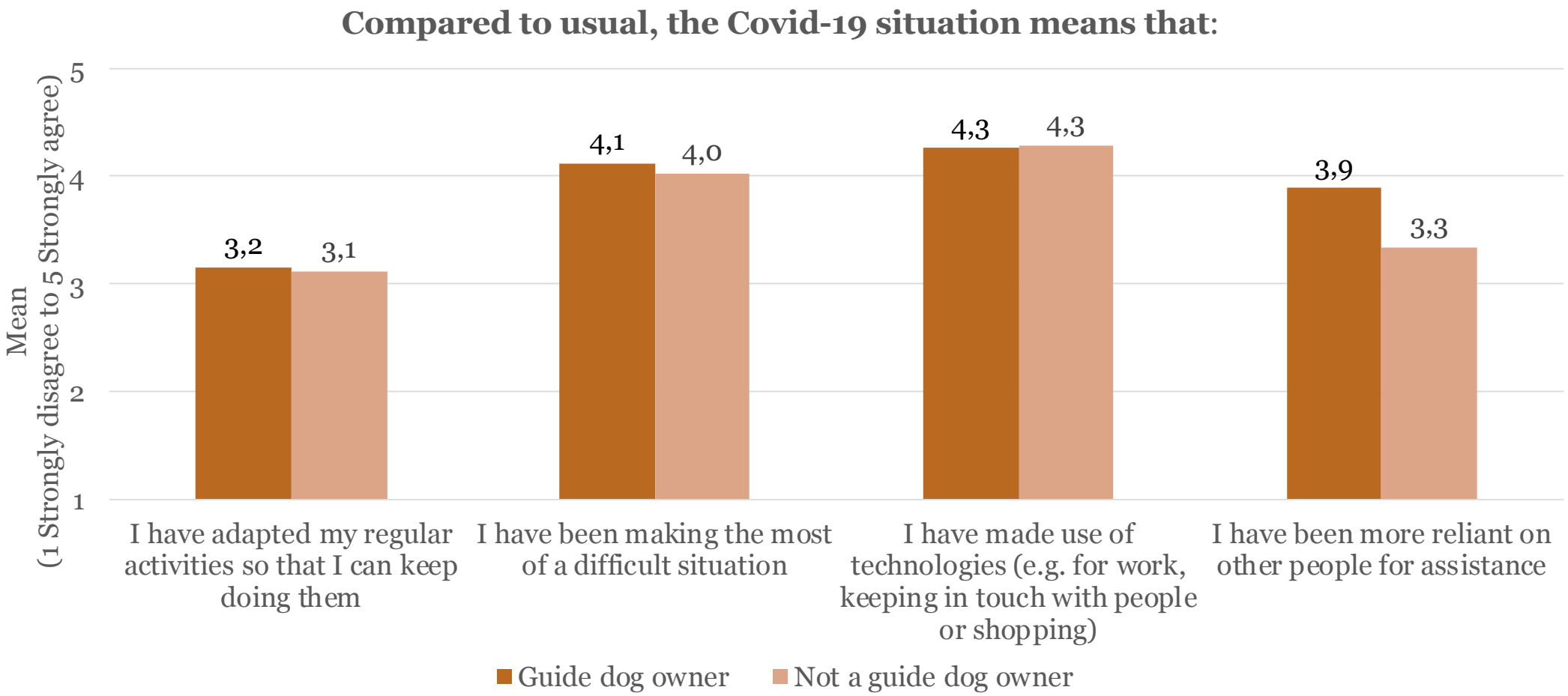
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Vision impairment



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Guide dog owner



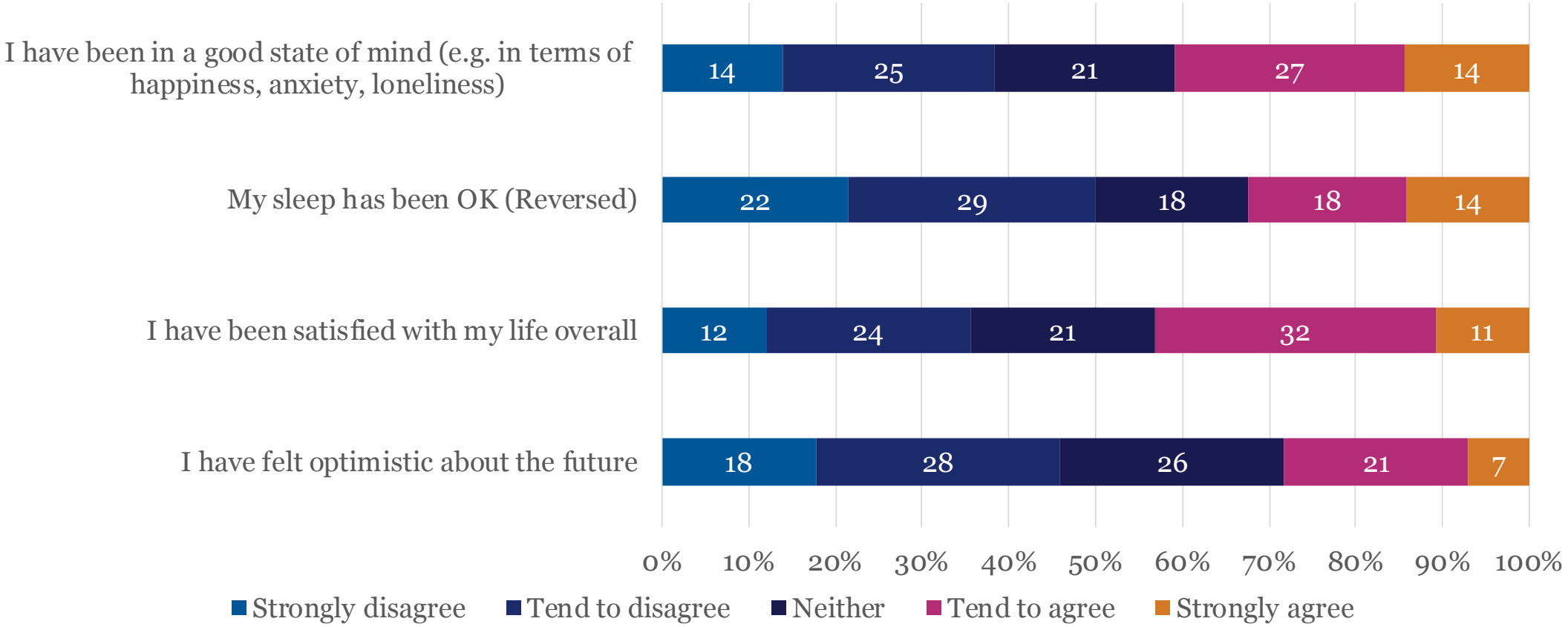
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10. Wellbeing

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Wellbeing

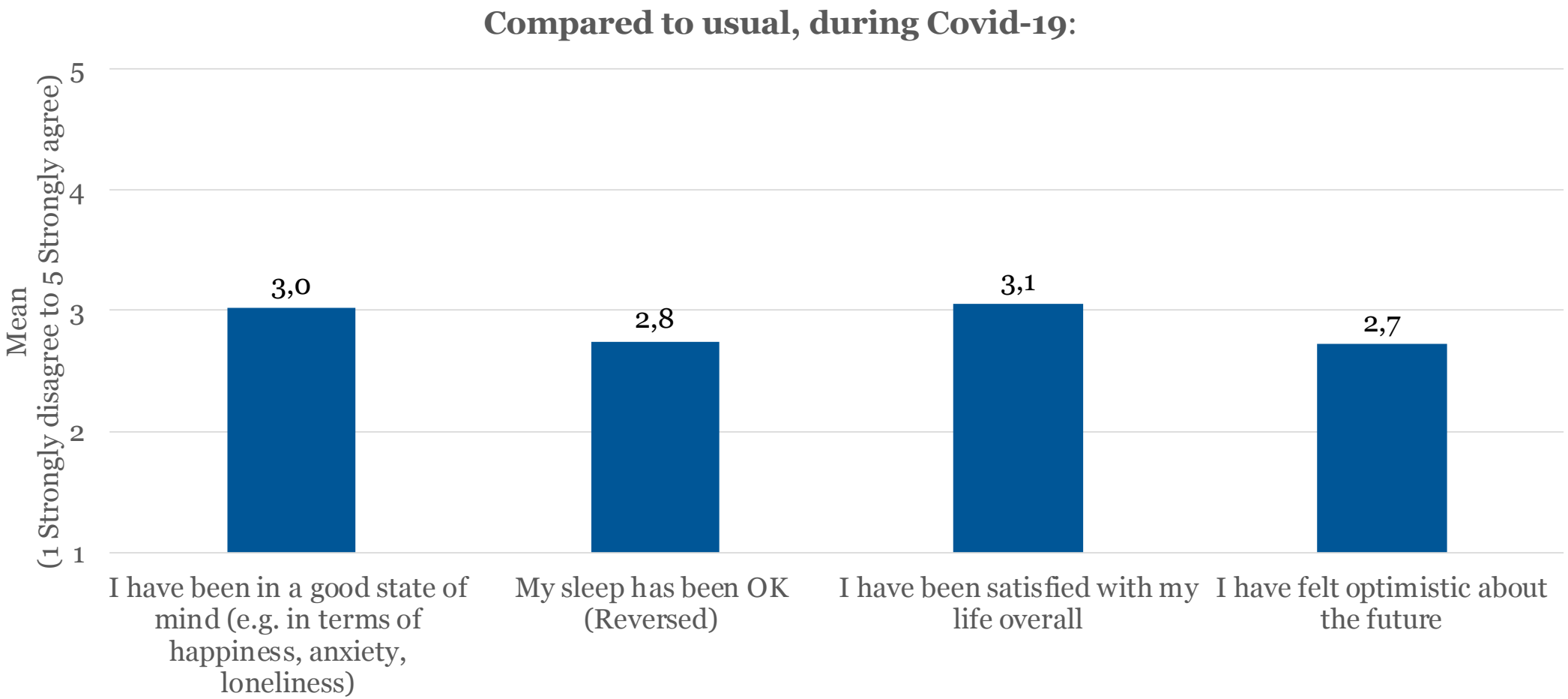
Compared to usual, during Covid-19:



