The mental health of young people before, during and after the Covid-19 pandemic

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Background

- The COVID-19 pandemic and public health measures resulted in widespread and lengthy closures of schools, colleges and workplaces, and reduced social interaction (Hale et al., 2021)
- Data from Ireland and other countries shows that young people and women experienced largest increases in mental health difficulties, including depressive symptoms, during the pandemic (Santomauro et al., 2021)
- Numerous mechanisms put forward to explain increase in mental heath difficulties during pandemic (Banks et al., 2021):
  - Fear of infection
  - Loss of income/unemployment
  - Changes to domestic living arrangements/additional caring responsibilities
  - Restrictions on health-promoting activities and services due to social distancing
- However, there is a lack of evidence on how young people have fared in the post-pandemic period
  - Most studies had limited follow-up in the post-pandemic period, and few included pre-pandemic measurements

Previous Literature (Ireland)

- Data from the latest Healthy Ireland Survey (wave 10, 2024) indicate that 12 per cent of the adult population had a probable mental health problem (<=56 on MHI-5) (Department of Health, 2024)
  - Lower than during the pandemic (2021 – 15 per cent), but still higher than pre-COVID (2016 – 10 per cent)
  - Rates highest among young people aged 15-24, particularly young women (20 per cent with MHI-5 <=56 in 2024), although most groups have not returned to rates pre-pandemic
- Madden (2024) examined change in CES-D (depressive symptoms indicator) over two time points (pre- and during COVID) for '98 Cohort and parents of '08 Cohort of GUI
  - Significant increase in prevalence of depressive symptoms for both groups, with stronger effects for females ('98 Cohort)
  - Explained by a shift in the distribution of the CES-D to the right, rather than a shift in the shape of the distribution (i.e., symptoms increased across the distribution, not just for those near the threshold)
- Daly et al (2021), using repeated cross-sectional data on a sample of Irish adults, found that the prevalence of PTSD increased between February 2019 and April 2020, and then declined in May and December 2020
  - No change over the 2019-2020 period in anxiety or depression

Previous Literature (International)

- Fancourt et al (2021) examined trajectories of anxiety and depression using longitudinal data on a sample of the English population observed weekly for 20 weeks from first lockdown in March 2020
  - Anxiety and depression both declined from high levels as lockdown progressed (but plateaued in later weeks), with inequalities across age, gender and income groups persisting
- Daly et al (2020), using data from the UKHLS (with a pre-pandemic measurement in 2017-2019), showed large increases in depressive symptoms across the population in early months of the pandemic (April 2020), with some recovery by June 2020
  - Henseke and Schoon (2025), using UKHLS data on 16-29 year olds and incorporating long-term trends, find an increase in depressive symptoms in first year of pandemic, with levels returning to trend from March 2021
- Meta-analyses of cross-sectional and longitudinal studies (i.e., including pre-pandemic period) by Robinson et al (2022), Kunzler et al (2021), Prati et al (2021) and Santomauro et al (2022) found significant increases in depression and anxiety during the early months of the pandemic, but non-significant effects for other measures of mental health and wellbeing (e.g., life satisfaction)
  - Meta-analyses by Miao et al (2023) and Racine et al (2021) focused on young people (<18) and showed significant increases in depression and anxiety, particularly among older adolescents and girls

