

COVID-19 PSYCHOLOGICAL RESEARCH CONSORTIUM (C19PRC)

**Initial research findings on the impact of COVID-19 on the well-being of young people
aged 13 to 24 in the UK**

Report 1

1 June 2020



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BACKGROUND

Aims and Objectives. Understanding adolescents' responses to the Covid-19 pandemic crisis in 2020: psychological, mental health and social consequences.

This is an axillary study that is being run as part of the **Covid-19 psychological research consortium**, which is currently looking at the impact of COVID-19 on the well-being of adults in the UK (Sample -2,000 UK citizens, stratified by age, sex and household income).

However, it is critical we also understand the consequences of this pandemic on the mental, physical and social well-being of young people. COVID-19 has led to an unprecedented disruption of normal social relations and economic activity worldwide – the impact on the public's mental health may affect need for services, the further progress or resolution of the pandemic and speed of recovery afterwards. While other institutions (as well as our own research) are looking impact of this virus on adults, it is also important to understand how young people are dealing with this crisis - especially the potential differences in the impact of the pandemic on psychological well-being at different developmental times during the adolescent period. Consequently, this study will provide essential information about the psychological impact of the virus on a sample of early to late adolescents, which could potentially inform future government policy targeted specifically in helping this population. To that end, the aim of this study was to run a survey on 13-24-year-old individuals that examined the impact of this virus on their physical health, mental health, and impact on family relationships. They were also asked about their understanding of and compliance with current government social distancing guidelines.

DEMOGRAPHIC INFORMATION AND PERSONAL EXPOSURE TO COVID-19

Sample: 2002 individuals aged 13-24. Survey start date: 21 April 2020; Survey end date: 29 April 2020

Occupation:

- 17% of respondents are at University
- 65.2% now study at home
- 17.5% now work at home
- Nearly 9% lost their job as a result of COVID-19
- Nearly 20% of sample have come back to live with their parents as a result of COVID-19
- Nearly 23% are key workers (either full or part time)
- Nearly 50% of the sample have parents(s)/caregiver(s) that are key workers

Ethnicity:

- Asian/Asian British -11.3%
- Black / African / Caribbean / Black British 5.6%
- Mixed / Multiple ethnic groups -5.8%
- White -75.8%
- Other (please specify) 0.5%
- Prefer not to say 0.9%

Living Environment:

- 87.1% of respondents have a garden
- 72.3% of respondents reported that there was space where they live for them to be on their own, 21.6% said that they had this only sometimes, and 6.1% said they had no such space.

Personal exposure to COVID-19:

- We asked our sample of young people whether they or anyone they lived with had been diagnosed with coronavirus.
- 8% per cent said that they had personally had coronavirus and 16.7% said they had been unwell but were not sure that it was coronavirus.
- 6% reported that someone in their house had been diagnosed with coronavirus and 17.2% said someone in their family had been unwell but were not sure that it was coronavirus

Sample: Gender

13-18 year olds and 19-24 year olds

Female	13-18	N	Valid	612
			Missing	0
	19-24	N	Valid	689
			Missing	0
Male	13-18	N	Valid	389
			Missing	0
	19-24	N	Valid	281
			Missing	0

IMPACT OF PANDEMIC ON YOUNG PEOPLE

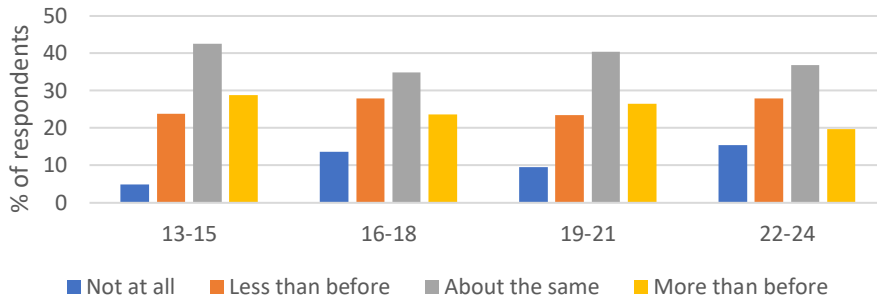
Respondents were asked whether as a consequence of the pandemic and current social distancing policy whether over the last two weeks they enjoyed being at home, felt anxious, worried about their parents/family and whether they enjoyed being with their parents. They rated their response on a scale of 'Not at all, Less than before, About the same and more than before'. The sample was split into 4 age groups: 13-15; 16-18; 19-21; 22-24 to examine this.

FINDINGS

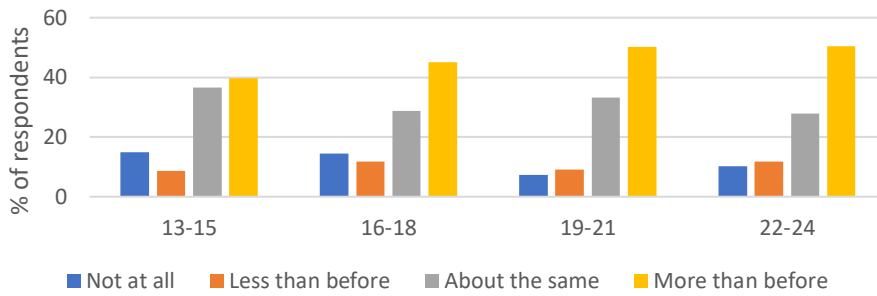
- A large proportion of respondents felt significantly more anxious (40-50%, greater numbers in older age groups) and worried about their parents/family (50-60%, again greater numbers in older age groups)
- Almost 30% of 13-15 year olds enjoyed being at home, and this dropped to around 20-25% in older age groups
- Notably, however, as age increased, a greater proportion of people did not enjoy being at home at all (10-15%). Only 5% of younger teens did not enjoy being at home at all
- Across all age groups, 30-40% enjoyed spending time with their parents(s)/caregiver(s)
- It is also worth noting that there is a significant proportion of respondents who reported that nothing had changed as a result of the current pandemic (30-40%).

TAKE HOME – The coronavirus outbreak has caused a significant increase in anxiety in young people, who are worried about their family members. Overall, young people are enjoying spending time with their family.

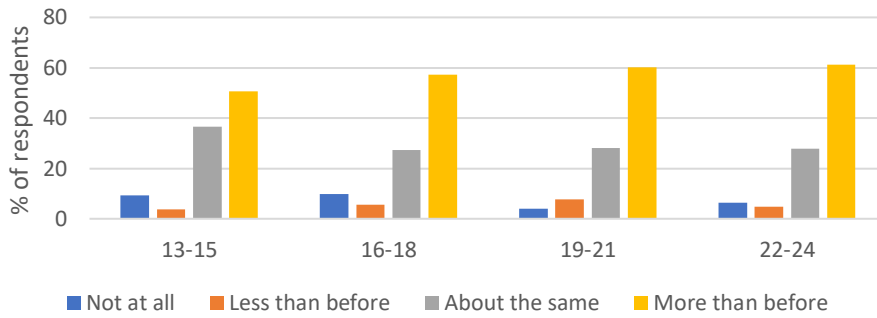
Enjoyed being at home



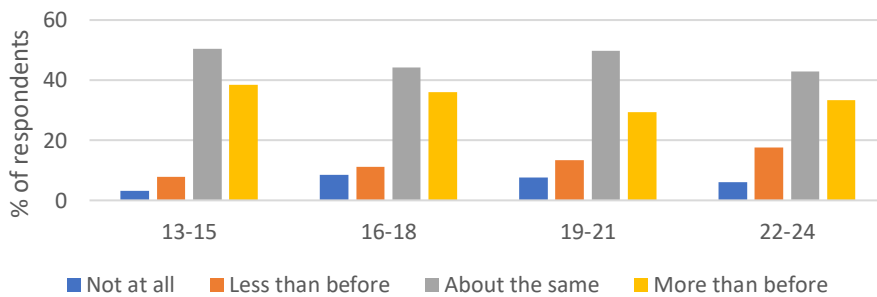
Felt anxious



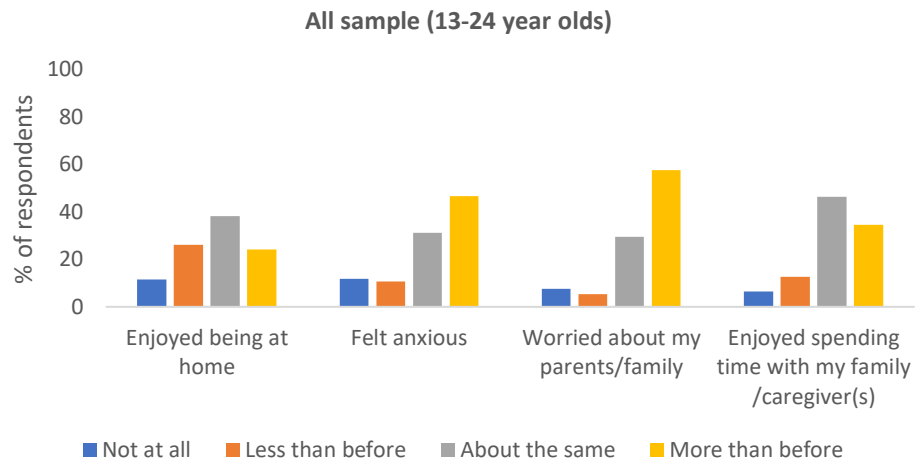
Worried about my parents/family



Enjoyed spending time with my parent(s)/Caregiver(s)



All sample (13-24 year olds)

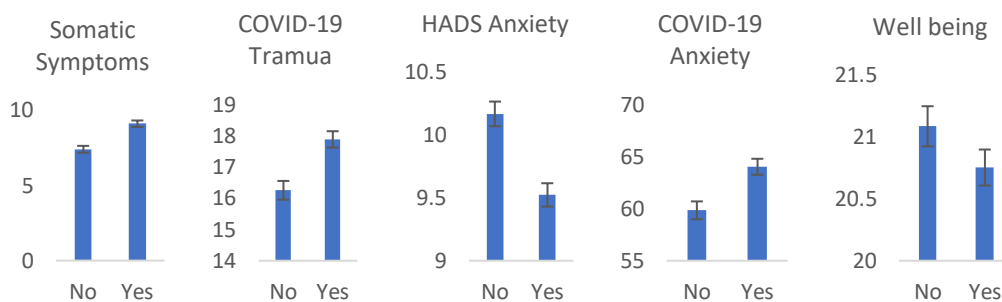


IMPACT OF PARENT(S)/CAREGIVER(S) BEING KEY WORKERS

FINDINGS

- Just over half (54.6%) of our 13-24 year olds respondents have parents/caregivers that are key workers (one, 38.8%; both parents, 15.8%).
- These young people show significantly greater levels of COVID-19 anxiety and trauma, and report more somatic symptoms, and also lower levels of general well-being. Interestingly however, in terms of general anxiety their scores are lower than individuals whose parents are not key workers (depression scores did not differ between the two groups).
- For simplicity figures below show the whole sample, n = 2002 (Mean and SEM). We see a very similar pattern across age groups when you break into early, mid and late adolescent periods. Covid-19 anxiety was measured by asking them to rate on a 0-100 slider scale how anxious they are about this pandemic. Somatic symptoms were measured using the SSS-8, Covid-19 related trauma measured using CRIES-8.; Well-being by the Short Warwick-Edinburgh well-being scale, anxiety and depression were measured using HADS (Hospital Anxiety and depression Scale).

TAKE HOME- Young people whose parents are key workers are impacted much more negatively by the current crisis.



Key to figures: Yes, parents are key workers; No, they are not. Y-Axis mean scores \pm SEM

THE IMPACT OF COVID-19 ON ETHNIC MINORITIES

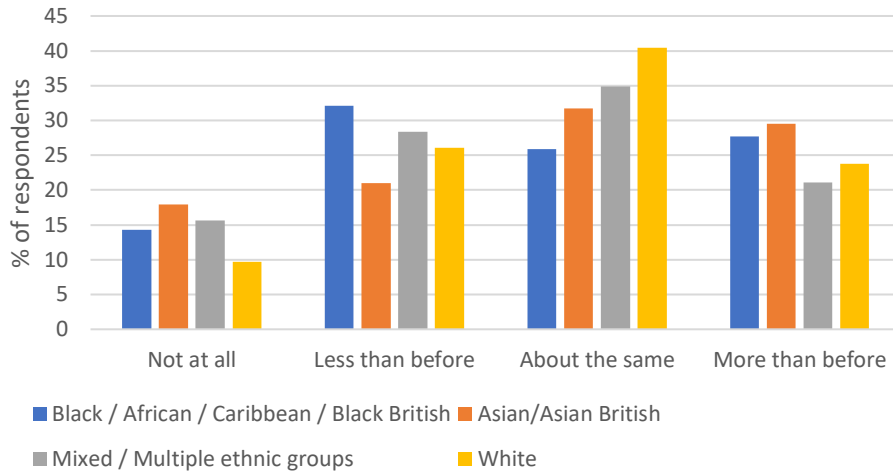
Ethnic minorities in England and Wales are dying from coronavirus at far higher rates than their white peers, according to analysis by the London-based Institute of Fiscal Studies (IFS). Hence, the impact of the pandemic on mental health and well-being on ethnic minorities in our sample was examined.