The reversed item was worded in the survey as "My sleep has been restless" but reversed in the analysis to match the direction of the other items

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Wellbeing seems fairly modest during Covid-19. Respondents generally neither agree nor disagree with all four statements



On average, respondents “Neither agree nor disagree” that they have had good wellbeing during the Covid-19 situation compared to usual:

2.9

(On a scale from 1 Strongly disagree to 5 Strongly agree)

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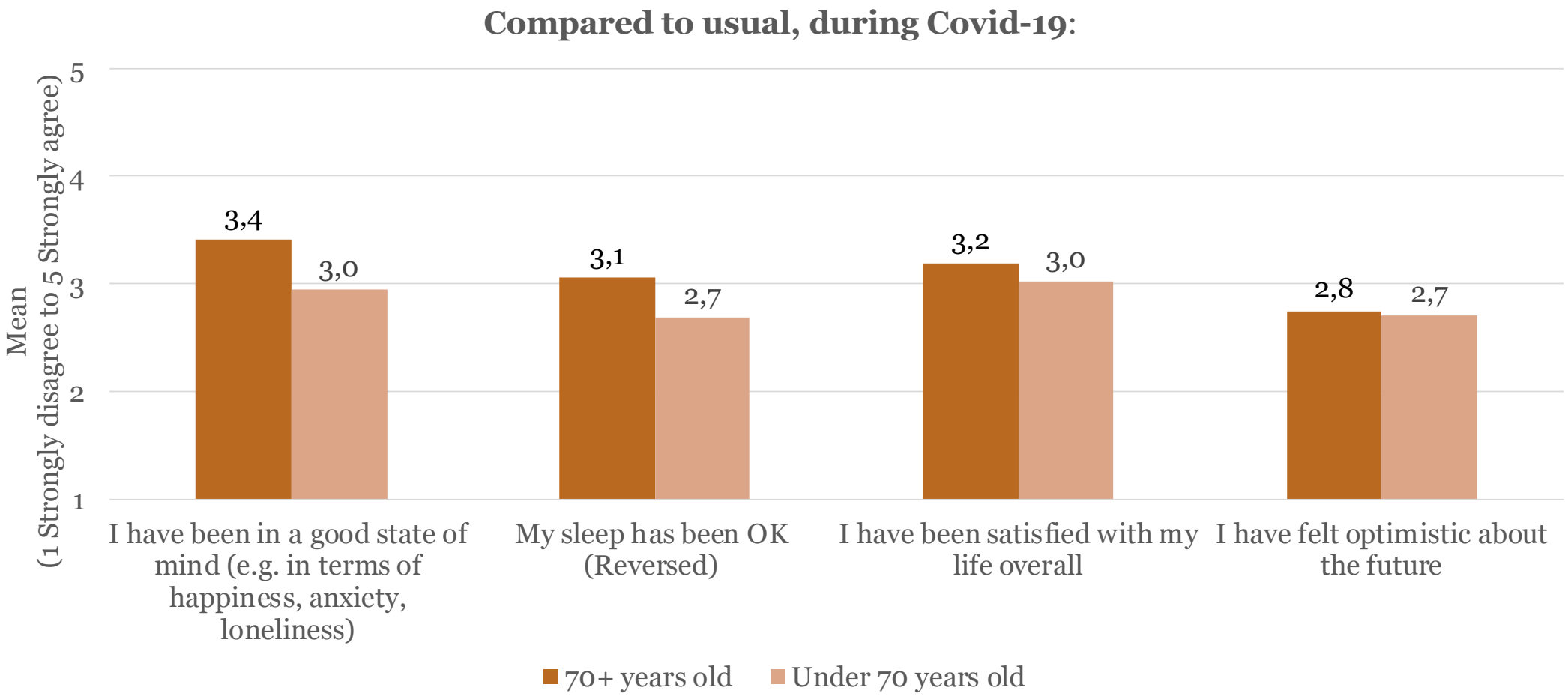
Mean wellbeing by respondent characteristics

Variable	Characteristic	N	Mean	SD	t-test
Gender	Female	572	2.870	0.928	t -1.061, p.289
	Male	354	2.936	0.918	
Age	70+	161	3.107	0.800	t 3.218, **p.001**
	Under 70	767	2.851	0.941	
Underlying health problems	Yes	345	2.819	0.937	t -1.946, p.052
	No	589	2.941	0.910	
Household income	Over 50,000	77	3.168	0.892	t 3.267, **p.001**
	50,000 or less	614	2.802	0.929	
Household composition	Live alone	257	2.790	0.967	t -2.018, p.044
	Live with others	650	2.927	0.904	
Vision impairment	Severe	501	2.856	0.919	t -0.196, p.845
	Other	307	2.869	0.939	
Guide dog owner	Yes	307	2.901	0.885	t 0.445, p.657
	No	579	2.872	0.944	
Had Covid-19 or symptoms	Yes	99	2.677	0.879	t -2.509, p.012
	No	835	2.922	0.924	

Those aged under 70, with a lower household income are experiencing significantly lower levels of wellbeing

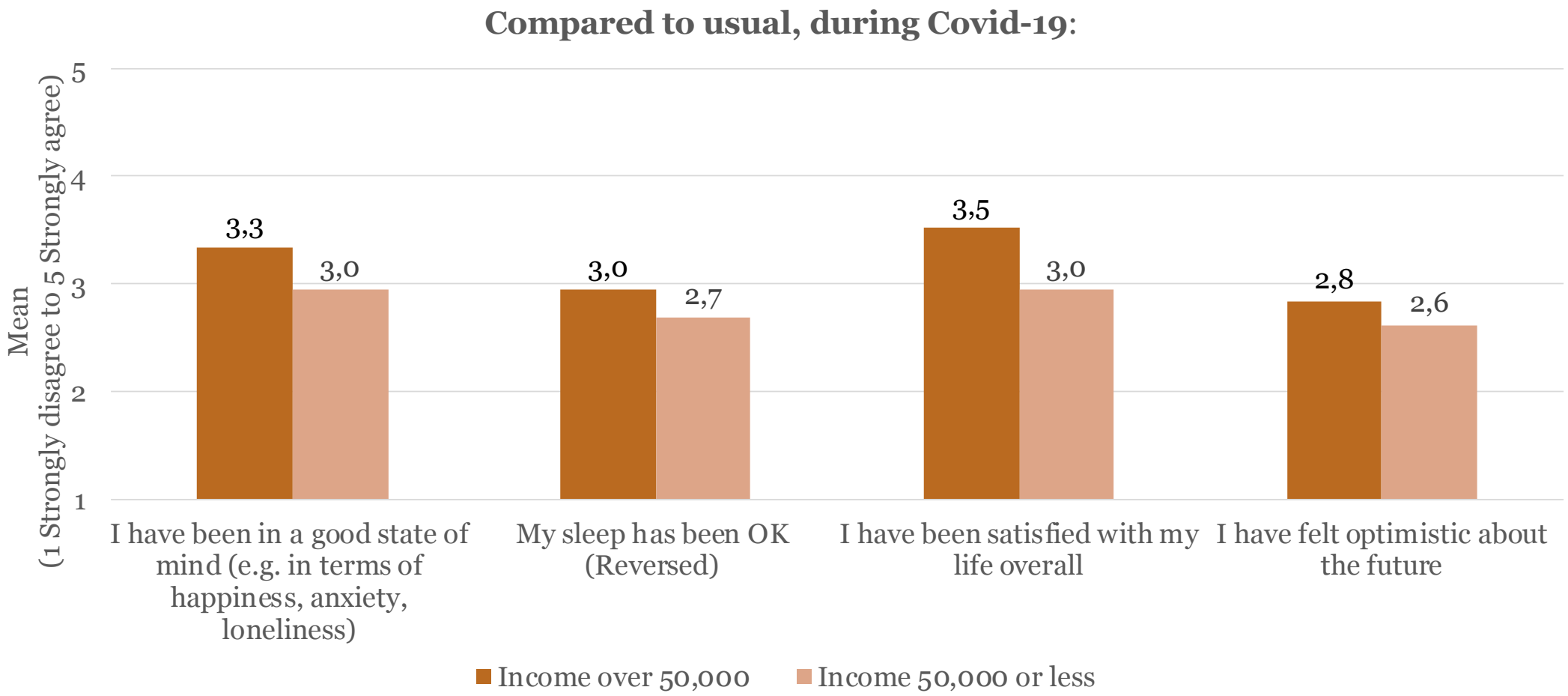
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Age