Contribution of this study

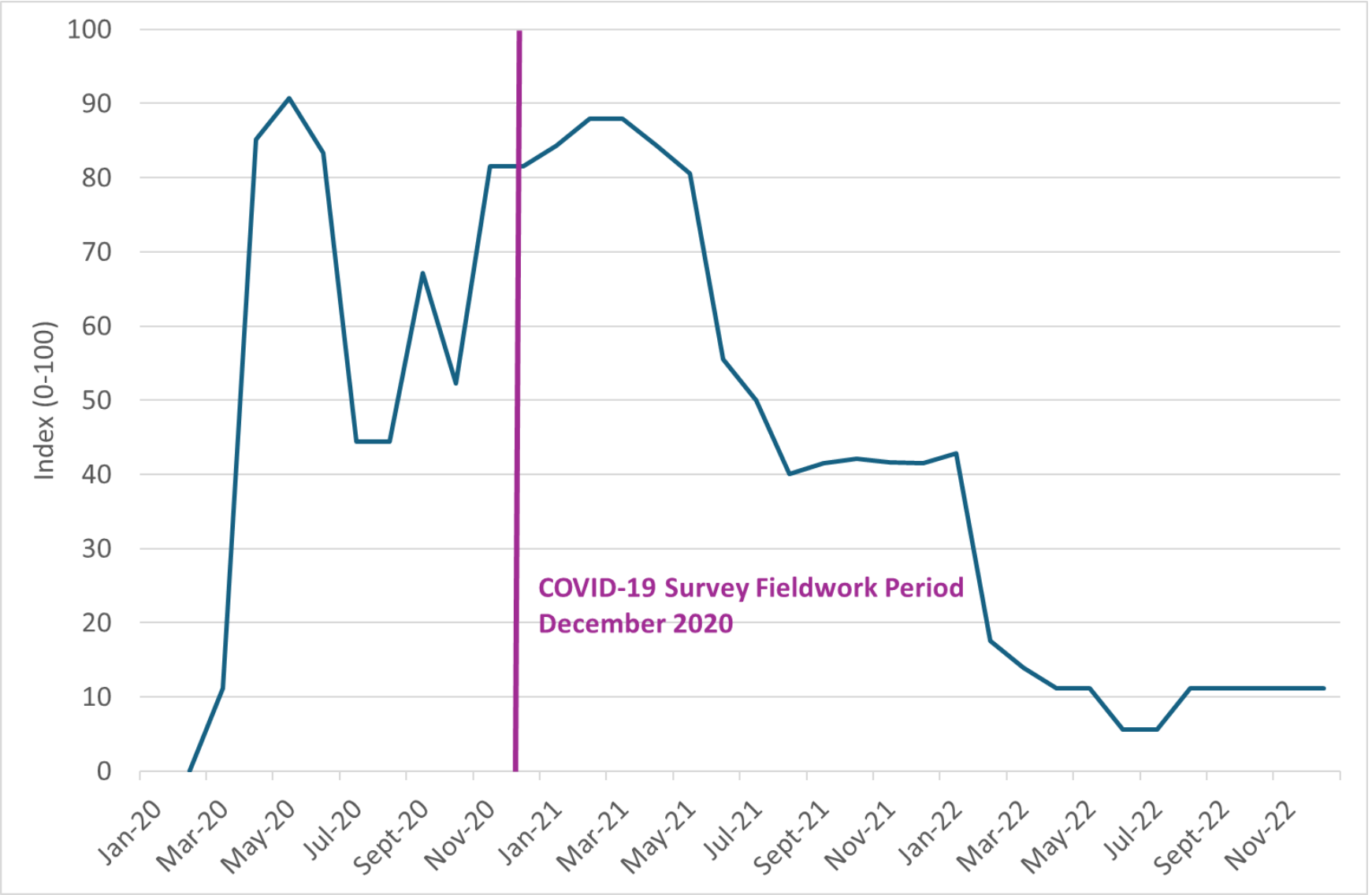
- **Longitudinal study design**; many of the studies referenced earlier did not include pre-pandemic measures and/or used repeated cross-sectional designs
- **Assesses the post-pandemic period**; most of the published research focuses on the first year of the pandemic with little assessment of longer-term patterns
- **Uses a well-validated indicator of mental health (CES-D) in a nationally representative survey of young people**; much of the evidence for the early stages of the pandemic was based on convenience samples which limits external validity
- **Comprehensive information on multiple dimensions of young adults' lives (work, school, family/relationships, etc.)** allows for an assessment of risk and protective factors; contrary to initial perceptions, COVID-19 was not a 'great leveller'

Data

- GUI ‘98 Cohort
  - Waves 4, COVID and 5

	Data collection period	N	Response rate
Wave 4 (age 20)	August 2018 – June 2019	5,190	65%
COVID (age 22)	December 2020	2,277	33%
Wave 5 (age 25)	April 2023 – April 2024	3,380	50%