All Sample		We would now like you to tell us about your ethnic background.			
		Frequency	Percent	Valid Percent	Cumulative P
Valid	Black / African	113	5.6	5.6	5.6
	Other (please specify)	11	0.5	0.5	6.2
	Prefer not to say	18	0.9	0.9	7.1
	Mixed / Multiple	116	5.8	5.8	12.9
	White	1518	75.8	75.8	88.7
	Asian/Asian British	226	11.3	11.3	100
	Total	2002	100	100	

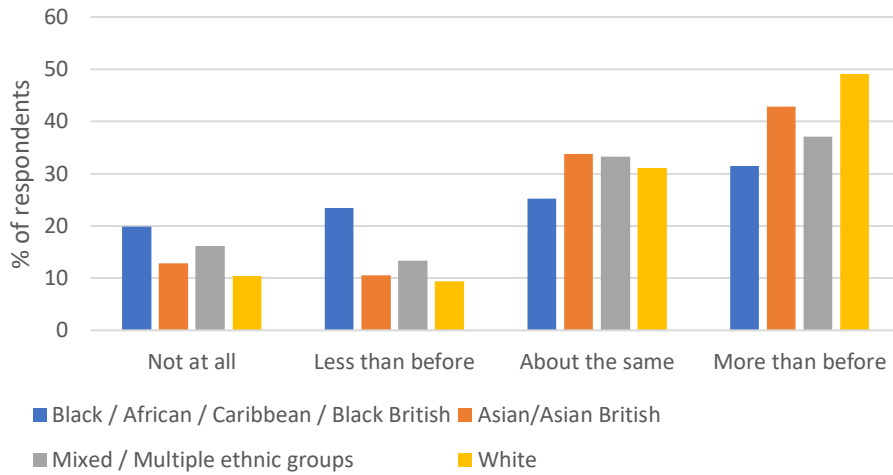
FINDINGS

- Black and mixed race respondents had higher levels of anxiety and depression as measured by HADS, compared to White and Asian respondents
- On all other measures, similar scores were found across ethnic groups (well-being, somatic symptoms, COVID-19 Trauma, COVID-19 anxiety)
- Significantly, a greater proportion of black respondents reported feeling less anxious than before the lockdown (23%) compared to White, Asian and Mixed-race respondents (10-13%).
- Slightly more Black and Asian respondents reported that they enjoyed being at home more than before the lockdown (27-30%) compared to white and mixed race respondents (21-24%). Note that there was also greater proportion of black respondents (32%) that indicated that they enjoyed being at home much less than before the lockdown compared to all the other ethnic groups (21-26%)

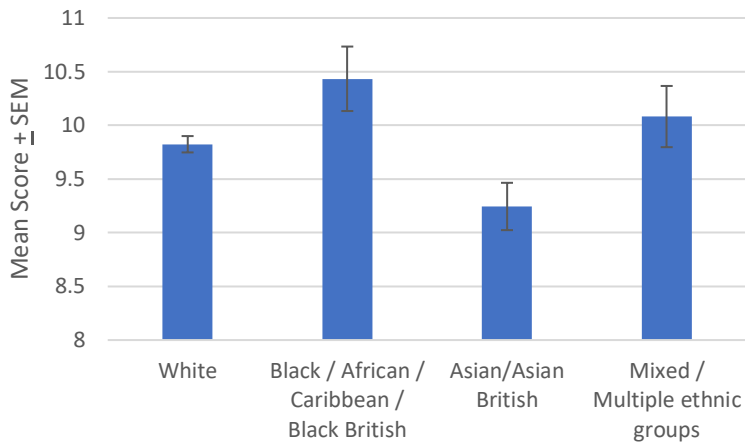
Enjoyed being at home



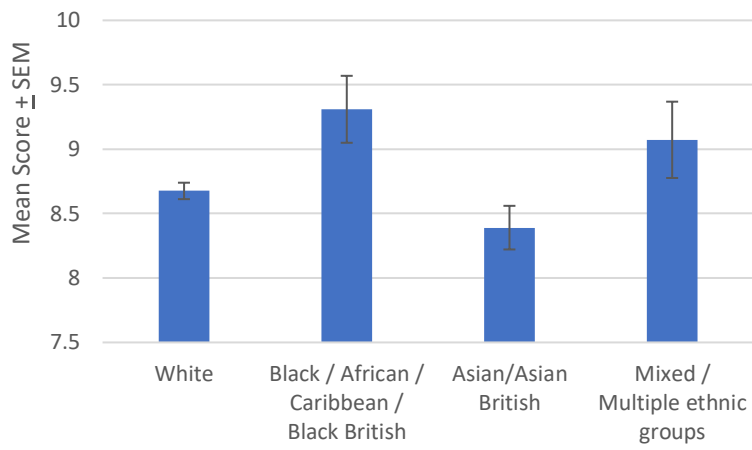
Felt Anxious



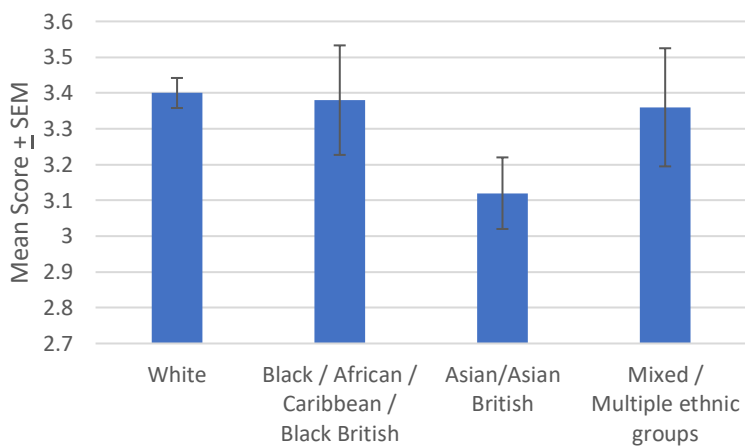
HADS Anxiety



HADS Depression



COVID-19 Anxiety



ETHNIC MINORITIES, WELL BEING AND PARENTS BEING KEY WORKERS

METHOD

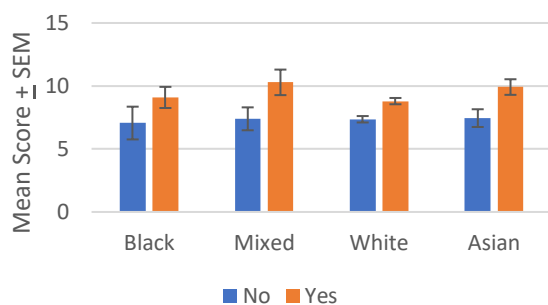
Examined all individuals aged 13-24 we surveyed (not split by gender as low sample size for ethnic minorities) and examined the relationship between ethnicity, their mental health and well-being and how that was affected by whether their parents were key workers

KEY FINDINGS

- Higher levels of reported somatic symptoms across all ethnicities in individuals whose parents were key workers, this increase was less in white respondents compared to the other ethnicities (Black, Mixed and Asian).
- Great Covid-19 related trauma (CRIES-8), and covid-19 anxiety scores were found in mixed race respondents whose parents were key workers
- In terms of clinical cuts offs for abnormal levels of HADS anxiety, HADS Depression and SSS-8 (somatic symptoms) and Covid-19 trauma
 - o Marked increase in clinical Covid-19 trauma/PTSD levels in mixed race respondents whose parents were key workers. Over 60% of mixed race respondents had clinical levels of trauma, compared to around 37% of mixed race respondents whose parents were not key workers
 - o For clinical cut off on the SSS-8 questionnaire (very high somatic symptoms) greater proportion of respondents in all ethnicities fell in this category if their parents were key workers (but less in white individuals)
 - o Interestingly, HADS anxiety levels in the clinical category (abnormal levels) actually showed an improvement, with slightly smaller proportion of individuals across all ethnicities showing clinical levels of anxiety if their parents were key workers
 - o This was not the case for clinical levels of depression (as measured by HADS), where greater proportion of respondents who were Mixed race or Asian had clinical levels of depression if their parents were key workers

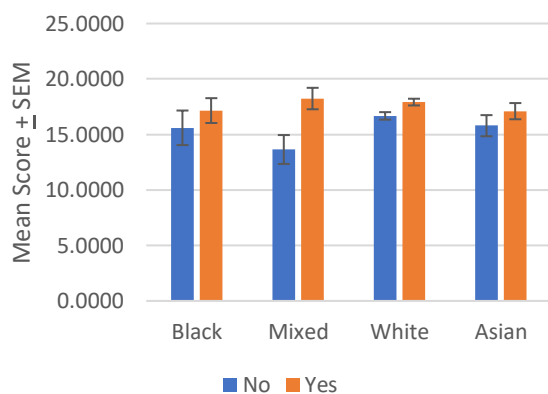
Tables and figures illustrating the above key findings are below

Somatic Symptoms SSS-8



Very High Somatic symptoms. Scores >16				
Table showing % of respondents	Parent(s) not key workers	Parent(s) key workers	Parent(s) not key workers N	Parent(s) key workers N
Black / African / Caribbean / Black British	17.1	26.9	35	78
Mixed / Multiple ethnic groups	13.7	25.4	51	59
White	14.3	20.7	697	801
Asian/Asian British	15.6	25.6	96	129

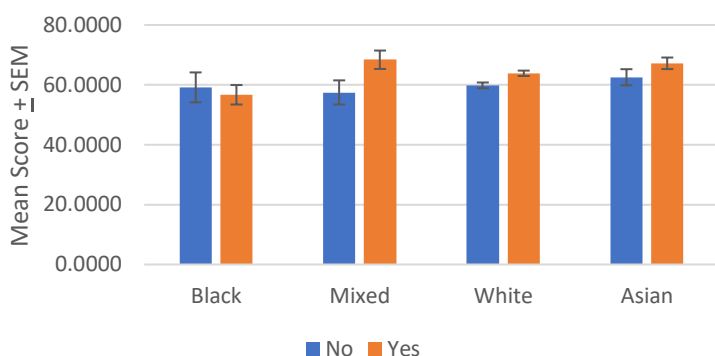
CRIS-8



Yes- Parents key workers; No – parents not key workers (CRIS-8 – Covid-19 related Trauma PTSD symptoms)

	CRIS-8					
	No			Yes		
	Mean	SEM	N	Mean	SEM	N
Black	15.6000	1.55688	35	17.1538	1.11912	78
Mixed	13.6471	1.30183	51	18.2373	0.96803	59
White	16.6743	0.33804	697	17.9201	0.30317	801
Asian	15.7917	0.95133	96	17.1008	0.73010	129
	Mean	SEM	N	Mean	SEM	N

Covid-19 Anxiety



Yes- Parents key workers; No – parents not key workers

	Covid-19 Anxiety					
	No			Yes		
Black	59.1714	4.98830	35	56.6923	3.25461	78
Mixed	57.4706	4.03031	51	68.3898	3.07552	59
White	59.8207	0.96674	697	63.8652	0.89830	801
Asian	62.5521	2.68663	96	67.2016	1.92967	129
	Mean	SEM	N	Mean	SEM	N

CRIES-8 Clinical Cut-off - Clinical Trauma levels

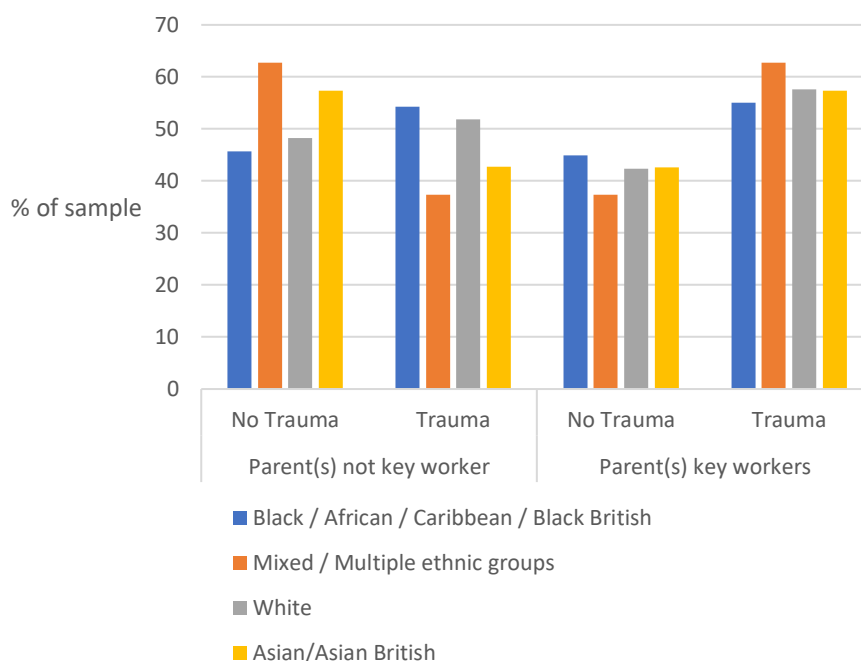
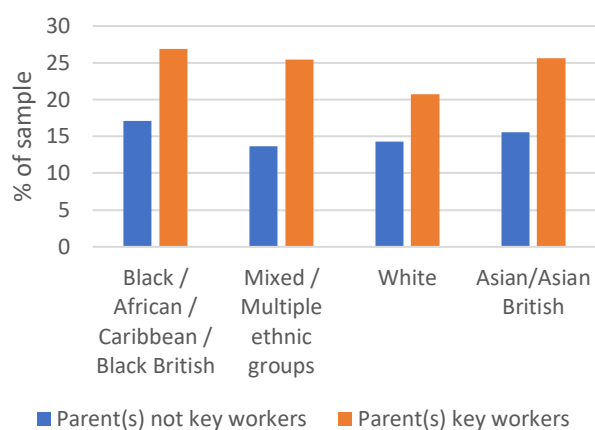


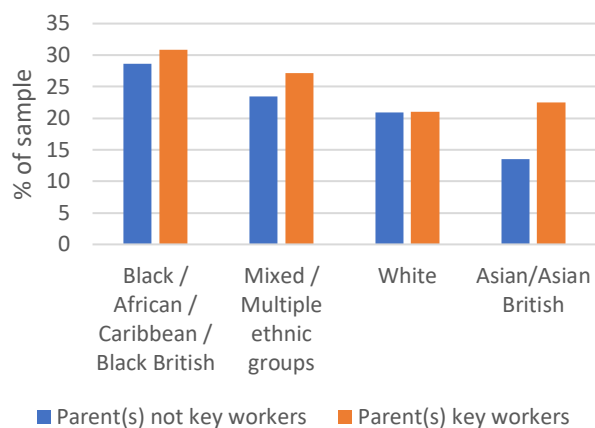
Table showing % of respondents CRIES-8 clinical Trauma cut-off score > 17	Parent(s) not key worker		Parent(s) key workers	
	No Trauma	Trauma	No Trauma	Trauma
Black / African / Caribbean / Black British	45.7	54.3	44.9	55.1
Mixed / Multiple ethnic groups	62.7	37.3	37.3	62.7
White	48.2	51.8	42.4	57.6
Asian/Asian British	57.3	42.7	42.6	57.4