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Household income



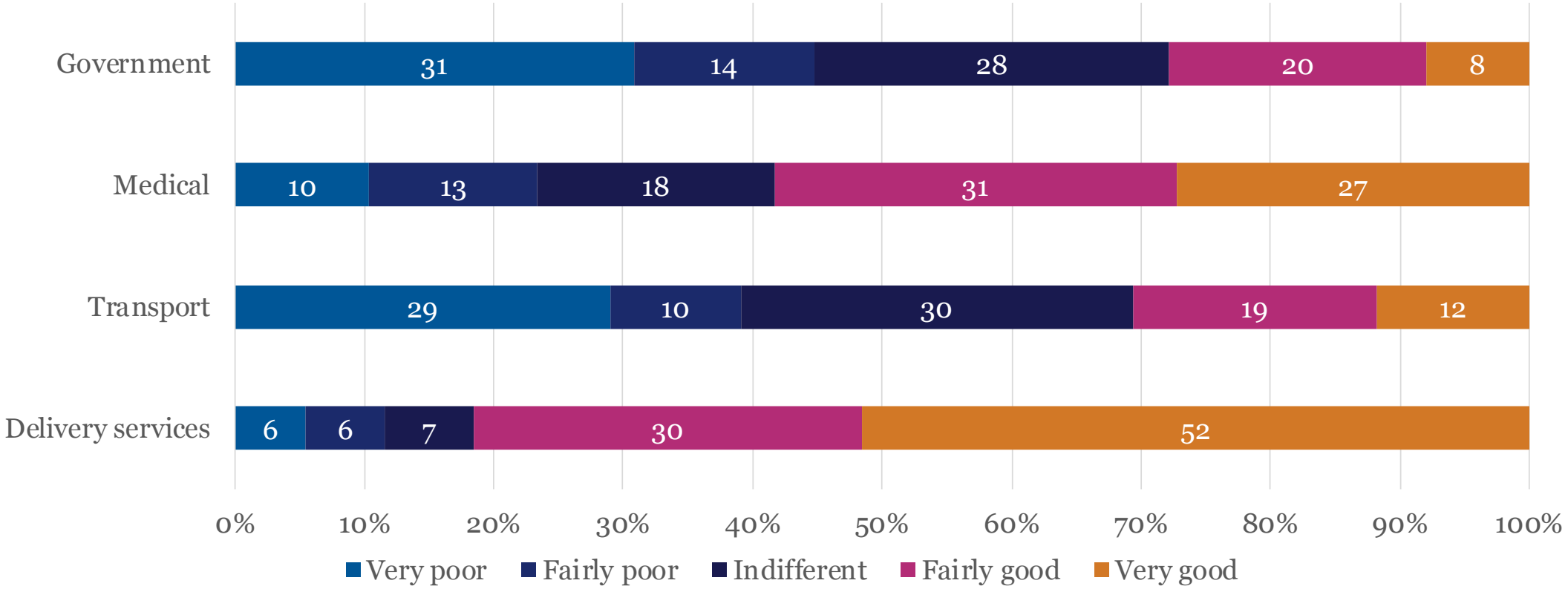
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11. Services

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Support from services

Rate the support you have received from the following sources during the Covid-19 situation

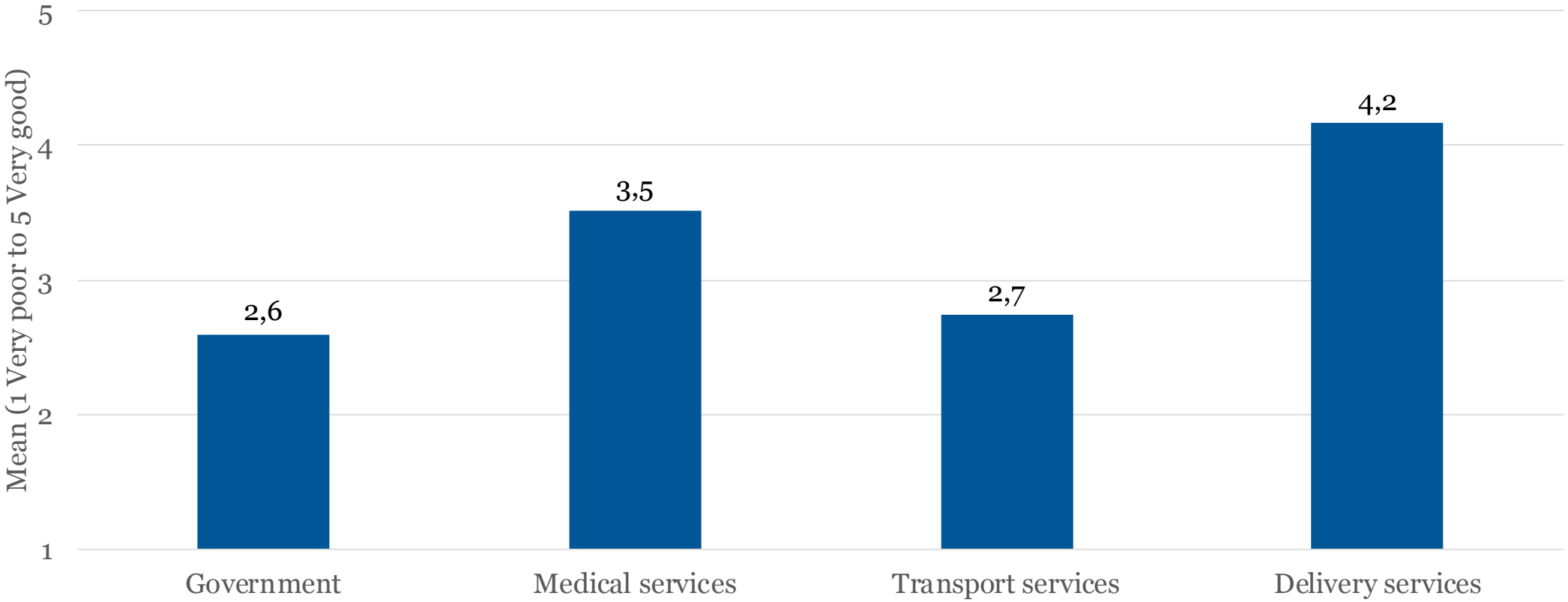


Note: Results only include those that have used the services

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Delivery services and medical services have been fairly good during Covid-19. Respondents are fairly indifferent about the support they have received from transport services and the government. It should be noted that only 25% of respondents have used transport services during Covid-19

Rate the support you have received from the following sources during the Covid-19 situation



Note: Results only include those that have used the services

On average, respondents rate the support they have received from services as being “Fairly good” during the Covid-19 situation:

3.6

(On a scale from 1 Very poor to 5 Very good)
(Results only include those that have used the services)