COVID-19 Pandemic in Ireland



Source: Oxford COVID-19 Government Response Tracker – Stringency Index

Outcome Variable (CES-D)

- The 8-item CES-D scale is a short, self-report screening instrument for depression in the general population
  - Collected in self-completion module in waves 4 and 5
- Respondents are asked to rate how frequently they experienced a number of symptoms of depression (in the last week)
  - e.g. I felt lonely, I had crying spells, etc.
  - Responses on a four-point scale, ranging from 0 (rarely/none of the time – 0 days) to 3 (most or all of the time – 5-7 days)
  - Composite score is derived (range 0-24)
  - Scores >=7 indicative of clinically-meaningful depressive symptoms

Methods

- Methods
  - Mixed effects linear regression (allows for random intercept for each individual)
- For now, main analyses are unweighted

- Independent variables
  - Time-varying: age, wave, mode, principal economic status, living away from parental home, economic strain
  - Time-invariant (age 9): sex, family background (lone parent, migrant, household social class)

Sample Characteristics
(unweighted)

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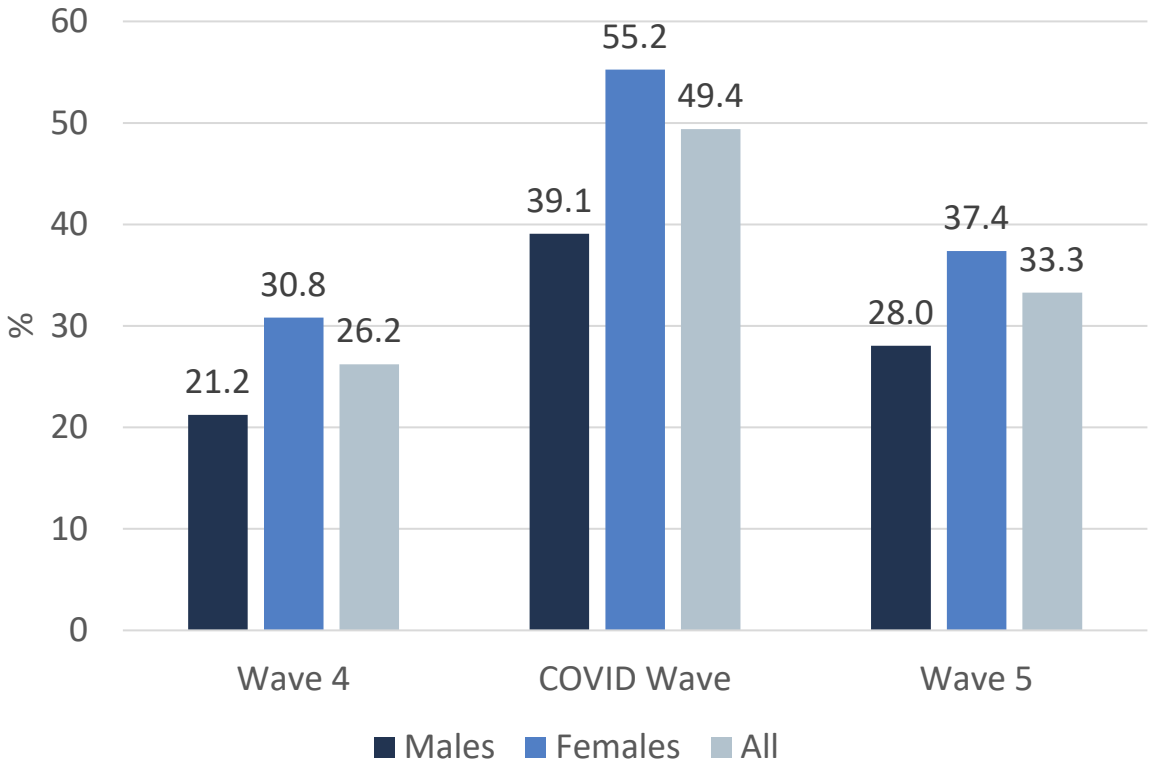
	Wave 4	COVID Wave	Wave 5
CES-D (average score)	4.5	7.5	5.5
Age (median, years)	20	22	25
% Female	52.1	63.8	56.2
% CAWI	0.0	100.0	85.1
% student	74.1	48.3	7.9
% living away from parental home	36.1	28.6	32.0
% great difficulty making ends meet	7.5	9.8	11.9
% semi/unskilled household social class (W1)	7.5	8.1	8.1
% lone parent family background (W1)	9.3	8.4	9.2
% migrant background (W1)	22.5	21.1	20.6
N-years	5,065	2,213	2,897