SSS-8 Cut off for very high levels of somatic symptoms



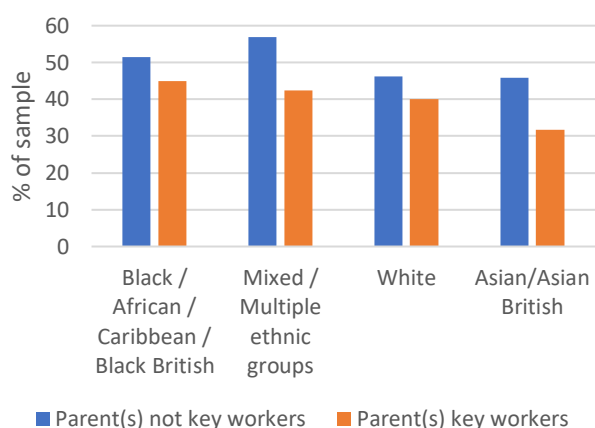
High levels of somatic symptoms (SSS-8 scores > 16)		
% of respondents	Parent(s) not key workers	Parent(s) key workers
Black / African / Caribbean / Black British	17.1	26.9
Mixed / Multiple ethnic groups	13.7	25.4
White	14.3	20.7
Asian/Asian British	15.6	25.6

HADS Depression Cut-off - abnormal levels



HADS Depression Cut-off - abnormal	% of respondents			
	Parent(s) not key workers	Parent(s) key workers	Parent(s) not key workers N	Parent(s) key workers N
Black / African / Caribbean / Black British	28.6	30.8	35	78
Mixed / Multiple ethnic groups	23.5	27.1	51	59
White	20.9	21	697	801
Asian/Asian British	13.5	22.5	96	129

HADs Anxiety Cut-off - Abnormal levels



HADS Anxiety Cut-off for abnormal levels				
% of respondents	Parent(s) not key workers	Parent(s) key workers	Parent(s) not key workers N	Parent(s) key workers N
Black/African/Caribbean/Black British	51.4	44.9	35	78
Mixed/Multiple ethnic groups	56.9	42.4	51	59
White	46.2	40	697	801
Asian/Asian British	45.8	31.8	96	129

QUESTIONNAIRE INFORMATION

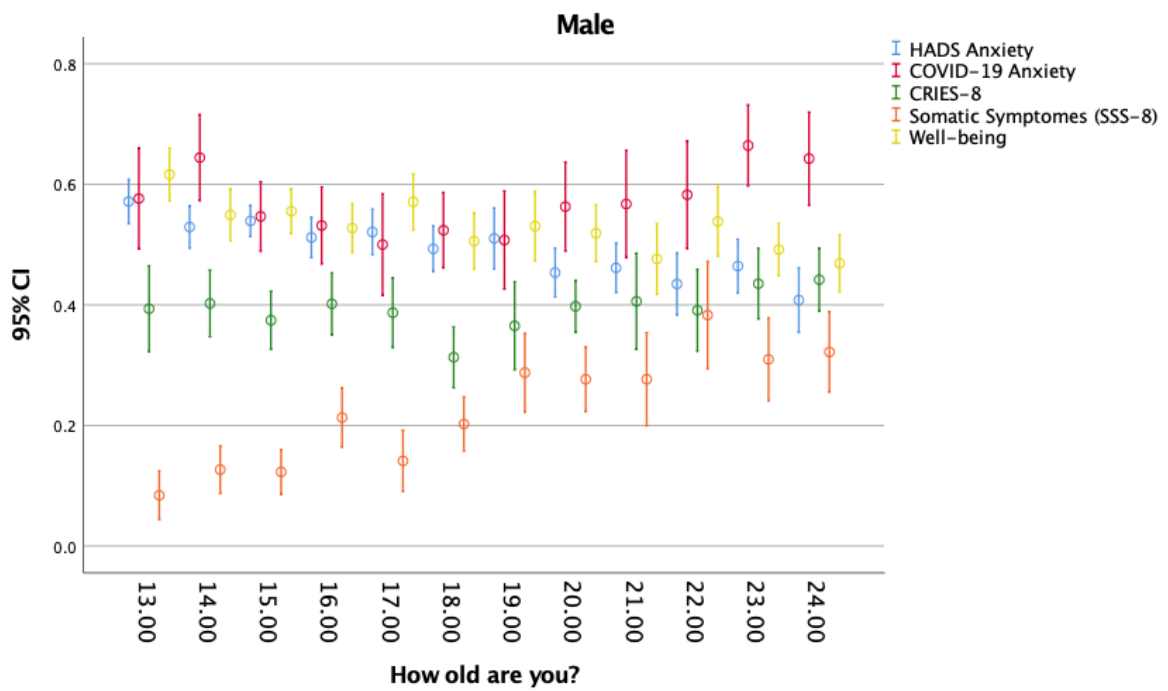
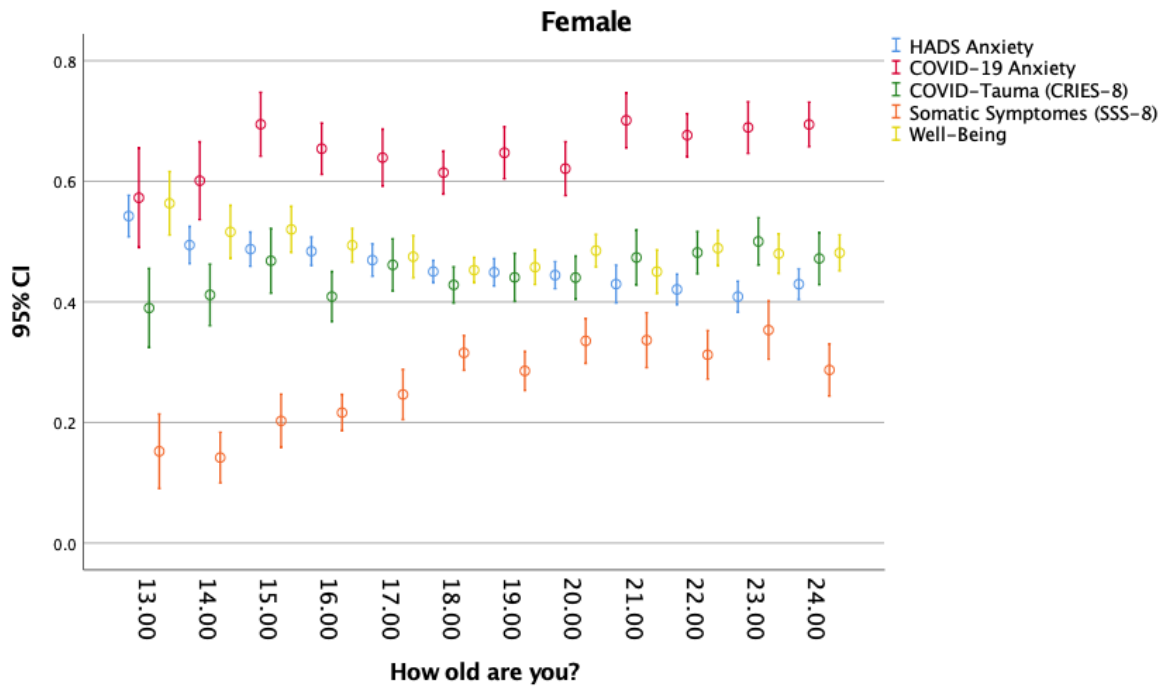
1. **COVID-19 related anxiety:** Examined by asking participants to use a slider to report how anxious they are about the coronavirus (COVID-19 pandemic) (0-100 scale, 0 not anxious at all, 100 Extremely anxious)
2. **COVID-19 related trauma was examined using Revised Child Impact Events Scale (Revised Child Impact Events Scale - CRIES-8).** It has 4 items measuring Intrusion and 4 items measuring Avoidance. Here I give data for total CRIES-8 score where a higher score = greater trauma. Scores of 17+ are a good predictor of PTSD in children (DSM diagnosis). https://www.corc.uk.net/media/1267/cries_introduction.pdf

FINDINGS

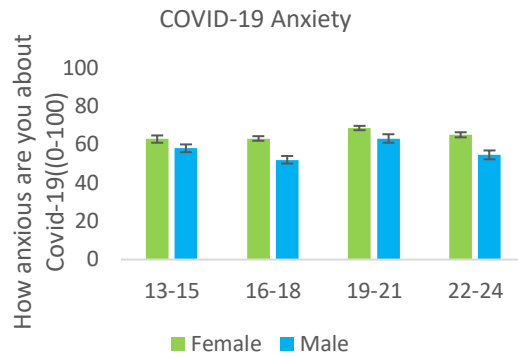
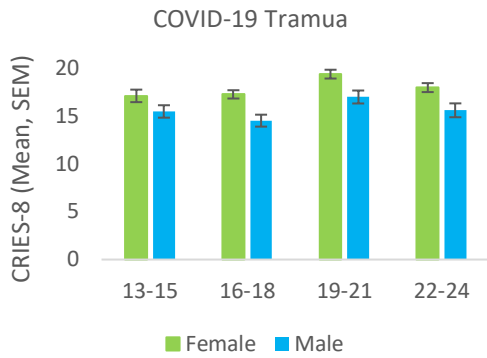
- In males and females, the younger you are the higher your levels of anxiety (as measured by HADS).
- In females, but not males in increasing age was associated with an increase in levels of depression, COVID-19 related anxiety and COVID-related trauma
- In both males and females increasing age was associated with lower wellbeing scores (as measured by the Short Warwick and Edinburgh Scale), and an increase in somatic symptoms (measured by the SSS-8)
- In addition, males and females of all ages reported studying/working at home to be equally challenging
- Across sample we have large % of individuals that score 17+ on the CRIES8 scale, indicating clinical levels of trauma

Table1: Association of age with mental health split by gender (Spearman’s Rho)

AGE x	HADS ANXIETY	HADS Depression	COVID-19 Anxiety	COVID-19 Trauma (CRIES8)	Well Being (SWEMWBS)	Somatic Symptoms (SSS-8)
Female	-.210**	-.058*	.073**	.091**	-.083**	.236**
Male	-.261**	-.021	.056	.047	-.152**	.349**



Figures : Questionnaire scores all scaled 0-1, to allow for easier comparison.



COVID-19 trauma 2-way ANOVA (Age group, Gender) Main effect of group ($F(3, 7)=7.8$, $P < 0.001$), such that greater trauma observed in 19-21 year olds, also significant main effect of gender ($F(1, 7) = 28.8$, $p < 0.001$), such that higher trauma scores found in females. No significant interaction ($F(3, 7) = 0.3$, $p = 0.816$).

COVID-19 Anxiety 2-way ANOVA (Age group, Gender) Main effect of group ($F(3, 7)=8.1$, $P < 0.001$), such that greater trauma observed in 19-21 year olds, also significant main effect of gender ($F(1, 7) = 42.02$, $p < 0.001$), such that higher anxiety scores were found in females. No significant interaction ($F(3, 7) = 1.84$, $p = 0.14$).

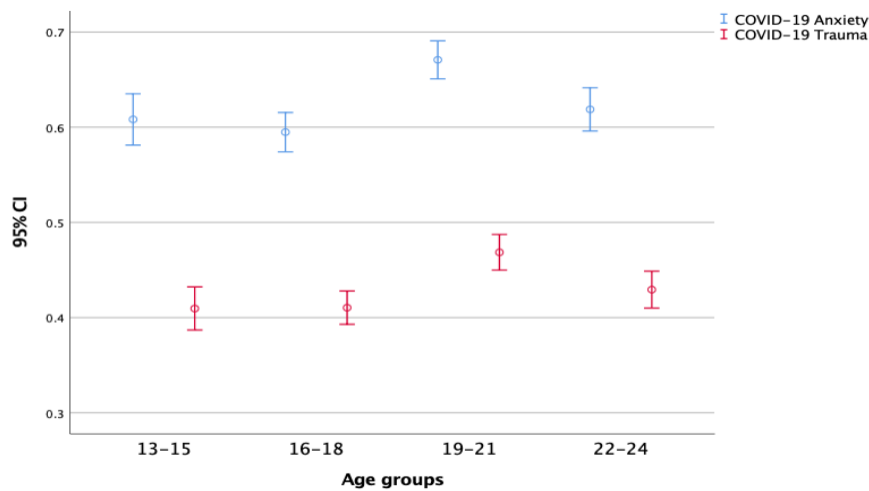


Figure on right – COVID-Anxiety and Trauma - data not split by gender (scaled 0-1)

METHOD

The Somatic Symptom Scale - 8 (SSS-8) is a brief self-report questionnaire (8 items) used to assess somatic symptom burden. It measures the perceived burden of common somatic symptoms. These symptoms were originally chosen to reflect common symptoms in primary care but they are relevant for a large number of diseases and mental disorders. The SSS-8 is a brief version of the popular Patient Health Questionnaire - 15 (PHQ-15). Respondents rate how much they were bothered by common somatic symptoms within the last seven days on a five-point Likert scale. Ratings are summed up to make a simple sum score (which can vary between 0 and 32 points). Internal consistency is demonstrated by Cronbach's $\alpha = 0.81$. The instrument is straightforward to complete, has an easy scoring algorithm (addition of the responses), and has two simple interpretation methods (i.e. severity categories and gender and age-specific percentiles). Gierk, B; Kohlmann, S; Kroenke, K; Spangenberg, L; Zenger, M; Brähler, E; Löwe, B (2014). "The Somatic Symptom Scale-8 (SSS-8): A Brief Measure of Somatic Symptom Burden". JAMA Internal Medicine. 174 (3): 399–407.