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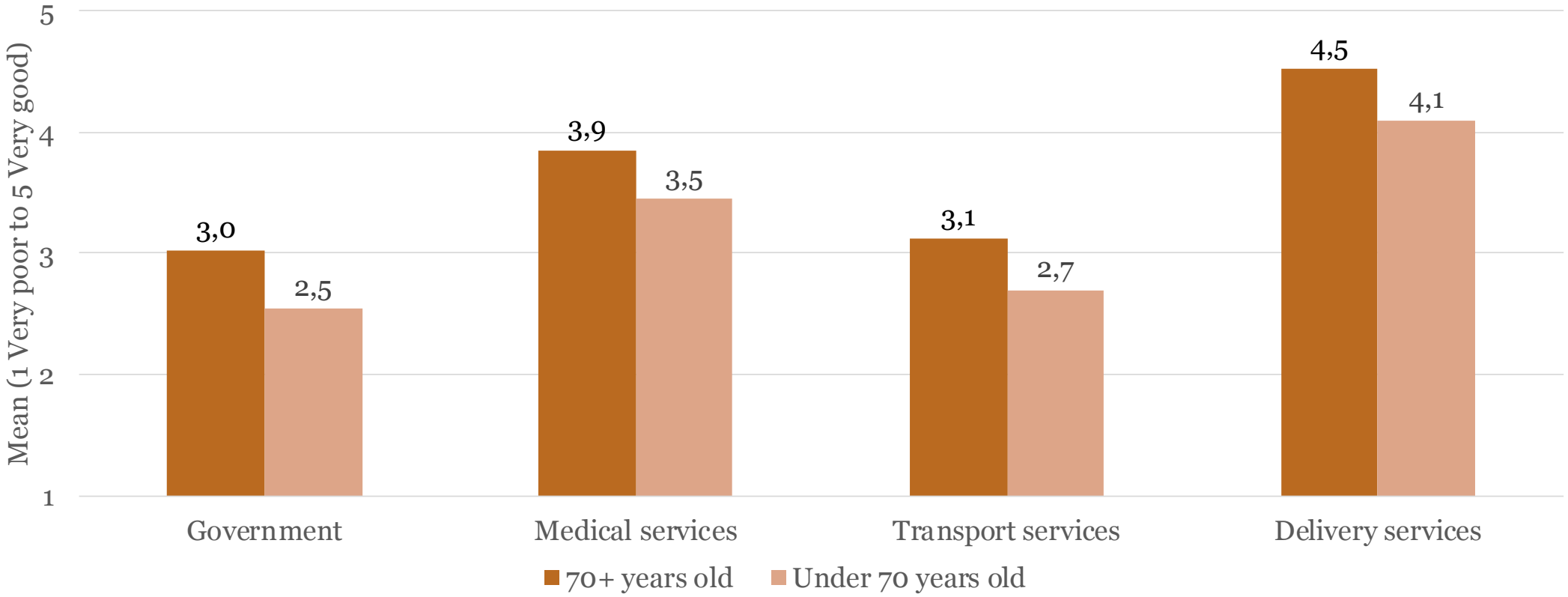
Mean support from services by respondent characteristics

Variable	Characteristic	N	Mean	SD	t-test
Gender	Female	546	3.568	1.085	t 0.690, p.490
	Male	340	3.516	1.054	
Age	70+	151	3.976	0.955	t 5.475, **p.000**
	Under 70	738	3.460	1.074	
Underlying health problems	Yes	337	3.475	1.089	t -1.596, p.111
	No	557	3.593	1.058	
Household income	Over 50,000	73	3.741	0.985	t 2.006, p.045
	50,000 or less	590	3.477	1.070	
Household composition	Live alone	242	3.384	1.085	t -2.734, **p.006**
	Live with others	625	3.604	1.060	
Vision impairment	Severe	485	3.390	1.104	t -3.785, **p.000**
	Other	292	3.690	1.002	
Guide dog owner	Yes	300	3.424	1.112	t -2.192, p.029
	No	553	3.593	1.095	
Had Covid-19 or symptoms	Yes	98	3.344	1.042	t -2.013, p.044
	No	796	3.574	1.072	

Those aged under 70, living alone*, and with severe vision impairment feel they have received significantly poorer levels of support from services

Age

Rate the support you have received from the following sources during the Covid-19 situation

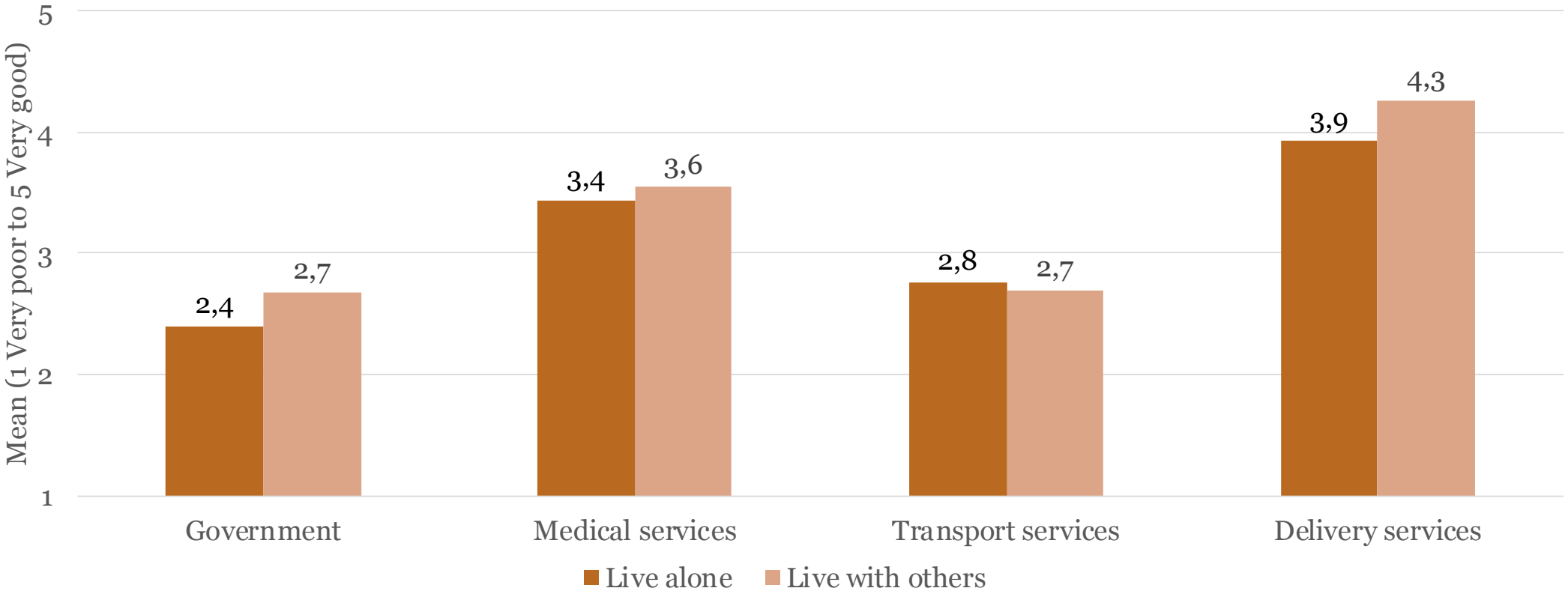


Note: Results only include those that have used the services

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Household composition

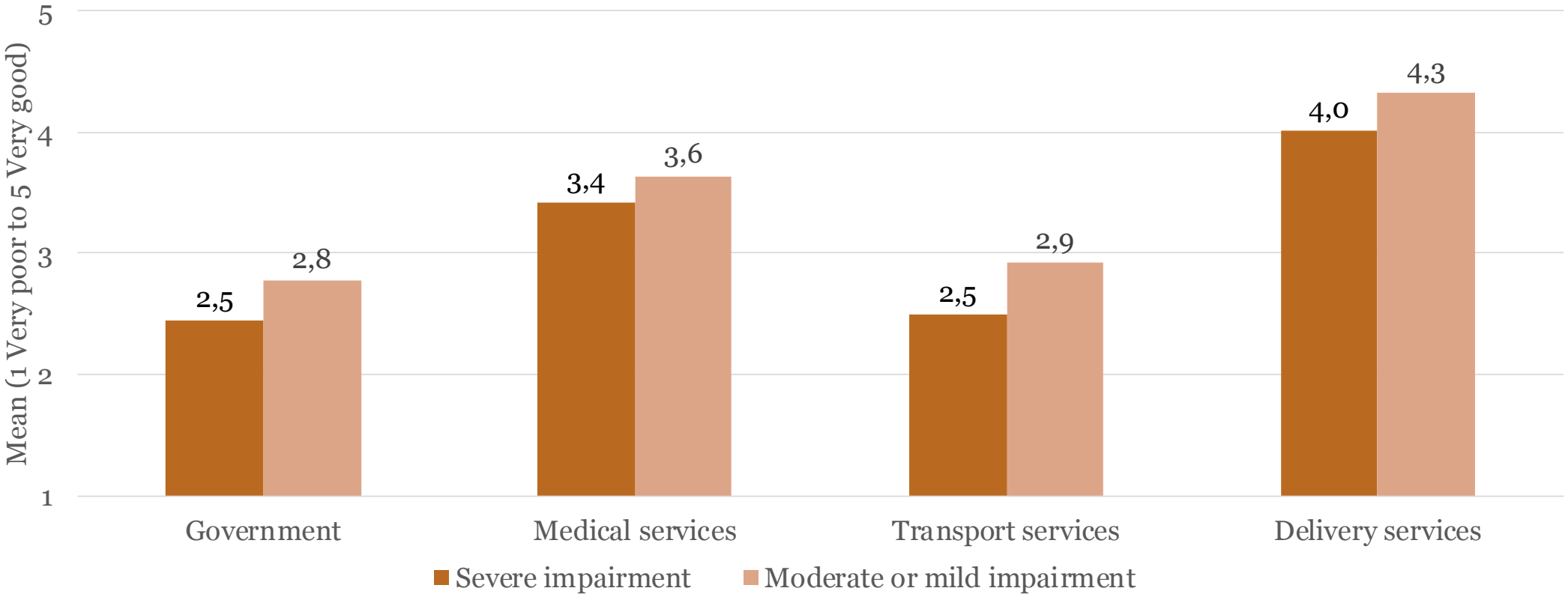
Rate the support you have received from the following sources during the Covid-19 situation