CES-D

Score (LHS); % with CES-D>=7 (clinically-meaningful level of depressive symptoms) (RHS)

	Wave 4	COVID Wave	Wave 5
Males	3.8	6.1	4.7
Females	5.2	8.3	6.1
All	4.5	7.5	5.5



Note: unweighted

Results

unweighted

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	(1)	(2)	(3)	(4)	(5)	(6)
Wave (ref = wave 4)						
- COVID wave	2.82 ***	3.16 ***	3.05 ***	2.56 ***	2.43 ***	2.43 ***
- Wave 5	0.91 ***	1.21 ***	0.91	1.00	0.89	0.89
CAWI (ref = CAPI)		-0.34	-0.47 **	-0.44 *	-0.52 **	-0.50 **
Age			0.08	0.07	0.07	0.07
Female (ref = male)			1.57 ***	1.48 ***	1.37 ***	1.37 ***
- COVID wave x female				0.74 ***	0.72 ***	0.72 ***
- Wave 5 x female				-0.14	-0.25	-0.25
Time-varying covars?	N	N	N	N	Y	Y
Time-invariant covars?	N	N	N	N	N	Y
N-years	10,175	10,175	10,175	10,175	10,175	10,175

*** p<0.001; ** p< .005; * p< .01

Results (other covariates)

unweighted

Time-varying	(6)	Time-constant	(6)
Student (ref)		Prof/managerial social class (ref)	
Employed	0.07	Skilled manual	-0.25 **
Unemployed	1.69 ***	Semi/unskilled	-0.17
Other	1.60 ***	Other	0.11
Living in parental home (ref)		Two parent family (ref)	
Living independently	-0.44 ***	Lone parent family	0.92 ***
Ends meet – very easily (ref)		Irish-born parents (ref)	
Fairly easily	0.54 ***	Non-Irish-born parent(s)	0.22
With some difficulty	1.45 ***		
With difficulty/great difficulty	2.99 ***		
N-years	10,175		

*** p<0.001; ** p< .005; * p< .01

Summary of preliminary findings

- Significant increase in depressive symptoms during COVID, and partial recovery post-pandemic
  - Young women had higher scores than young men before COVID, experienced a greater increase during COVID and a similar recovery post-pandemic
- Other factors associated with depressive symptoms:
  - Own economic status (employment status, economic strain)
  - Own living arrangements
- Caveats
  - lower response rate to COVID survey (how to incorporate weights?)
  - results cannot be considered causal due to absence of counterfactual trend (Banks et al., 2021; Henseke and Schoon, 2025)

Discussion/Further Work

- Further work required to understand the mechanisms underlying these patterns
  - In initial stages of the pandemic, focus was on fear of infection, unemployment/financial situation and social distancing as key mechanisms (Banks et al., 2021)
  - With longer follow-up, other mechanisms may become more important (e.g., scarring effects of repeated disruptions to education and employment; loss of social capital) (Henseke and Schoon, 2025; Laurence, 2025)
  - And the relative importance of different mechanisms may differ for different groups (e.g., men vs. women)
- Mental health and wellbeing is more than just the absence of mental ill-health, but also includes dimensions that capture positive mental health and broader indicators of wellbeing (e.g., life satisfaction)
  - GUI '98 at ages 20, 22 and 25 also collects information on life satisfaction

Thank you

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CES-D items

J1. Listed below are 8 statements about some of the ways you may have felt or behaved. Please indicate how often you have felt this way *during the past week*.