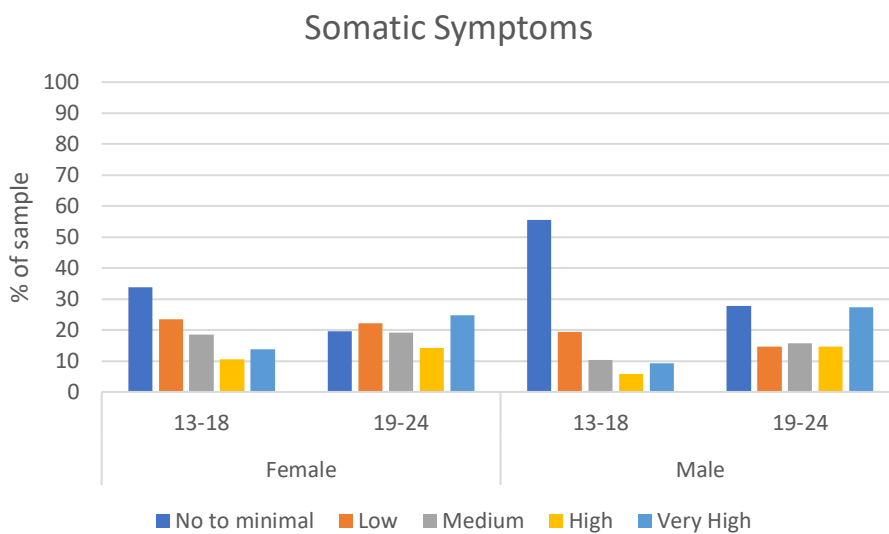
Scores on SSS-8 can be categorized into the following severity categories

Score	Severity
0-3	No to minimal
4-7	Low
8-11	Medium
12-15	High
16-32	Very high

To examine in our sample the proportion of individuals that were in one of the five severity categories, we split sample into 2 age groups (13-18 and 19-24).

FINDINGS

- Significant proportion of young people are suffering with very high levels of somatic symptoms
- Levels of somatic symptoms significantly increase with age.
- In the 13-18 age group, about 10% of males had very high levels of somatic symptoms, this went up to almost 30% in the 19-24 age group.
- In females in the 13-18 age group from levels just over 10% (very high levels of), this went up to about 25% in the 19-24 age group.



SSS-8 Severity Categories

			Frequency	Percent	Valid Percent	Cumulative Percent	
Female = 0, Male = 1,	Female	13-18	No to minimal	206	33.7	33.7	33.7
			Low	144	23.5	23.5	57.2
			Medium	114	18.6	18.6	75.8
			High	64	10.5	10.5	86.3
			Very High	84	13.7	13.7	100.0
			Total	612	100.0	100.0	
		19-24	No to minimal	135	19.6	19.6	19.6
	Low		153	22.2	22.2	41.8	
	Medium		132	19.2	19.2	61.0	
	High		98	14.2	14.2	75.2	

		Very High	171	24.8	24.8	100.0
		Total	689	100.0	100.0	
Male	13-18	No to minimal	216	55.5	55.5	55.5
		Low	75	19.3	19.3	74.8
		Medium	40	10.3	10.3	85.1
		High	22	5.7	5.7	90.7
		Very High	36	9.3	9.3	100.0
		Total	389	100.0	100.0	
		19-24	No to minimal	78	27.8	27.8
		Low	41	14.6	14.6	42.3
		Medium	44	15.7	15.7	58.0
		High	41	14.6	14.6	72.6
		Very High	77	27.4	27.4	100.0
		Total	281	100.0	100.0	

METHOD

We examined trauma (PTSD) as a result of Covid-19 by using the Revised Child Impact Events Scale (a measure of trauma-focused on COVID 19): The Children’s Revised Impact of Event Scale (CRIES) is a brief child-friendly measure designed to screen children at risk for Post-Traumatic Stress Disorder (PTSD), developed by the Children and War Foundation. It has a good face and construct validity, a stable factor structure, and correlates well with other indices of distress, and has been used to screen very large samples of at-risk-children following a wide range of traumatic events. It has been applied in a variety of cultures as post-traumatic stress symptoms in children are more similar than they are different from one culture to the other. Here we are using CRIES-8 (8 items) version. It is designed for use with children aged 8 years and above who are able to read independently. It consists of 4 items measuring Intrusion and 4 items measuring Avoidance.

Reference: *Perrin, S., Meiser-Stedman, R. & Smith, P. (2005) The Children’s Revised Impact of Event Scale (CRIES): Validity as a screening instrument for PTSD. Behavioural and Cognitive Psychotherapy, 33 (4), 487-498.*

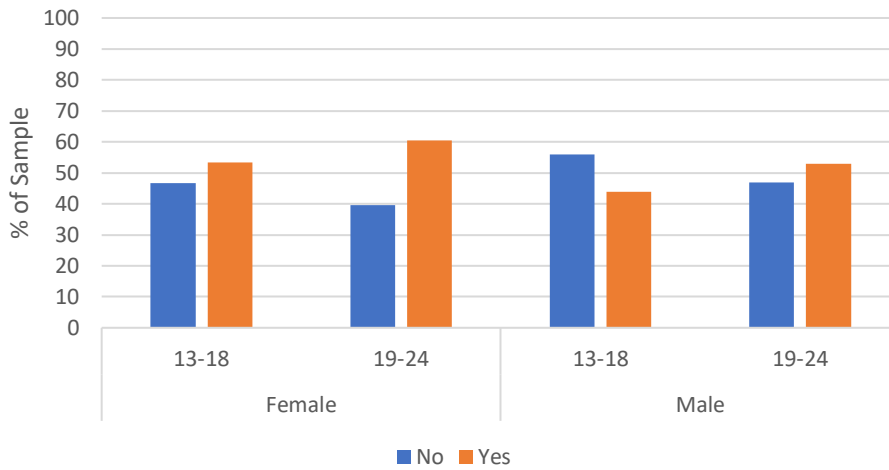
We used the scale to focus on trauma that related to Covid-19. For example items were worded in the following way - “Do you think about coronavirus even you when you don’t mean to?” which they had to rate as either Not at all, Rarely, sometimes or often

Further, Perrin, Meiser-Stedman and Smith (2005) reviewed the use of CRIES-8 and provide validity data from two samples of children (52 attending a PTSD clinic, and 63 attending an Accident and Emergency Clinic). In both samples a cut-off score of 17 maximised sensitivity and minimised the rate of false negatives, 75-83% of children were correctly classified as having PTSD (as separately judged from the Anxiety Disorder Interview Schedule) or not on the basis of their CRIES-8 score.

RESULTS

- Using a cut off of 17, with those scoring above 17 highly likely to have COVID-19 PTSD, we found that alarming levels of young people (50-60%) both male and female experiencing COVID-19 trauma/PTSD-like symptoms

Presence of Covid-19 trauma/PTSD



Covid-19 related Trauma/PTSD Data Table

			Frequency	Percent	Valid Percent	Cumulative Percent
Female	13-18	No Trauma	286	46.7	46.7	46.7
		Trauma	326	53.3	53.3	100.0
		Total	612	100.0	100.0	
	19-24	No Trauma	273	39.6	39.6	39.6
		Trauma	416	60.4	60.4	100.0
		Total	689	100.0	100.0	
Male	13-18	No Trauma	218	56.0	56.0	56.0
		Trauma	171	44.0	44.0	100.0
		Total	389	100.0	100.0	
	19-24	No Trauma	132	47.0	47.0	47.0
		Trauma	149	53.0	53.0	100.0
		Total	281	100.0	100.0	

METHOD

To examine anxiety and depression in our cohort we used the Hospital Anxiety and Depression Scale (HADS). The Hospital Anxiety and Depression Scale (HADS) was originally developed by Zigmond and Snaith (1983) and is commonly used clinically to determine the levels of anxiety and depression that a person is experiencing. The HADS is a fourteen-item scale that generates: Seven of the items relate to anxiety and seven relate to depression. Zigmond and Snaith created this outcome measure specifically to avoid reliance on aspects of these conditions that are also common somatic symptoms of illness, for example, fatigue and insomnia or hypersomnia. HADS has good reliability and discriminant validity (Bjelland et al, 2002. J Psychosom Res. 2002 Feb;52(2):69-77.)

Scores on HADS can be categorized into the following severity categories

Score	Severity
0-7	Normal
8-10	Borderline abnormal
8-11	Abnormal

To examine in our sample the proportion of individuals that were in one of the three severity categories, we split sample into 2 age groups (13-18 and 19-24).

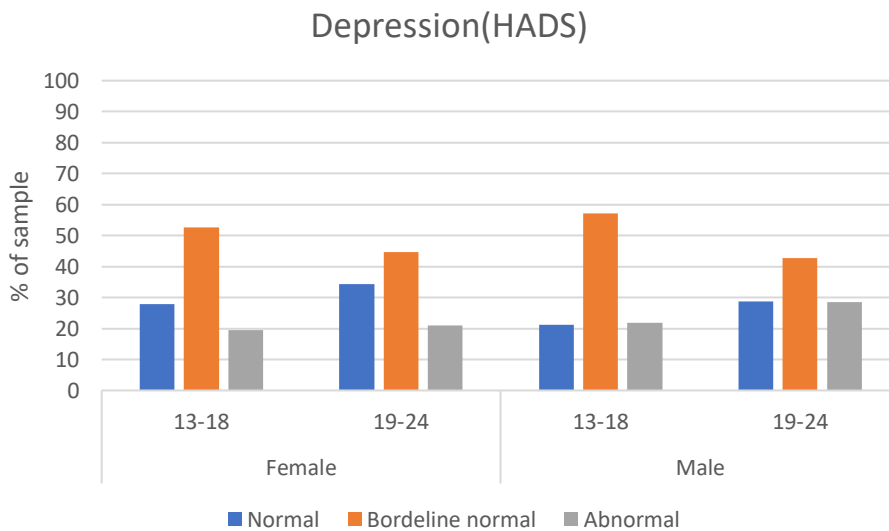
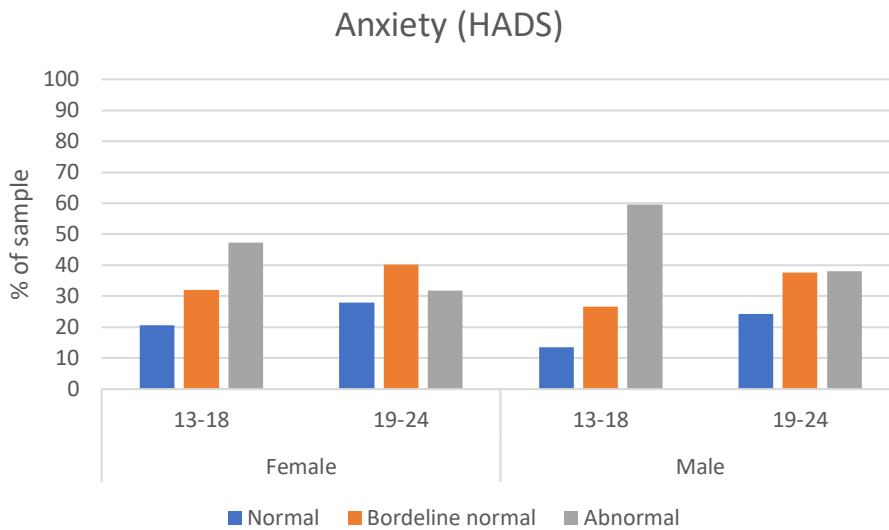
FINDINGS

Significant proportion of young people with abnormal levels of anxiety and depression

- About 60% of male aged 13-18 anxiety scores were in the abnormal range, this went down in 19-24 year olds to about 40% (still a significant proportion)
- About 50% of females aged 13-18 anxiety scores were in the abnormal range, this went down in 19-24 year olds to about 30% (still a significant proportion). Interesting that this shows a gender difference, where overall there are less females in the abnormal range of anxiety.
- It is also worth to note the large proportion of individuals aged 13-18 and 19-24 that have borderline abnormal levels of anxiety (30-40%)

- We found a different pattern for depression where in both age groups and in both genders proportion of individuals scoring as having abnormal levels of depression was much lower than that of anxiety, but it was still significant (about 20%), with a significant proportion scoring in the borderline abnormal range (about 50%).

Figures to illustrate above below, as well as Tables with data



DATA

HADS Anxiety

Female = 0, Male = 1,	13-18 year olds and 19- 24 year olds			Frequency	Percent	Valid Percent	Cumulative Percent
Female	13-18	Valid	Normal	126	20.6	20.6	20.6
			Bordeline	196	32.0	32.0	52.6
			Abnormal	290	47.4	47.4	100.0
			Total	612	100.0	100.0	
	19-24	Valid	Normal	193	28.0	28.0	28.0
			Bordeline	277	40.2	40.2	68.2
			Abnormal	219	31.8	31.8	100.0
			Total	689	100.0	100.0	
Male	13-18	Valid	Normal	53	13.6	13.6	13.6
			Bordeline	104	26.7	26.7	40.4
			Abnormal	232	59.6	59.6	100.0
			Total	389	100.0	100.0	
	19-24	Valid	Normal	68	24.2	24.2	24.2
			Bordeline	106	37.7	37.7	61.9
			Abnormal	107	38.1	38.1	100.0
			Total	281	100.0	100.0	

HADS Depression

Female = 0, Male = 1,		13-18 year olds and 19- 24 year olds		Frequency	Percent	Valid Percent	Cumulative Percent
Female	13-18	Valid	Normal	171	27.9	27.9	27.9
			Borderline	322	52.6	52.6	80.6
			Abnormal	119	19.4	19.4	100.0
			Total	612	100.0	100.0	
	19-24	Valid	Normal	237	34.4	34.4	34.4
			Borderline	308	44.7	44.7	79.1
			Abnormal	144	20.9	20.9	100.0
			Total	689	100.0	100.0	
Male	13-18	Valid	Normal	82	21.1	21.1	21.1
			Borderline	222	57.1	57.1	78.1
			Abnormal	85	21.9	21.9	100.0
			Total	389	100.0	100.0	
	19-24	Valid	Normal	81	28.8	28.8	28.8
			Borderline	120	42.7	42.7	71.5
			Abnormal	80	28.5	28.5	100.0
			Total	281	100.0	100.0	

COVID-19 HEALTH BEHAVIOUR: RISK ASSESSMENT

We wanted to investigate what young people thought about the risk they posed to others and what risk they themselves face with regards to COVID-19 infection and transmission.

To that end, they reported their response to the following items on a slider scale 0-100 (with 0 being strongly disagree and 100 strongly agree):

1. I am personally less at risk of catching coronavirus than older people
2. I have not had the symptoms so I'm not infectious and therefore a risk to others
3. There is no risk for me to catch this virus as young people are immune
4. There is no risk that I can easily spread the virus to others even if I have no or very mild symptom
5. I have a health condition that puts me more at risk of having more serious symptoms

Higher scores on these items indicated that respondents thought they were not a risk to others.

FINDINGS

- Scores on these items were high for all age groups, which indicates that young people do not perceive themselves as being at risk of catching the virus, or are a risk to others. This is even more marked in adolescent males; whose scores were very high (See Figure below).
- Compared to females of their age, males thought that they were not at risk, or that they were a risk to others (of COVID-19) to a larger degree than females.
- In males, age was positively associated with their responses on three of these questions, where older males more strongly agreed with these statements.