Note: Results only include those that have used the services

Vision impairment

Rate the support you have received from the following sources during the Covid-19 situation



Note: Results only include those that have used the services

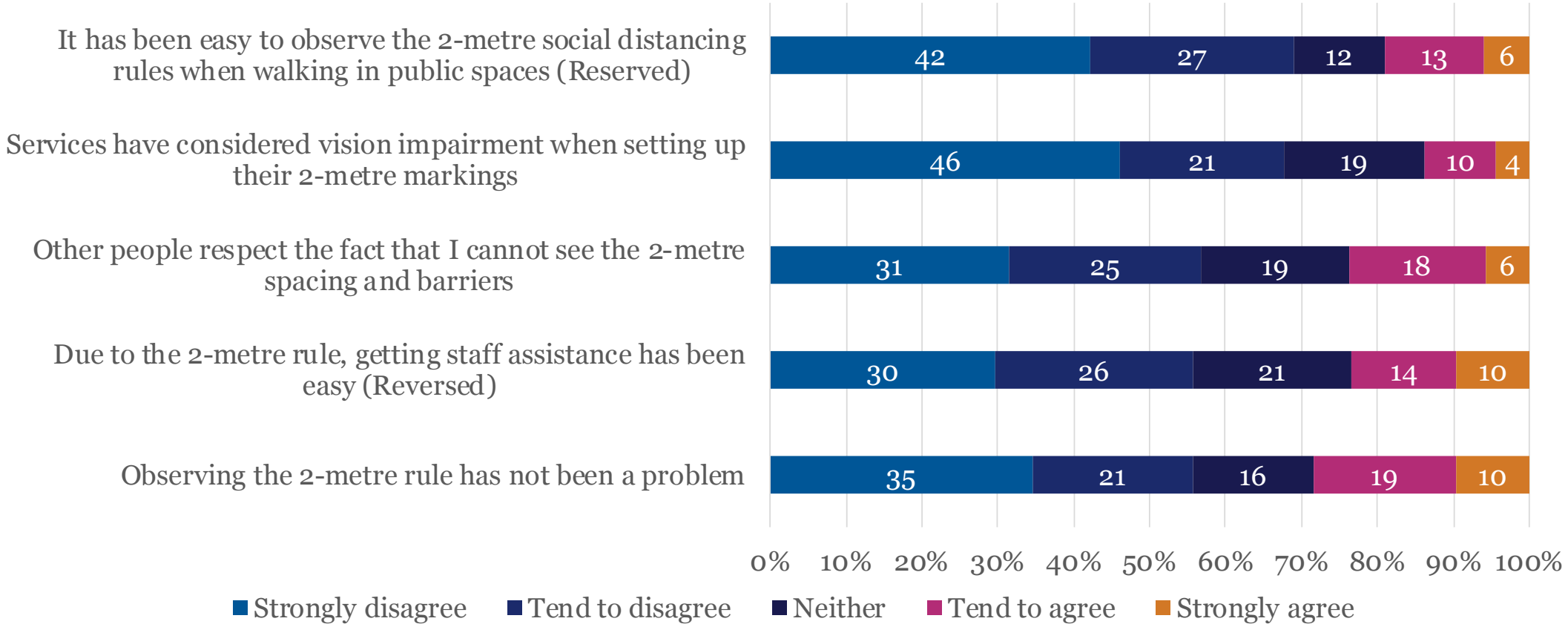
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12. 2-metre rule

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Confidence with the 2-metre rule

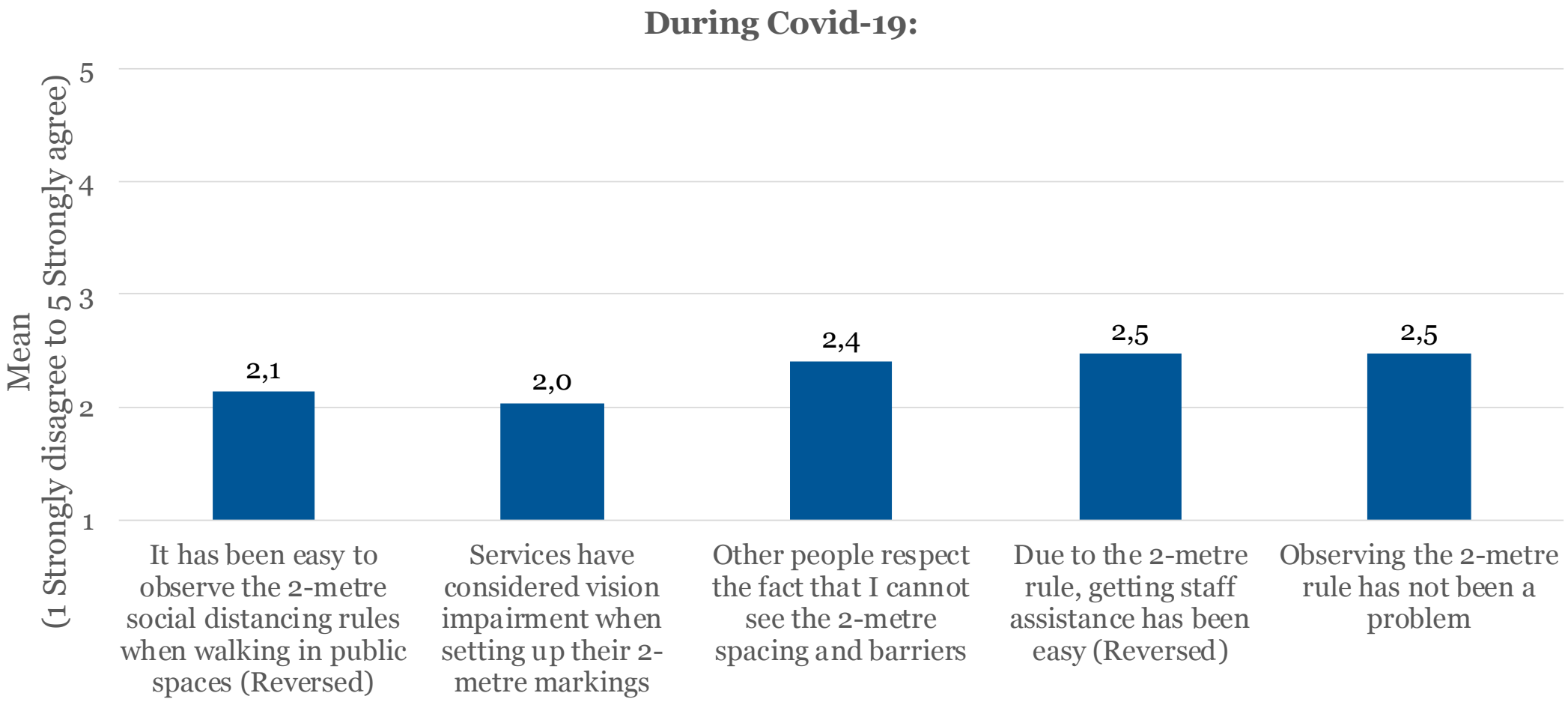
During Covid-19:



Reversed items were worded in the survey as "It has been difficult.." and "..has been difficult.." but reversed in the analysis to match the direction of the other items

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Confidence with the 2-metre rule is fairly low, especially regarding the extent to which services have considered vision impairment when setting up their 2-metre markings



On average, respondents "Tend to disagree" that they have confidence in the 2-metre rule during the Covid-19 situation:

2.4

(On a scale from 1 Strongly disagree to 5 Strongly agree)