		Rarely or none of the time (less than 1 day)	Some or a little of the time (1-2 days)	Occasionally or a moderate amount of the time (3-4 days)	Most or all of the time (5-7 days)
a.	I felt I could not shake off the blues even with help from my family or friends	☐1	☐2	☐3	☐4
b.	I felt depressed	☐1	☐2	☐3	☐4
c.	I thought my life had been a failure	☐1	☐2	☐3	☐4
d.	I felt fearful	☐1	☐2	☐3	☐4
e.	My sleep was restless	☐1	☐2	☐3	☐4
f.	I felt lonely	☐1	☐2	☐3	☐4
g.	I had crying spells	☐1	☐2	☐3	☐4
h.	I felt sad	☐1	☐2	☐3	☐4

Sample Characteristics

(weighted using wave-specific cross-sectional weight)

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CES-D (average score)	4.6	7.4	5.6
Age (median, years)	20	22	25
% Female	49.2	50.3	50.7
% CAWI	0.0	100.0	86.4
% student	66.9	41.7	6.5
% living away from parental home	32.5	28.4	29.3
% great difficulty making ends meet	8.2	11.2	14.1
% semi/unskilled household social class (W1)	10.7	11.0	12.0
% lone parent family background (W1)	18.3	17.3	11.0
% migrant background (W1)	20.7	19.6	20.1
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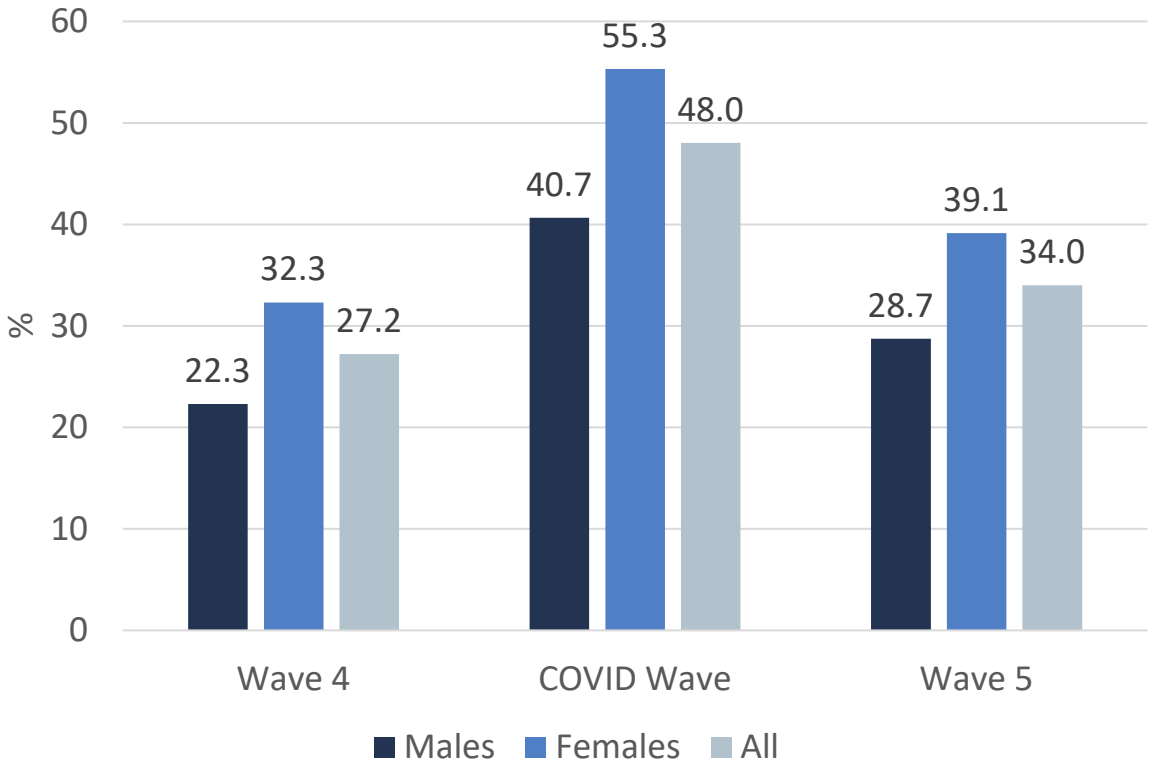

Note: weighted using wave-specific cross-sectional weight

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