Correlation analysis: Age X	I am personally less at risk of catching coronavirus than older people	I have not had the symptoms so I'm not infectious and therefore a risk to others	There is no risk for me to catch this virus as young people are immune	There is no risk that I can easily spread the virus to others even if I have no or very mild symptoms	I have a health condition that puts me more at risk of having more serious symptoms
Female	-.033	.000	.003	.053	.152**
Male	.021	.005	.160**	.136**	.212**
** p < 0.001, * P < 0.05					

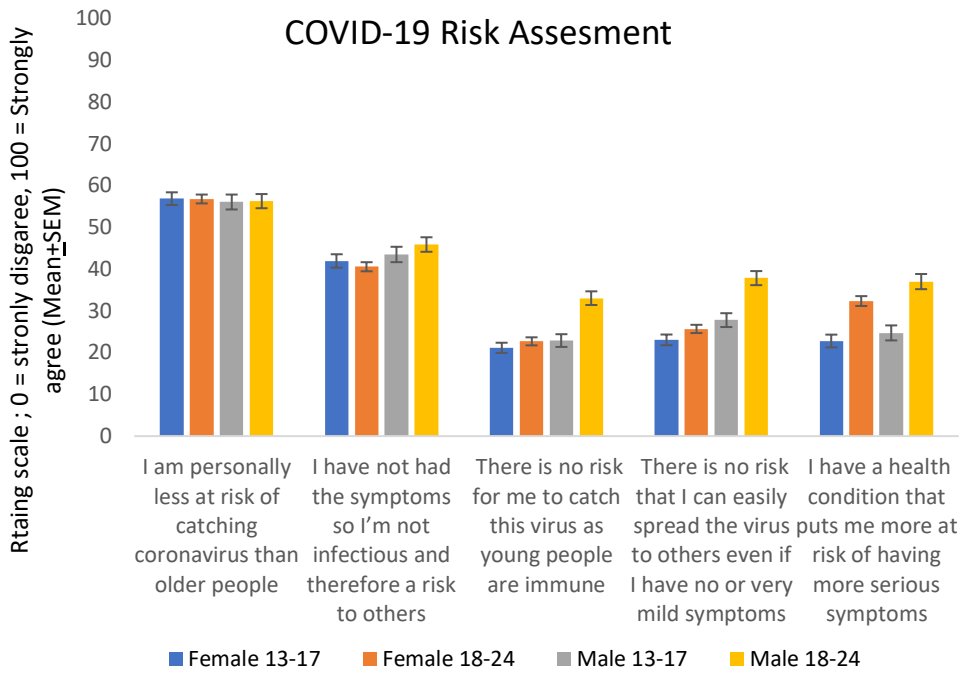


Figure: For a simplified illustration of our data was split into two age groups, 13-17 and 18-24 age and also split by gender. Note the higher the scores the more they think that they are not at risk personally or to others of Covid-19.

METHOD

In this survey, we also examined young people's compliance with social distancing policy. Participants were told that we were interested in their daily life during the lockdown

They were asked if they did the following things in the last week...

1. Left the house for food, health reasons, or for work?
1. When you have left home, stayed at least 2 meters (6ft) away from other people?
2. Exercised alone once a day?
3. Exercised more than once a day?
4. Met up with friends or extended family that you do not live with?
5. Gathered in a group of more than two people in a park or other public space?
6. Driven to a national park or other green space to exercise?
7. Left the house to care for a vulnerable or elderly person?
8. Washed your hands more often than usual?
9. Washed your hands as soon as you got home if you went out?
10. When you have left home, stayed at least 2 meters (6ft) away from other people?

They had to answer if they did this on the following scale: Not at all; 1-2 days a week; 3-4 days a week; Most days; Every day

FINDINGS

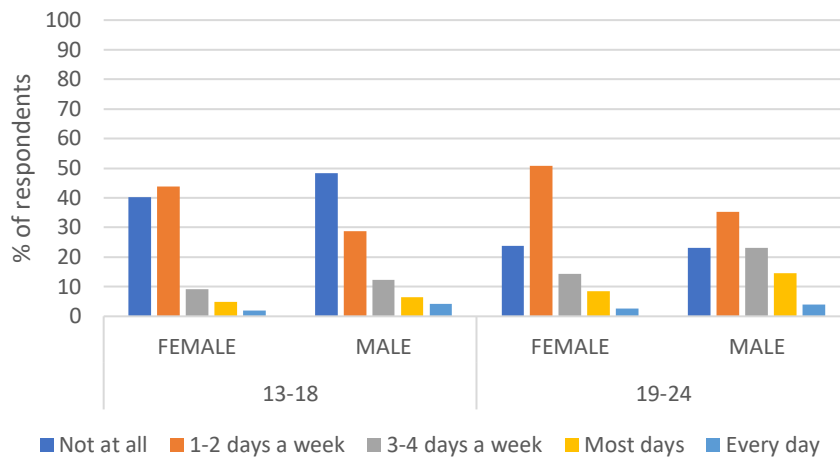
Initial analysis – Our initial analysis examined male and female respondents in 13-18 and 19-24 age groups

Key findings:

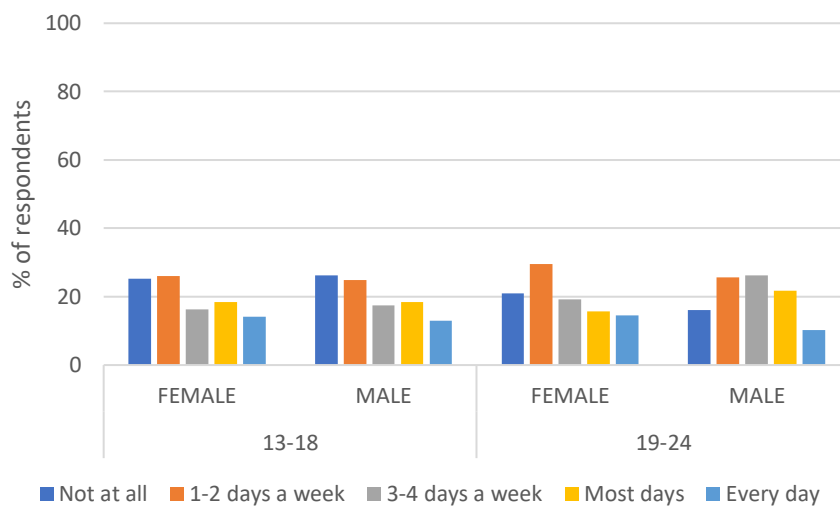
- Across all health behaviours, older adolescent males (19-24) were the least compliant with current guidelines. This is consistent with the results presented above – i.e., that this group considered themselves at less personal risk of catching or transmitting COVID-19
- For example, a greater proportion of male older adolescents reported exercising more than once a day, or not staying at least 2 meters away from other people when they leave home. 50% reported that they had gathered in a group of more than two people in a park or a public space.
- For all ages and genders, basic hygienic practices are not something that the respondents were doing all the time.
- The young people who adhere most closely to the guidelines are 13-15 year olds. However, even within this age group, only 60% of females and 50% of males

reported that they washed their hands as soon as they got home every day. This drops to 40% for 19-24-year-old males.

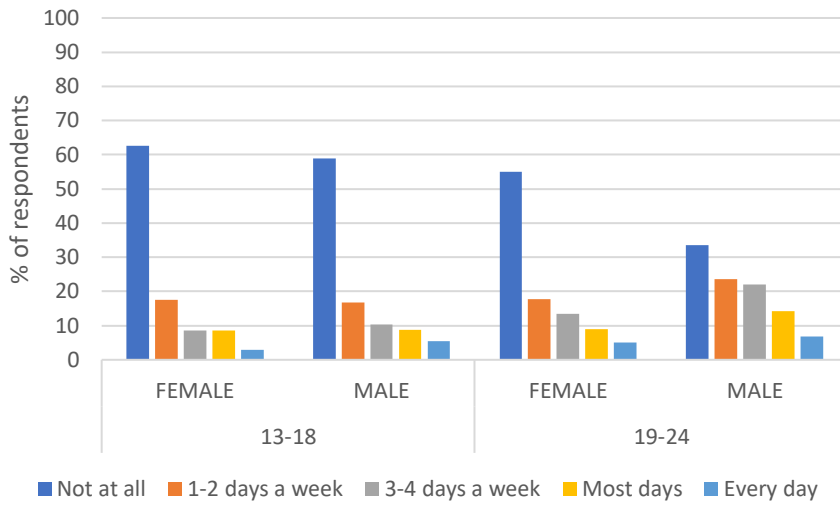
Left the house for food, health reasons, or for work?



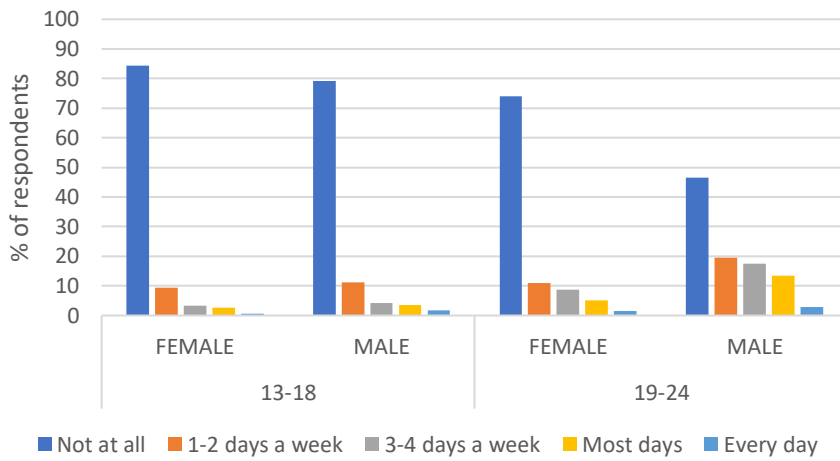
Exercised alone once a day



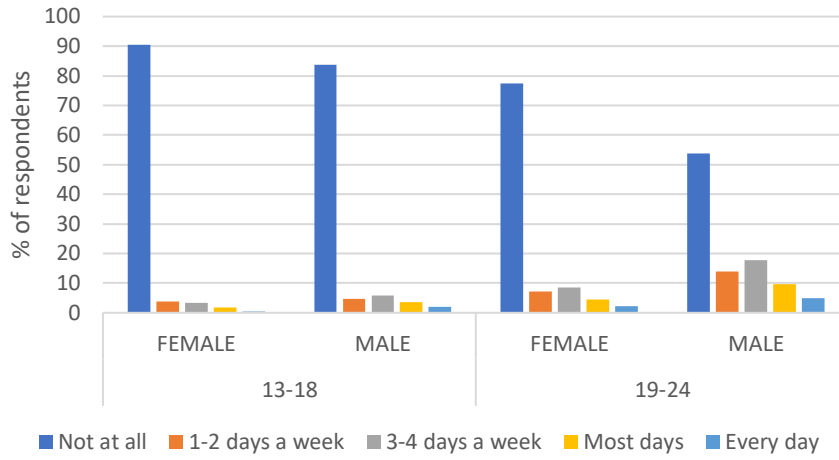
Exercised more than once a day



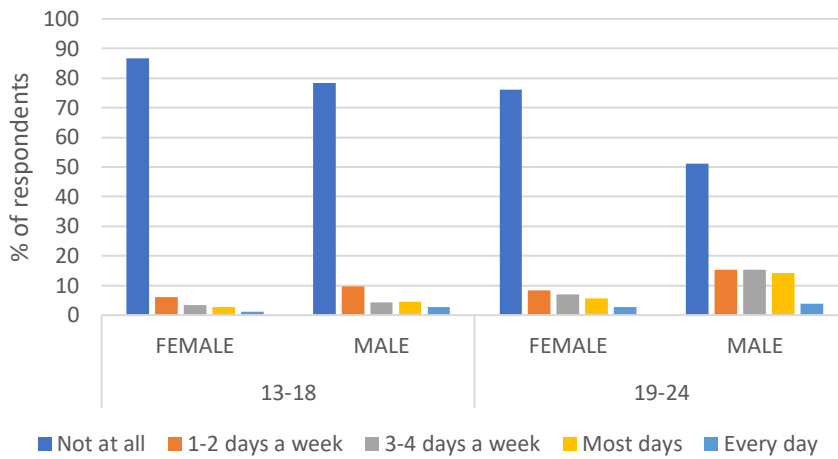
Met up with friends or extended family that you do not live with?



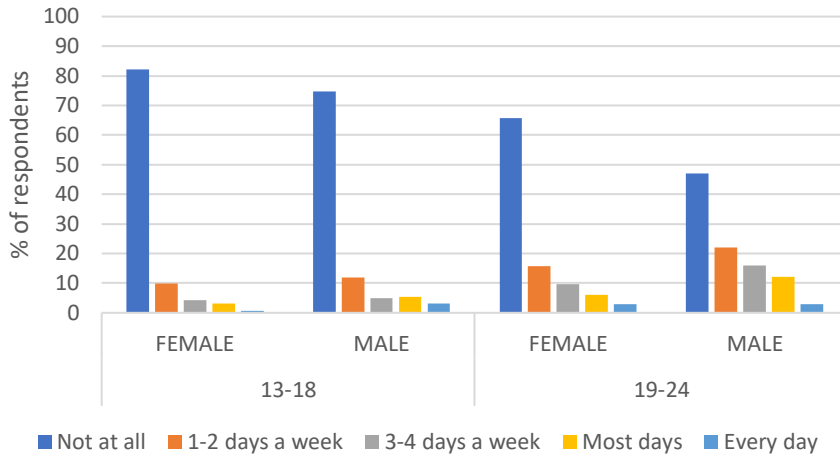
Gathered in a group of more than two people in a park or other public space?