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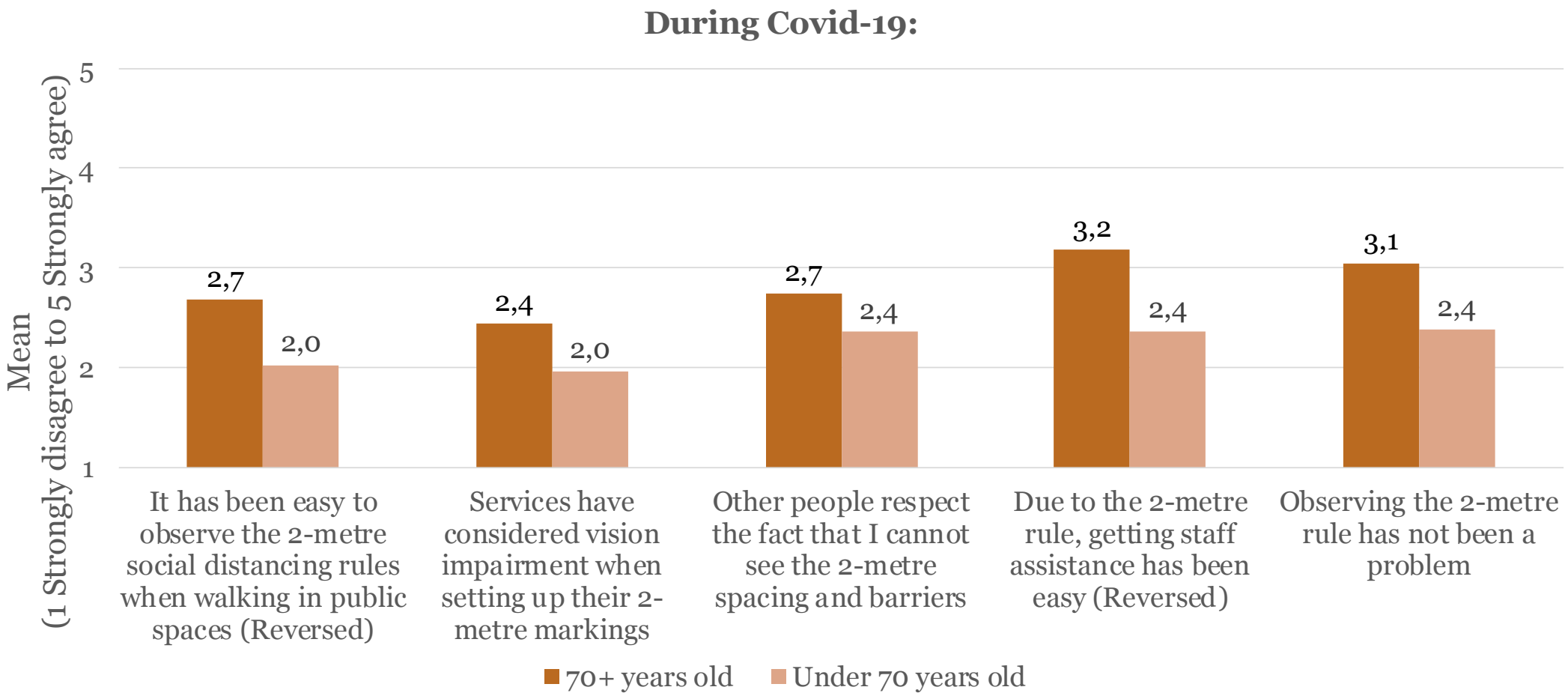
Mean confidence in the 2-metre rule by respondent characteristics

Variable	Characteristic	N	Mean	SD	t-test
Gender	Female	505	2.347	0.957	t -1.562, p.119
	Male	323	2.455	0.996	
Age	70+	134	2.873	0.965	t 6.529, **p.000**
	Under 70	698	2.289	0.946	
Underlying health problems	Yes	300	2.319	1.004	t -1.477, p.140
	No	536	2.422	0.953	
Household income	Over 50,000	69	2.303	1.148	t -0.223, p.824
	50,000 or less	553	2.330	0.934	
Household composition	Live alone	232	2.442	0.941	t 1.158, p.247
	Live with others	586	2.354	0.988	
Vision impairment	Severe	476	2.117	0.901	t -8.734, **p.000**
	Other	282	2.719	0.945	
Guide dog owner	Yes	300	2.120	0.911	t -5.946, **p.000**
	No	523	2.527	0.965	
Had Covid-19 or symptoms	Yes	85	2.138	0.880	t -2.479, p.013
	No	751	2.413	0.979	

Those aged under 70, with severe vision impairment and a guide dog have significantly less confidence in coping with issues associated with the 2-metre rule

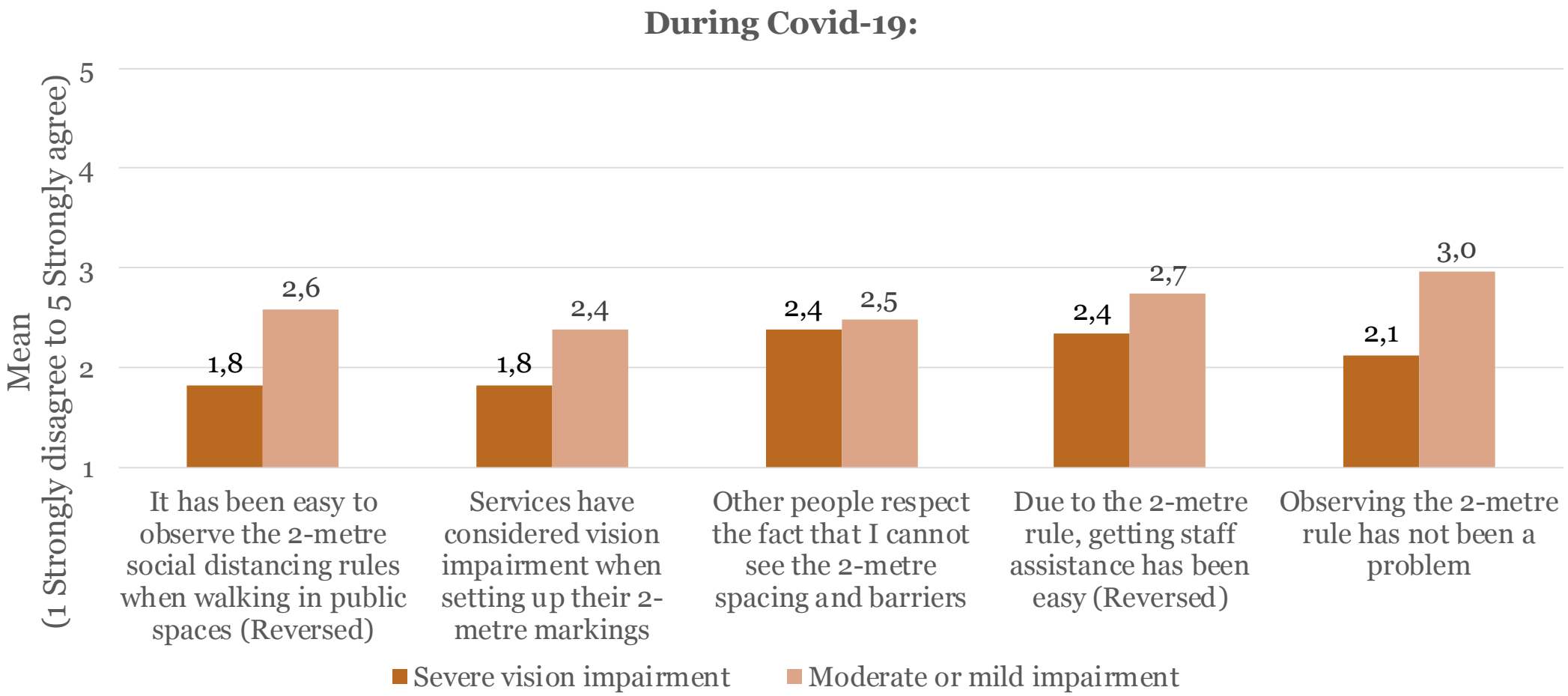
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Age



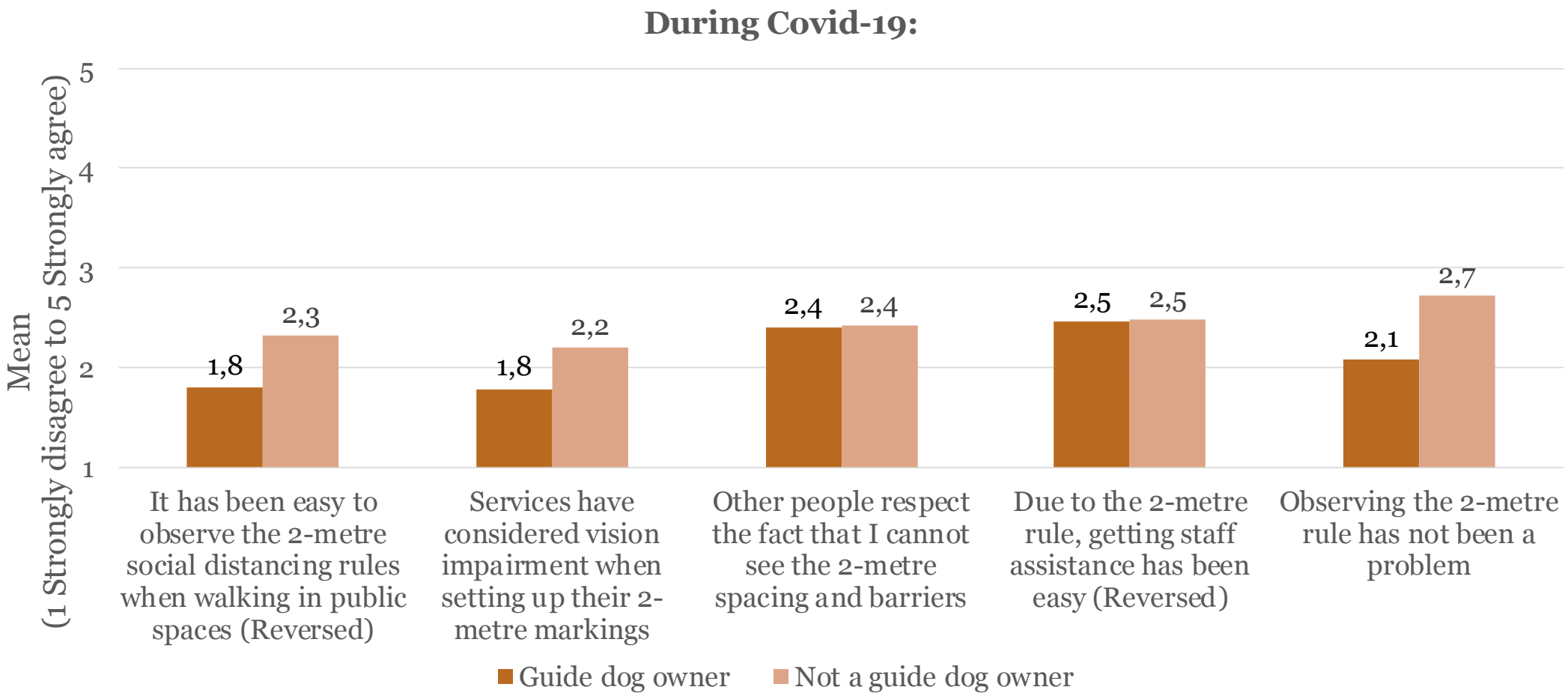
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Vision impairment