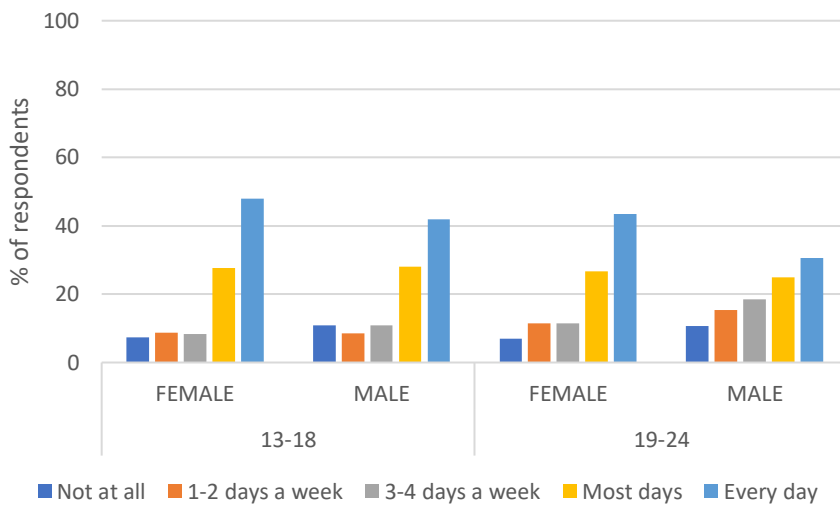
Driven to a national park or other green space to exercise?



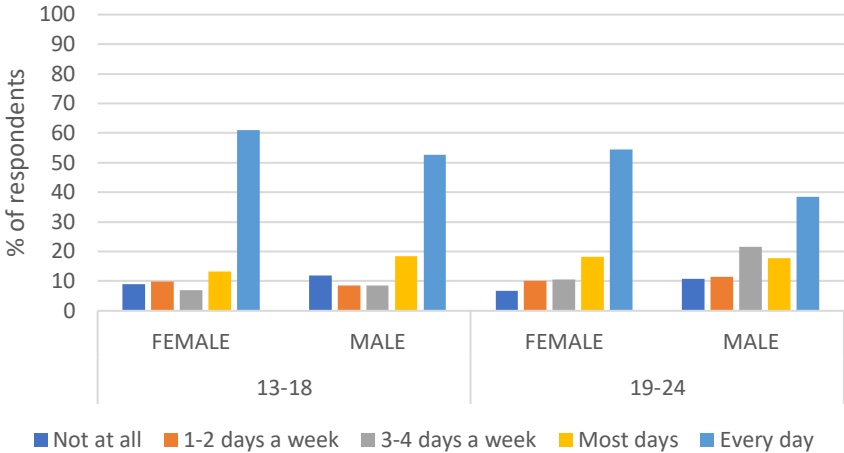
Left the house to care for a vulnerable or elderly person?



Washed your hands more often than usual?



Washed your hands as soon as you got home if you went out?



METHOD

We examined our respondents' intention and confidence in being able to follow social distancing guidelines over the next 2 weeks, as well as whether they thought it was worthwhile thing to do, and how hard they think that will be. They were also asked whether people they know best of their age will follow the guidelines.

To that end, they were asked to rate on a scale of 1-7 the following statements

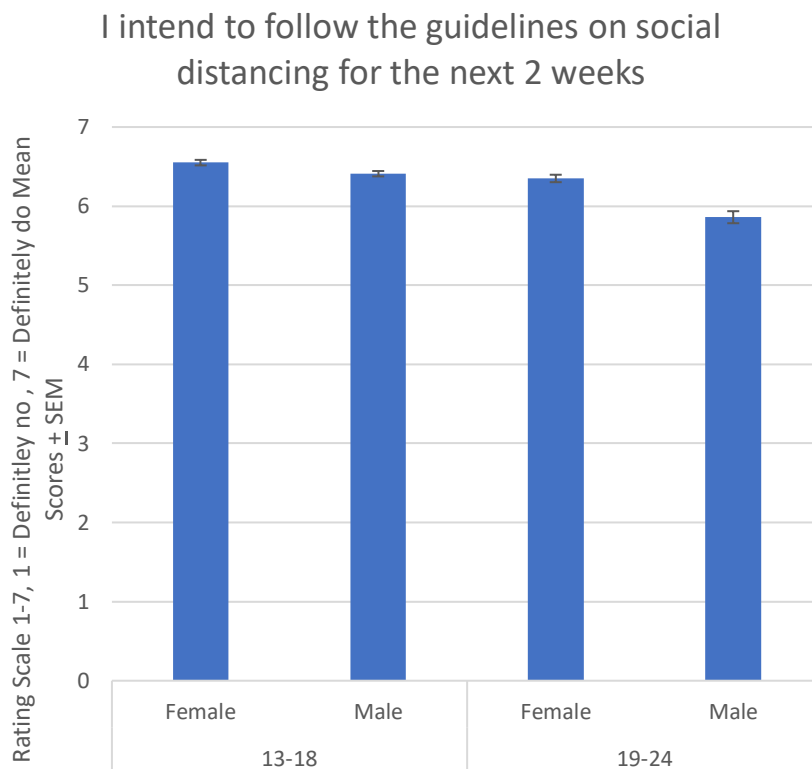
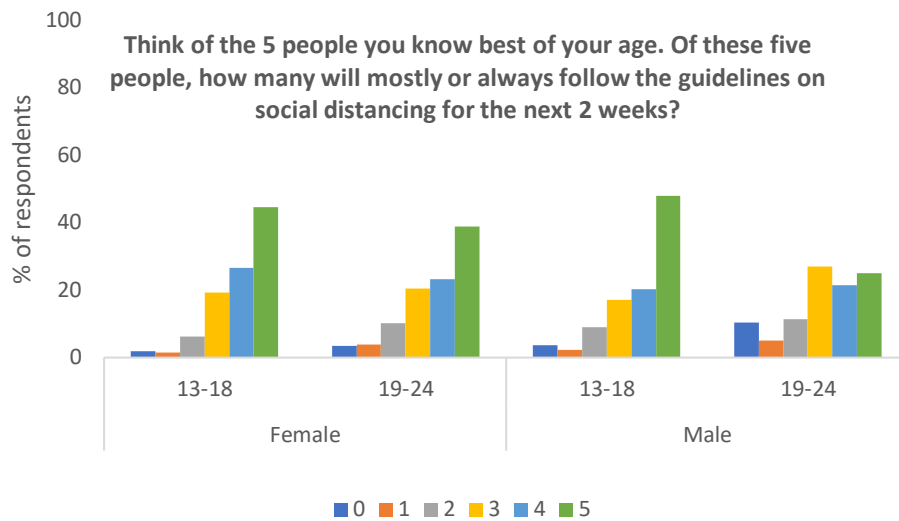
1. I intend to follow the guidelines on social distancing for the next 2 weeks
2. I will try to follow the guidelines on social distancing for the next 2 weeks
3. I think that following the guidelines on social distancing for the next 2 weeks will be pointless-worthwhile (1-7)
4. I think that following the guidelines on social distancing for the next 2 weeks will be not enjoyable-Enjoyable
5. I think that following the guidelines on social distancing for the next 2 weeks will be Very Difficult- Very Easy
6. I am confident I will be able to follow the guidelines on social distancing for the next 2 weeks -Definitely No-Definitely yes
7. Most people who are important to me think I should follow the guidelines on social distancing for the next 2 weeks Definitely No-Definitely yes

Sample was split into two age groups 13-18, and 19-24

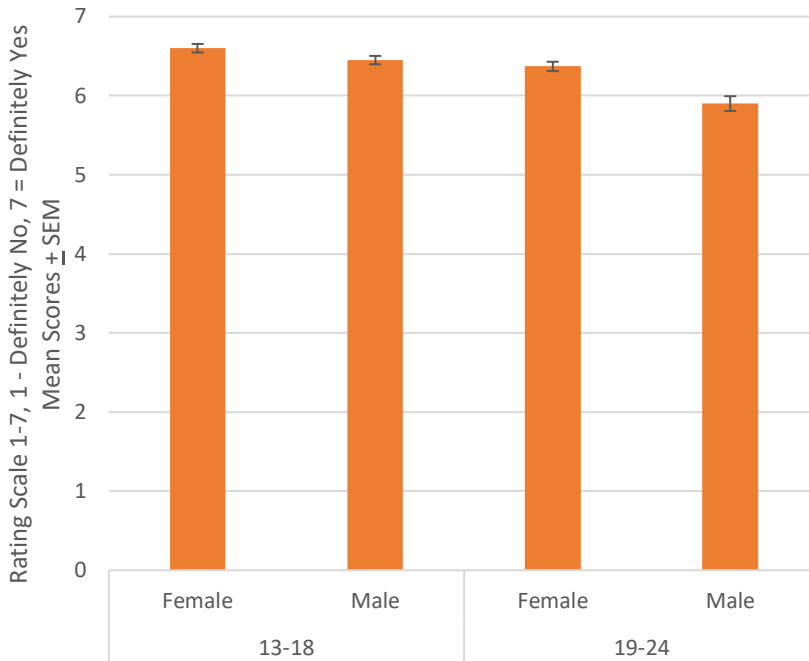
FINDINGS

- Overall all respondents scores were high, meaning that they had good intentions of following the guidelines, strongly agreed that they will try to follow them, and were very confident that they would be able follow them for the next two weeks. They also reported that they thought following the guidelines was a worthwhile thing to do.
- Notably, however, there were age and gender differences: Older male adolescents (19-24) had good intentions, though the scores were lower than females of their own age and 13-18 year olds. The same was observed in their thoughts about whether they were going to follow the guidelines, and whether it is worthwhile to follow them.
- In addition, older adolescent males also reported a lower number of people their own age that they thought would mostly or always follow the guidelines.

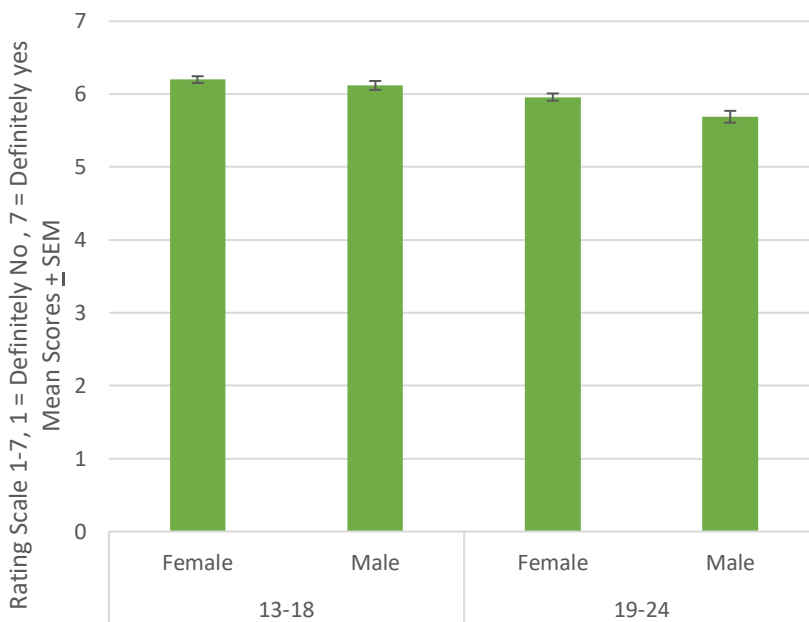
- These results are consistent with what we found in this study of the actual behaviour reported by our respondents, where male late adolescents are much more likely to break social distancing rules



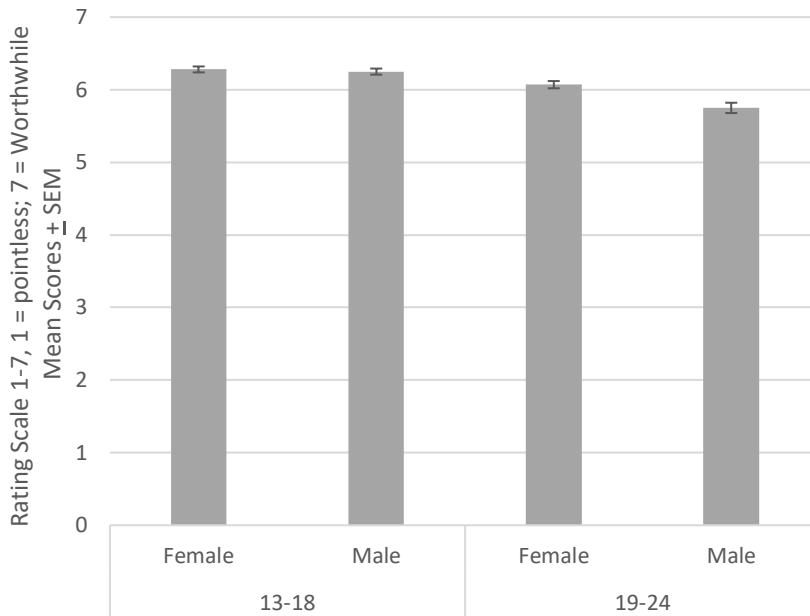
I will try to follow the guidelines on social distancing for the next 2 weeks - Rate



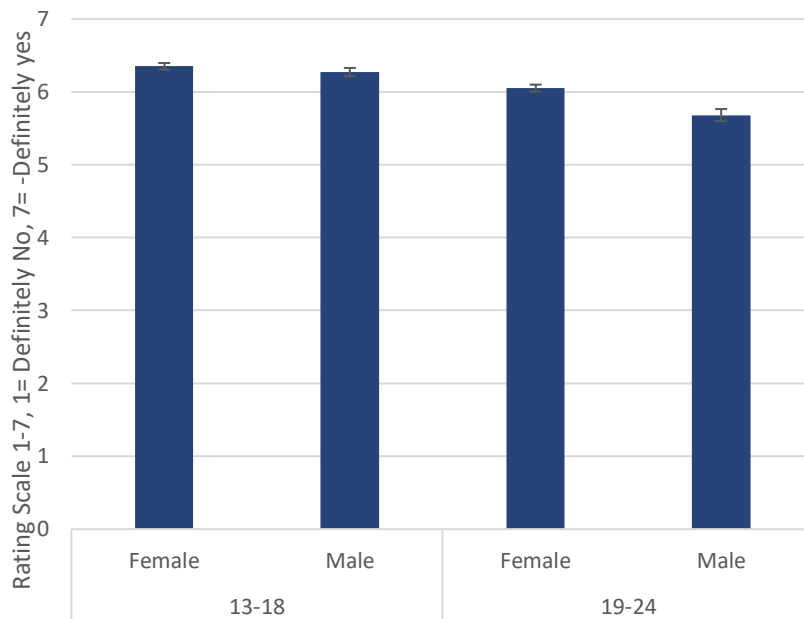
I am confident I will be able to follow the guidelines on social distancing for the next 2 weeks



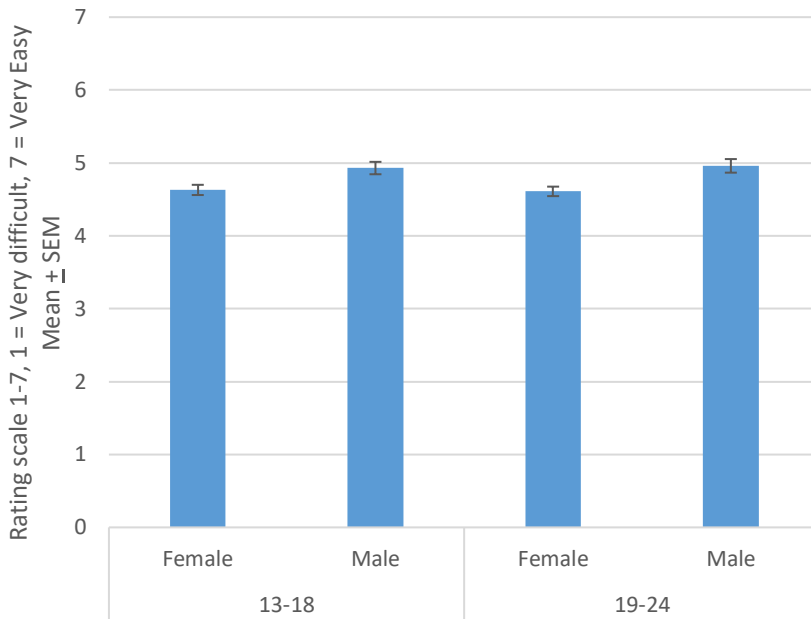
I think that following the guidelines on social distancing for the next 2 weeks will be pointless-worthwhile



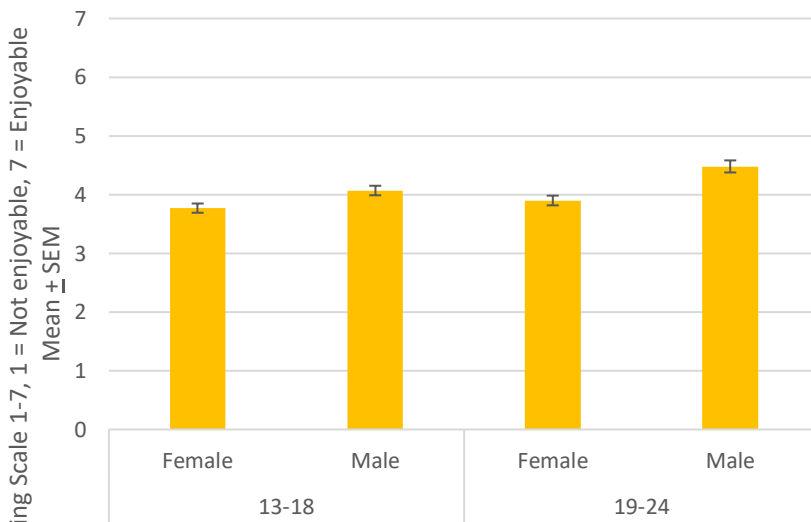
Most people who are important to me think I should follow the guidelines on social distancing for the next 2 weeks



I think that following the guidelines on social distancing for the next 2 weeks will be Very Difficult- Very Easy



I think that following the guidelines on social distancing for the next 2 weeks will be not enjoyable-Enjoyable



I think that following the guidelines on social distancing for the next 2 weeks will be not enjoyable-Enjoyable (1-7)

HEALTH BEHAVIOUR REACTION QUESTIONS – YOUNG PEOPLES THOUGHTS ABOUT PEERS WHO DO NOT FOLLOW THE GUIDELINES

We wanted to examine what young people thought about peers their age that did not follow the social distancing guidelines. In addition, we also examined their propensity to take risks with the social distancing rules in hypothetical social scenarios.

METHOD

PART 1: Judgments of a peer not following the rules:

Respondents were told that the following questions were about their ideas about a typical person of your age who does NOT follow the social distancing guidelines. It does not have to be anyone in particular – just the typical person of your age who does not follow these guidelines. They had to rate characteristics on whether they matched their image of that person (e.g., whether they were cool or careless etc). They were then asked to rate on a scale of 1-7 ...

- How likeable or dislikeable do you think this type of person is?
- In general, how similar are you to this type of person?
- Do the characteristics of this type of person describe you?

Part 2: Personal decision making – What risks are young people willing to take when faced with peer pressure to potentially break the rules?

Respondents were asked to imagine themselves in a particular situation, which presented them with options for breaking or keeping within the rules. They rated the extent to which they would be willing to do each thing if this happened to them today or this week.

FINDINGS

PART1: Judgments of a peer not following the rules:

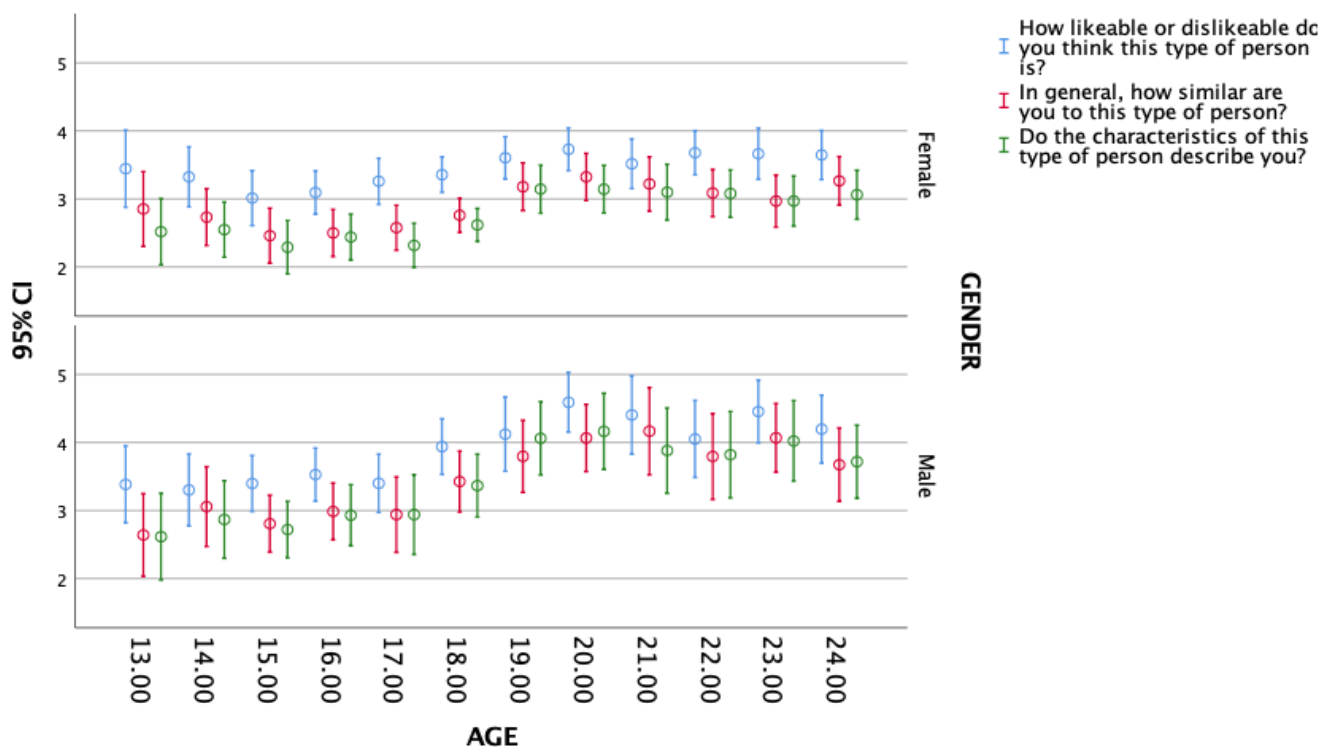
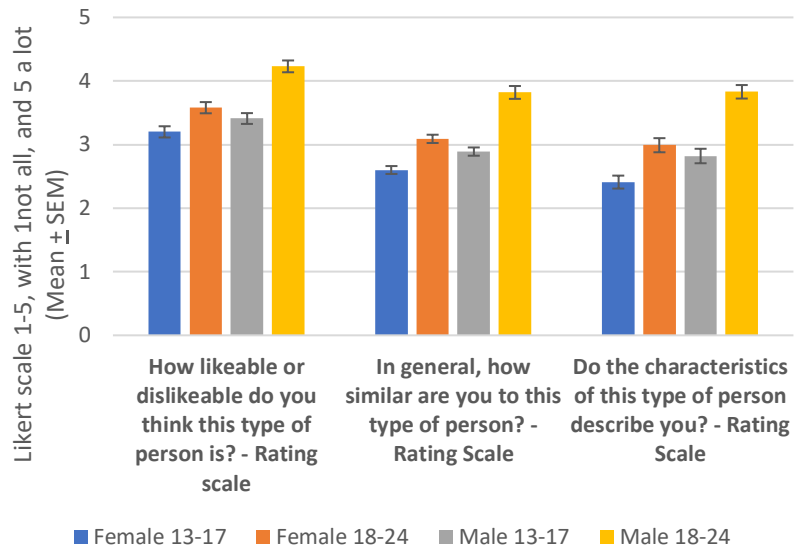
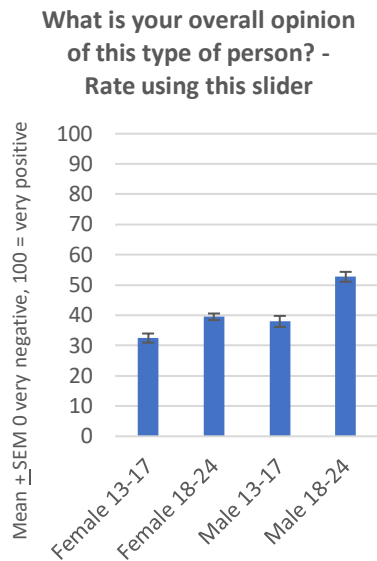
Key finding: Again, males aged 19-24 show a different pattern in terms of how much they relate this kind of person and how dislikeable they are (See Figures below)

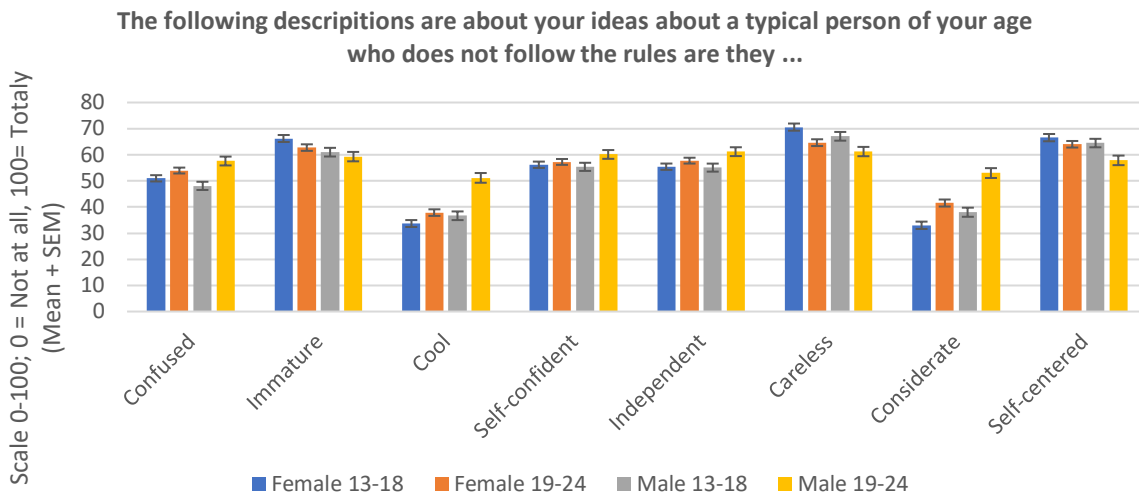
- Overall, respondents do not have very positive view of a person their age that does not follow the guidelines, but this changes with age where older individuals see this type of person less negatively. This is particularly marked in males ages 19-24.
- Respondents aged 19-24 were likely to have a more positive perception of people their age who break the rules, regarding this person as 'cool' and 'independent' while other groups saw these people more negatively 'e.g., 'self-centred' and 'immature'.
- In terms of them thinking about whether this person is likable or dislikeable and how similar they are to this individual, males aged 19-24 rate this kind of individual as

more likable, and also report that they are more like this individual, compared to the other respondents. When people have positive perceptions of someone who takes risks, theory tells us that they are more likely to take those risks themselves.

- It is interesting to note, however, that all respondents perceived some similarities between themselves and this type of individual.

Data categorized into two age groups- 13-17 and 19-24 and split by gender:





Part 2: Personal decision making – What will you do when faced with peer pressure to potentially break the rules

Scenario 1: Imagine you're at home and you get a text message from a friend and they ask you to meet up to hang out in the park. You are really bored, there's nothing on TV and you could do with some fresh air, you've been stuck in the house for 2 weeks. You haven't had any symptoms of coronavirus and your other friends are well.