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Guide dog owner




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13.
Free text
analysis

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Open response analysis

- A qualitative analysis of open response questions was carried out using Textometrica software
- Textometrica is a software that facilitates techniques for sorting and handling large volumes of digital data
- The dataset consists of responses to three questions:
  - **Q1. Tell us about any underlying health issues that potentially make you vulnerable Covid-9 = 340 responses of which 263 described actual comorbidities**
  - **Q2. How do you believe that the Covid-19 situation will impact you in the future and what support could help? = 450 responses**
  - **Q3. Can you provide any further comments? = 212 responses**

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Frequencies

- Question 1: 340 responses of which 263 described actual comorbidities included in the analysis

- Responses to Question 2 and 3 were semantically similar. Hence, all responses were analysed as one corpus. This resulted in a total of 662 responses. The analysis revealed that some respondents spoke about multiple issues, resulting in 1043 separate statements organised into 9 themes:

    1. How restrictions have impeded daily and anticipated function (27.6.0%; 288/1043 statements)
    2. What would help people with vision impairment navigate the ongoing situation (15.3%; 160/1043)
    3. Perceptions of public and shop staff attitudes and behaviour (9.7%; 101/1043)
    4. Specific issues with regard to public transport (8.7%; 91/1043)
    5. Specific issues with regard to maintaining the 2-metre rule (8.0%; 83/1043)
    6. Perceptions of Guide Dogs services and provision (8.0%; 83/1043)
    7. No change or positive adaptation (3.07%; 32/1043)
    8. A guide dog affords comfort and support and relying on others (2.5%; 26/1043)
    9. Rhetorical, neutral, and generic references (17.2%; 179/1043)

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1. How restrictions have impeded daily and anticipated function

- This concept captured fifteen coding categories, including [most prolifically]:

  - Imagined future effects such as difficulty finding a job or having to work differently; anticipated financial issues
  - Being excluded from activities when restrictions eventually ease
  - Altered behaviour relating to fear of the virus per se
  - Loss of independence
  - Decreased availability or facility for online shopping
  - Concerns that guide dog would require re-training

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1. How restrictions have impeded daily and anticipated function (continued…)

- The analysis revealed how impediments to daily and anticipated function are often interlinked:

  "I am unlikely to find employment now and my guide dog is not able to work to her full capacity so will be less able I believe when I am eventually allowed out. This will reduce my mobility, sense of self-worth, social skills and confidence. I fear these losses the most"

  "Socially limiting for both my guide dog and myself. Limited working opportunities with no purpose"

- What was clear is that while the 2-metre rule and other restrictions are making people with vision impairment less active, they anticipate a radically different future where working and social patterns have changed; potentially permanently. This includes how they imagine being able to access/obtain support, in a broad sense

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2. What would help people with vision impairment navigate the ongoing situation

- This conceptual area reflects eleven categories, the most frequent of which were:
  - More consideration from the government for disabled people and improved clarity in communication
  - A vaccine
  - Having vision impairment placed on the ‘most vulnerable’ list
  - More online delivery slots
  - Improved signage in, for example, shops
  - Dedicated shopping hours
- To a lesser extent:
  - Getting back lost independence
  - More information from transport companies

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2. What would help people with vision impairment navigate the ongoing situation (continued…)

- Respondents clearly feel that if vision impairment was a ‘vulnerable’ category, and if the government paid more attention to the needs of disabled people, then their experience would be easier:

  “If this will ever happen again it would make a huge difference if being visually impaired is among the list of vulnerable people. This will allow the shopping to be delivered and find an online slot to order otherwise, it has been a struggle”

- However, alongside instrumental changes, such as more online shopping slots and hospital access, respondents also expressed more abstract concerns:

  “No freedom. No consideration given by government to people with sight loss”

  “No support before hence now government and local councils will be making even more financial cut backs to people/services for the blind”

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2. What would help people with vision impairment navigate the ongoing situation (continued…)

- Beyond the wish for a vaccine, the potential interaction between comorbidity and Covid-19 was also expressed. For instance:

  "1/3 of the people who have died are diabetics and this concerns me if a vaccine is either not available or the one being developed does not guarantee protection"

- Interestingly, a low number of respondents suggested that they would benefit from being able to wear a visible sign that signalled vision impairment to, for example, shop assistants; who would then be able to proactively offer help

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3. Perceptions of public and shop staff attitudes and behaviour

- A number of responses reflected perceptions or concerns about the public and/or shop staff adopting a negative orientation to vision impaired people:

  - most commonly that public/staff need educating re. VI
  - concerns that the public will be less [naturally] helpful
  - fear of a guide dog being touched

- It should be stressed that actual instances of these were reported less than concerns about them:

  "Making the public aware of how to help or when to help and not being aggressive or because they are doing the wrong thing"

  "I am also worried there will generally be negative impacts on attitudes to disabled people"

  "This situation is frightening enough without us having to endure the kind of personal threats that I regularly receive from members of the public because I am free running my guide dog in areas under PSPOs (sic)"

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3. Perceptions of public and shop staff attitudes and behaviour (continued…)

- Overall there appears to be a low level of general concern and questions about the public's future attitude to vision impaired people and their guide dogs

- In contrast to negative perceptions around the public, a very small number of responses were more positive. This serves as a reminder of the variability in experiences, and hence the need to ensure the 'bigger picture' is considered:

  "Overall I have found that people are usually very considerate with the guide dog and me"

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4. Specific issues with regard to public transport
5. Specific issues with regard to maintaining the 2-metre rule

- Given the degree of overlap between some aspects of these conceptual areas, they will be considered in conjunction

- Negotiating the 2-metre rule on transport such as buses was a concern that interacted with a generally decreased availability of actual services and decreased capacity on vehicles due to regulations

- There is also a relationship here with the area of 'how restrictions have impeded daily life', discussed above, in that some respondents stated that their ability to return to work or find work was, or would be, impeded by inability to access transport safely

  "[…] I'll miss more train connections, be more stressed in the street, and be less able to go to work and potentially put my ability to maintain my job at risk"

  "If public transport spaces remain problematic, I'll never be able to go out and live my life"

4. Specific issues with regard to public transport
5. Specific issues with regard to maintaining the 2-metre rule (continued…)

- Fear of actually catching the virus while on public transport was only reported directly in a limited number of instances

- Clearly, being able to safely negotiate 2-metre markings outside of shops, and maintaining the distance from other people, causes concerns to people with vision impairment; particularly people with no sight. The converse is that some respondents expressed concern that the public would get too close to them

  "I have heard of sighted people coming too close and expecting the visually-impaired person to avoid them"

  "I have noticed when I have been out that others think it is okay to walk too close to me because they think I can't see them which is rather rude"

4. Specific issues with regard to public transport
5. Specific issues with regard to maintaining the 2-metre rule (continued…)

- The perceived inability to negotiate the 2-metre distance rule safely may have a direct effect on health e.g.:

  "Sticking to the 2-metre rule will be a big problem, which means I'll be less active more likely to put on weight"

- Overall, the 2-metre rule is resulting, and is anticipated to result in, a range of perceived and actual deleterious outcomes

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6. Perceptions of Guide Dogs services and provision

- 7 categories were captured by the overarching conceptual area of statements reflecting Guide Dogs Association in a negative light. The most frequently reported issues was waiting time for a guide dog. However, while respondents were aware that waiting times had been affected by Covid-19 and that the ongoing effects of this would ripple out for some time, perceived unreasonably long waiting times were reported as a separate issue:

  "I have been waiting two years for a guide dog because my guide dog had to retire at age four […]. They may keep putting it off. Folk have been waiting three years. They have been given a mandate to get their waiting times down. […] I am heartbroken. Please make me a priority"

  "I NEED A DOG REALLY SOON. My age is against me. Two years down the line I would say to guide dogs if you are not going to help me, take my name off the list. […] The newsletter needs to say how they anticipate the training program getting back to normal. Why did Guide Dogs get in to this muddle?"