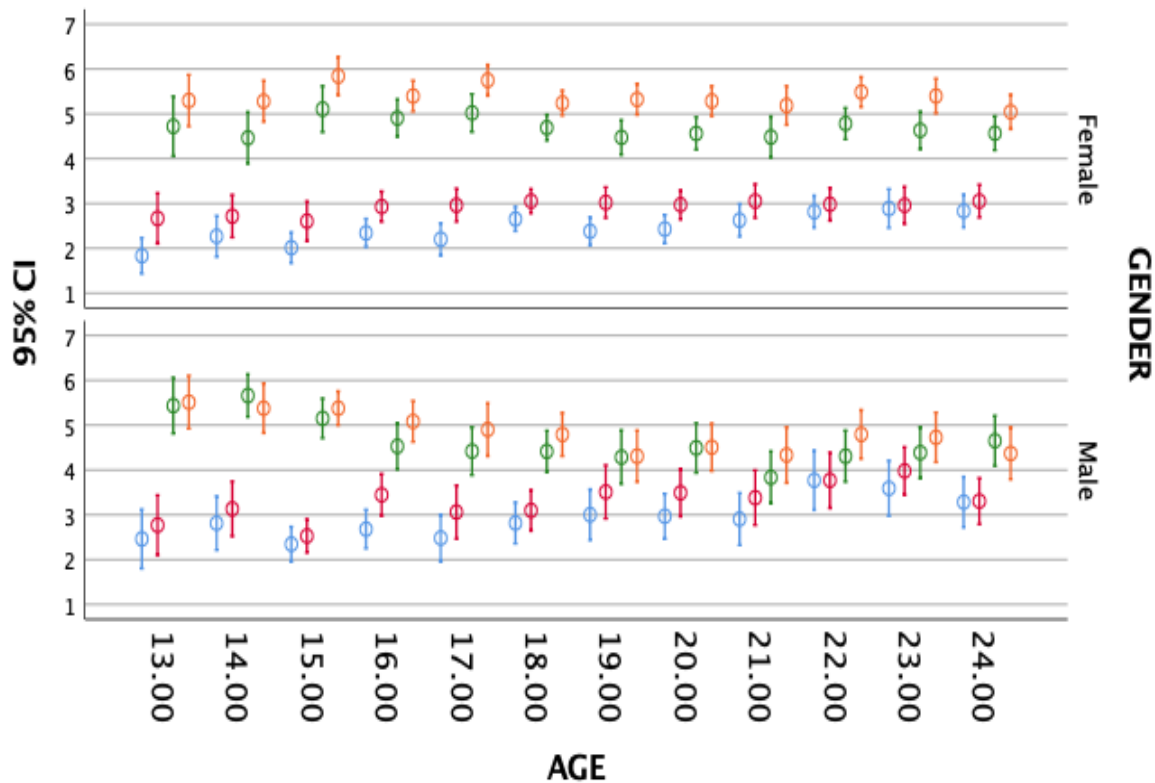
Rating on a scale of 1-7: 1 = Not at all willing, 7 = very willing

- **Green**= Stay at home and call your friends instead while they meet
- **Orange**= Explain that you are following government guidelines about social distancing and say no
- **Blue** = Go to the park
- **Red**= Go to the park and sit 2 meters away from your friends

FINDINGS

- In females, across age groups, respondents reported that they will only partially be willing to not go out with their friends, or tell them that they are following social distancing rules at stay at home. Our data shows that their actual behaviour contrasts with what they will tell their friends as their scores on our other items suggest that they are following social distancing rules and not meeting up with their friends.
- In males, we see some age effects - with increasing age, males are more strongly unwilling to stay at home and call them instead, or explain that they are following government guidelines about social distancing and say no to meeting up. This is

consistent with changes of their actual behaviour with age, where with an increase in age there is also a small increase in their willingness to go to the park and meet up with their friends.



Scenario 2:

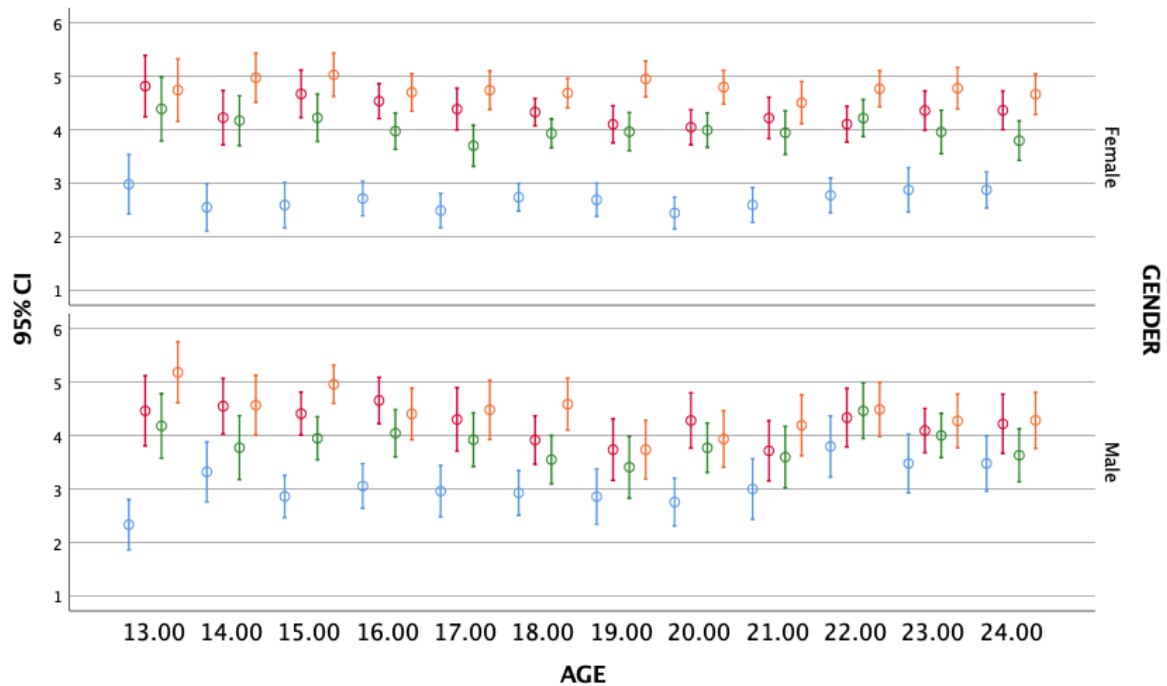
It's quite busy in the street and you haven't been able to keep a 2-meter distance from everyone you have walked by. Across the street, you see 2 friends who call out to you and cross the road to join you. The path is narrow on your side and your friends stand close to you and begin to chat. You're desperate to stop and talk, it's been 2 weeks since you've seen your friends and there's lots to catch up on. They seem to be ok with meeting up.

How willing would you be to do each of the following things? **Rating on a scale of 1-7: 1 = Not at all willing, 7 = very willing**

- **Green** = Make an excuse that you are busy or in a rush and leave them as soon as you can?
- **Orange** = Explain that you are following the government guidelines on social distancing and walk away?
- **Blue** = Stay close to your friends and chat?
- **Red** = Move 2 meters away from your friends but carry on chatting?

FINDINGS

- Age and gender effects found. See Figure below
- 13-year-old males say that they will very unwilling to stay close to their friends and chat, but this changes with age with older males scoring slightly higher, so while they still indicate that to a large extent they will be unwilling to stay close to their friends, it is to a lesser degree compared to 13 year old boys. No such age differences in females.
- In terms of the other behaviours there is more of a similar pattern between the genders both males and females, both report that so a limited extent they are willing to move a way 2 meters from their friends and carry on chatting, walk away and even make an excuse and leave them as soon as they can. However, note their scores are still not that high, suggesting that actually they will not be very willing to do this.



ASSOCIATION BETWEEN COMPLIANCE WITH SOCIAL DISTANCING AND MENTAL HEALTH

One of the key aspects of this study is that it allows us to examine the relationship between how young people's mental health may be impacting their compliance with the social distancing rules. To that end, we generated a score of the actual social distancing behaviour of young people (for example, hand washing, meeting up in the park, exercising more than once a day), and then examined how that related to their general levels of anxiety, depression, anxiety that is specific to Covid-19, and how their age and gender may effect this relationship.

FINDINGS

Results of the multiple regression analysis used to investigate this question showed:

- That levels of anxiety and depression play a part in how much the young people we sampled adhered to the social distancing guidelines in their day to day lives
 - o Higher levels of anxiety predicted closer adherence to the rules
 - o Higher levels of depression predicted the reverse, less adherence to the rules
- We also found that age and gender also played a role in how closely these young people adhered to social distancing rules in the last two weeks. Males compared to females adhered less to the rules, and in general increasing age was associated with lower adherence.

Stats: Multiple Linear regression, DV- Social distancing behaviour, independent variables, HADS anxiety, HADS depression, COVID-19 Anxiety, Age and gender

Assumption testing There was independence of residuals, as assessed by a Durbin-Watson statistic of 1.967. There was homoscedasticity, as assessed by visual inspection of a plot of studentized residuals versus unstandardized predicted values. 13 outliers detected (left them in analysis for now). R^2 for the overall model was 4.1% with an adjusted R^2 of 3.9%. Age, gender, anxiety, depression, Covid-19 anxiety and gender statistically significantly predicted Social distancing behaviour, $F(5, 1965) = 16.9, p < .0005$. The multiple regression predicts that the older you are the more likely you did not fully adhere to the social distancing rules, with males adhering to the rules less. Critically individual's levels of anxiety and depression also play an important part, where greater anxiety levels are associated with greater adherence to the rules, and the reverse for depression, where greater depression levels suggest you will adhere to the rules less. Interestingly, how anxious participants felt about the COVID-19 pandemic did not predict their actual behaviour in this model.

VACCINATION

We asked participants that if a new vaccine was to be developed that could prevent COVID-19, would you accept it for: yourself, Your parent(s)/Caregiver(s), siblings, elderly relatives, child/children

FINDINGS

While overall large proportion of responds said yes, they would (60-70%). However, there was still large number of respondents who were not sure 20-30% or said they would not accept it 7-15%

YOURSELF		
13-18	No	8.4
	Maybe	28.8
	Yes	62.8
19-24	No	12
	Maybe	32.6
	Yes	55.4

PARENTS/CAREGIVERS		
13-18	No	7.7
	Maybe	22.3
	Yes	70
19-24	No	9.9
	Maybe	26.4
	Yes	63.7

SIBLINGS		
13-18	No	9.1
	Maybe	24.2
	Yes	66.7
19-24	No	11.6
	Maybe	28.1
	Yes	60.4

ELDERLY RELATIVES		
13-18	No	8.6
	Maybe	20
	Yes	71.4
19-24	No	12
	Maybe	23.6
	Yes	64.3

CHILD/CHILDREN		
13-18	No	14.5
	Maybe	21.8
	Yes	63.7
19-24	No	17.2
	Maybe	30.3
	Yes	52.5

CONSEQUENCES OF BREAKING THE RULES – POLICE & YOUNG PEOPLE

METHOD

Respondents were asked if since the lockdown, they have been dispersed by the police, arrested, or fined for breaking the social isolation rules.

To examine this the sample was split into four age groups (13-15, 16-18, 19-21, and 22-24) and looked at the effect of age group and gender on the proportion of young people that answered either Yes or No to the above.

FINDINGS

- As expected for majority of respondents had no interaction with the police
- However, what is striking is for both females and males an increase in age was associated with greater numbers of these individuals being stopped by the police.
- This is more the case for males. For example, almost twice as many males aged 19-21 were stopped by the police for breaking the rules compared to females of the same age.

For more in-depth look at results see tables and figures below

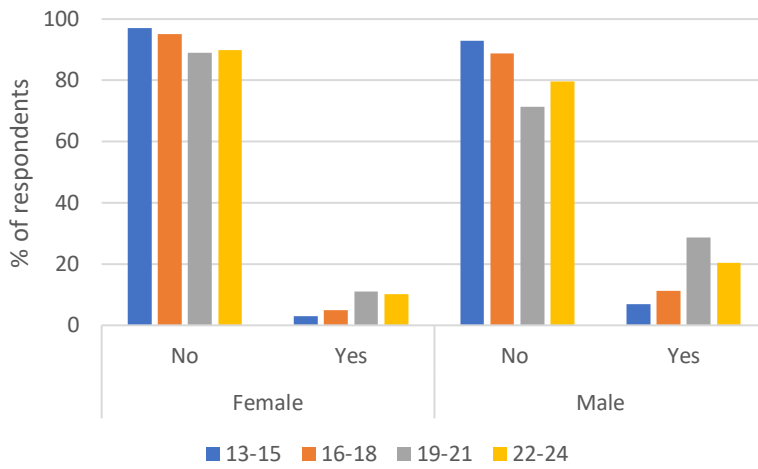
Since the lockdown, please tell us if you have... - Been instructed to go home, leave an area or disperse by the police?

	Female		Male	
	No	Yes	No	Yes
13-15	97	3	93	7
16-18	95.1	4.9	88.7	11.3
19-21	89	11	71.3	28.7
22-24	89.8	10.2	79.6	20.4

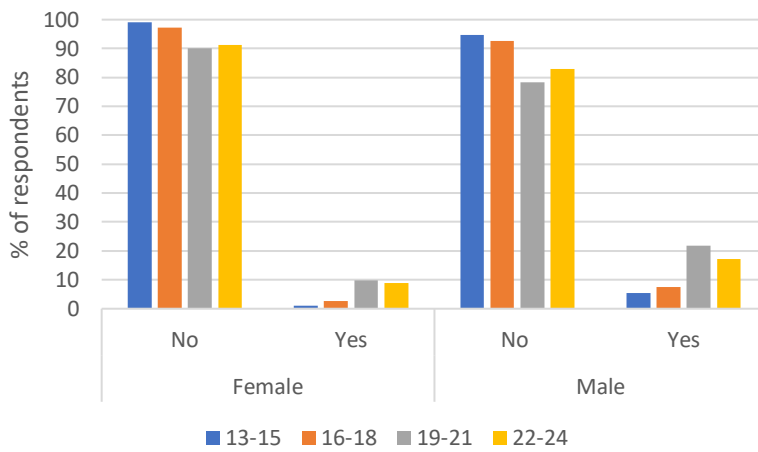
Since the lockdown, please tell us if you have... - Been taken home, arrested or fined by the police for breaking the social isolation rules?

	Female		Male	
	No	Yes	No	Yes
13-15	99	1	94.6	5.4
16-18	97.3	2.7	92.6	7.4
19-21	90.2	9.8	78.3	21.7
22-24	91.2	8.8	82.9	17.1

Since the lockdown, please tell us if you have... - Been instructed to go home, leave an area or disperse by the police?



Since the lockdown, please tell us if you have... - Been taken home, arrested or fined by the police for breaking the social isolation rules?



RESEARCH GROUP

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This study is a part of the University of Sheffield and the University of Ulster COVID-19 Psychological Research Consortium (twitter @C19PRCStudy)

Consortium information: A group of clinical, developmental and health psychologists, as well as political scientists at the Universities of Sheffield and Ulster, with additional collaborators from University College London, Liverpool and Royal Holloway and Bedford College. The list of researchers is given at the end of this press release.

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