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6. Perceptions of Guide Dogs services and provision (continued…)

- Beyond waiting times, other categories included:

  - Generic negative issues
  - Lack of concerted planning with other VI organisations
  - Failure to adequately communicate contingency plans and in general
  - Failure to communicate to individuals during Covid-19
  - Generic claims that more could be done:

  “Guide Dogs withdraw all of its volunteering services and stopped the guide dog service with no flexibility or impact assessment of the effect this would have on a very at-risk community they take public money to help”

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6. Perceptions of Guide Dogs services and provision (continued…)

- While Covid-19 is exacerbating the issue, it appears that a generally negative attitude towards Guide Dogs, albeit from a limited number of respondents, exists

- Somewhat counterbalancing the negative statements discussed previously, a small yet significant number of responses indicated favourable interactions with, and perception of Guide Dogs:

  "The telephone support from Guide Dogs has been very good but it's difficult sometimes to know who to contact as the staff furloughed changes every few weeks"

  "Guide Dogs have been absolutely fantastic during this time. My manager has phoned me up several times which has been really good to just get reassurance on how to care for my guide dog during this time"

- Despite favourable responses, some evidence suggests that, for example, direct phone contact from Guide Dogs has been somewhat limited. This may reflect organisational differences at the regional level

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7. No change or positive adaptation

- A small number of responses contained references indicating that positive adaptations had been made or that the person's situation was more or less the same as before Covid-19:

  "Lockdown has introduced me to online exercise classes, which I will be continuing in the future"

  "I have not faced redundancy as I work in a remote team so my role is currently safe and I haven't lost out financially. If anything, I believe I have gained at present"

  "Just looking forward to the all-clear but pleased I have made good use of my time supported (sic) the NHS"

- While some respondents were able to adapt, e.g. in terms of working from home, this experience was not universal. However, remote working is likely to become more salient post-Covid-19, across many domains. Moreover, some individuals may able to make positive adaptions for psychosocial and/or other pragmatic reasons. This interaction clearly demands further investigation in itself

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8. A guide dogs afford comfort and support

- It is clear from the results and overwhelmingly positive references that guide dogs provide a major source of support and comfort for their owners:

  "My guide dog has had a huge impact on my ability to carry on and has allowed me to exercise and work with her in different ways which have been challenging at times"

  "I cannot see this ever improving so grateful I have my beautiful guide dog she's keeping me going"

- Beyond comfort and support, the guide dog acts as an indicator of the vision-impaired person's status, and this is viewed positively:

  "I am severely visually-impaired. A guide dog is a very clear symbol of this so helps in terms of my movement and others adapting their own when they see me"

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8. Rhetorical, neutral and generic references

- Although not the smallest conceptual area, a significant number of statements comprised neutral, rhetorical or generic statements that do not necessarily pertain to the experience of being vision-impaired per se:

  "[…] whether we like it or not, but, as always, when it comes to visual-impairment and access, we are second-class citizens in this country"

  "The [virus] has been a fortunate plague for the Conservatives, as it mops up the most vulnerable in society that have been hit by a decade of welfare cuts"

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8. Rhetorical, neutral and generic references (continued…)

- The largest proportion of [rhetorical] statements in this area reflect that the future with respect to Covid-19 is uncertain or could not be known.

  "Don't know the future"

- A small number of responses were framed in a humorous manner

- Overall, the nature of responses in this area serve as a reminder that Covid-19 affects everyone in society and, as such, peoples responses are as much common and social as they are individual; i.e. people call upon similar discursive resources and articulate their experiences in comparable ways. Hence, it is important that this context is held in mind so as to avoid establishing the vision-impaired population as entirely different from the non-vision impaired population

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9. Comorbidities

- 263 respondents indicated one or more comorbidity from a total of 53 unique comorbidities. 89 respondents reported two or more comorbidities. 25 reported four or more

- The most frequent comorbidities were:

  - Diabetes I/II (n=88)
  - Asthma (n=69)
  - Heart disease/COPD (n=65)
  - Immunosuppression (n=29)
  - Arthritis (n=16)
  - Cancer (n=13)
  - Kidney dysfunction (n=13)

- Specific comorbidities have not been associated with age or other demographic data. As noted by McLean et al. (2014) comorbidity in vision impaired adults over age 65 is common and exacerbates the challenges posed to such individuals. In terms of provision and support for vision impaired individuals it is therefore important that complex clinical needs are taken into account


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Summary

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Survey respondents

- 1182 responses to the survey, with 937 viable, complete surveys for analysis
- 62% of respondents are female
- 17% are in the “at risk” category of 70+ years of age
- 89% have a household income of £50,000 or less
- 28% live alone
- 62% have severe vision impairment
- 35% are guide dog owners
- 37% have underlying health problems that make them vulnerable to Covid-19
- 10% feel they have had symptoms
- 0.3% have tested positive and received treatment

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Participation

- Overall, participants are “slightly less active” during the Covid-19 situation than before, with mobility most significantly affected

- Those with underlying health problems, a lower household income, severe vision impairment and a guide dog are significantly less active

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Constraints

- Respondents “neither agree nor disagree” that they are experiencing **intrapersonal** constraints during Covid-19, compared to before it
- “I have been more concerned for my own health” is the strongest intrapersonal constraint
- Those aged under 70, with underlying health problems, and a lower household income experience significantly stronger intrapersonal constraints
- Respondents “tend to agree” that they are experiencing **interpersonal** constraints during Covid-19, compared to before it
- “I have been more concerned about the wellbeing of loved ones” is the strongest interpersonal constraint
- Those with underlying health problems and live alone experience significantly stronger interpersonal constraints
- Respondents “neither agree nor disagree” that they are experiencing **structural** constraints during Covid-19, compared to before it
- “Places I normally like to go to have been closed” is the strongest structural constraint
- Those aged under 70 and with a lower household income experience significantly stronger structural constraints

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Negotiation of constraints

- Respondents “tend to agree” that they have negotiated constraints during the Covid-19 situation
- “I have made use of technologies (e.g. for work, keeping in touch with people or shopping” is the most agreed upon negotiation strategy
- Those with a higher household income, severe impairment and a guide dog are significantly better at negotiating constraints

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Wellbeing

- Respondents “neither agree nor disagree” that they have maintained good wellbeing during the Covid-19 situation
- “Good state of mind”, “sleep OK”, “satisfied with life overall” and “optimistic about the future” all received similarly, moderate responses
- Those aged under 70, with a lower household income are experiencing significantly lower levels of wellbeing

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Services

- Respondents rate the support they have received from services as “fairly good” during Covid-19, compared to before it
- Delivery and medical services received the highest rates, while transport and government services were lower on average
- Those aged under 70, living alone and with severe vision impairment feel they received significantly poorer levels of support from services

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2-metre rule

- Respondents “tend to disagree” that they have confidence in the observing the 2-metre rule during Covid-19 in all situations

- Those aged under 70, with severe vision impairment and who have a guide dog have significantly less confidence in abiding by the 2-metre rule and issues associated with it

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Free text analysis

- 343 responses, resulting in 1043 statements, from 937 respondents were organised into 9 overarching conceptual areas:

  - How restrictions have impeded daily and anticipated function (27.6.0%; 288/1043 statements)
  - What would help people with vision impairment navigate the ongoing situation (15.3%; 160/1043)
  - Perceptions of public and shop staff attitudes and behaviour (9.7%; 101/1043)
  - Specific issues with regard to public transport (8.7%; 91/1043)
  - Specific issues with regard to maintaining the 2-metre rule (8.0%; 83/1043)
  - Perceptions of Guide Dogs services and provision (8.0%; 83/1043)
  - No change or positive adaptation (3.07%; 32/1043)
  - A guide dog affords comfort and support and relying on others (2.5%; 26/1043)
  - Rhetorical, neutral, and generic references (17.2%; 179/1043)

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References

- Crawford, D.W., & Godbey, G. (1987). Reconceptualizing barriers to family leisure. *Leisure Sciences,* 9, 119-127
- Cacioppo, J. T., & Hawkley, L. C. (2009). Perceived social isolation and cognition. *Trends in Cognitive Sciences*, 13(10), 447-454
- Crawford, D.W., Jackson, E.L., & Godbey, G. (1991). A hierarchical model of leisure constraints. *Leisure Sciences*, 13(4), 309-320
- Hodge, S., & Eccles, F. (2013). Loneliness, social isolation and sight loss: a literature review conducted for Thomas Pocklington Trust.
- Jackson, E. L., Crawford, D. W., & Godbey, G. (1993). Negotiation of leisure constraints. *Leisure Sciences*, 15(1), 1-11.
- McLean, G., Guthrie, B., Mercer, S.W., & Smith, D.J. (2014). Visual impairment is associated with physical and mental comorbidities in older adults: a cross-sectional study. *BMC medicine*, 12(1), 181.

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The research team would like to thank respondents for taking the time to participate in our survey

«Thank you»

If you have any questions or comments, please email Jillian Rickly at Jillian.Rickly@nottingham.ac.uk