DISRUPTED TRANSITIONS? YOUNG ADULTS AND THE COVID-19 PANDEMIC

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EVIDENCE FOR POLICY

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ABBREVIATIONS

CAMHS   Child and Adolescent Mental Health Services

CES-D   Center for Epidemiologic Studies Depression Scale

COVID-19   Coronavirus Disease

CSO   Central Statistics Office

DCEDIY   Department of Children, Equality, Disability, Integration and Youth

EU   European Union

EWSS   Employment Wage Subsidy Scheme

GUI   *Growing Up in Ireland*

MCS   Millennium Cohort Study

NCDS   National Child Development Study

NEET   Not in Employment, Education or Training

OECD   Organisation for Economic Cooperation and Development

PUP   Pandemic Unemployment Payment

UK   United Kingdom

US   United States

EXECUTIVE SUMMARY

BACKGROUND TO THE STUDY

The COVID-19 pandemic and related public health restrictions have led to severe disruptions in day-to-day lives, including education, employment and social activities. Young adults have experienced the highest rate of job loss during the pandemic (Central Statistics Office, 2020b). This study draws on a specific survey of the *Growing Up in Ireland* (GUI) Cohort '98 conducted in December 2020, at a time when restrictions were easing (before a further period of closures). The short online survey was completed by 2,277 young adults, 33 per cent of the total sample, most of whom were 22 years of age at the time. The study seeks to fill a gap in knowledge about the extent of disruption to young adults at a crucial time of transition in their lives and the consequences of this disruption for their mental health.

DISRUPTION TO EMPLOYMENT

GUI Cohort '98 has experienced a prolonged transition to adulthood, being mostly still in full-time education/training, living in the parental home and financially dependent on their parents at the age of 20 (O'Mahony et al., 2021). Just before the pandemic hit (in February 2020), most (63 per cent) continued to be in full-time education, including the 16 per cent who were combining studies with term-time employment; less than a third were in employment as their main status while 5 per cent were not in employment, education or training (NEET).

Among those who were employed (either full-time[1] or term-time) before the pandemic, the vast majority (84 per cent) experienced some type of employment disruption, most commonly losing a full-time job (36 per cent) or losing a term-time job (21 per cent). Only one-in-six (16 per cent) of the young adults started working remotely or increased the hours they worked from home. Young adults were much more likely to lose their jobs and much less likely to work remotely than the parents of Cohort '08 who were surveyed at the same time (*Growing Up in Ireland* Study Team, 2021). Having higher Leaving Certificate grades and being in a professional/managerial job at 20 appeared to act as some protection against job loss when the pandemic began. Having received the Pandemic Unemployment Payment (PUP) served to shelter these young adults from financial strain following employment loss.

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[1] Throughout the report, 'full-time' employment or 'main job' refer to those for whom employment is their main status, regardless of the number of hours worked.

DISRUPTION TO EDUCATION

Much less is known about the pandemic experiences of those in further or higher education compared to the school-going population in Ireland. The vast majority reported having the electronic devices they needed for remote learning and were enrolled in institutions that offered live online lectures/classes. However, the group varied in their access to adequate broadband (50 per cent always having it), a quiet place to study (46 per cent) and in receiving regular feedback on their work (30 per cent). In this context, over half (57 per cent) found it difficult to study while learning remotely. Responses on access to educational resources and contact with the educational institution were combined to give an overall measure of the experience of remote learning. Women and those in their final year of study reported poorer experiences of remote learning while those who had more positive learning conditions (such as a place to study and regular contact with their educational institution) found it easier to study.

DISRUPTION TO SOCIAL ACTIVITIES

Young adults reported very significant changes to their social activities during the pandemic. The largest effect was the reduction in face-to-face contact with friends, reported by 81 per cent. Significant minorities reported a decline in sports and cultural participation and spending less time outdoors. In contrast, (informal) screentime increased for two-thirds of young adults. Less involvement in sports and cultural activities was more common among those who had experienced a disruption to their education and/or job situation. Some less healthy behaviours, such as alcohol consumption, declined for a large group but other behaviours, such as eating junk foods/sweets, increased for many. Loss of the main job was linked with more consumption of alcohol, cigarettes and junk food, all negative coping strategies. These changes in diet and smoking/vaping tended to result in increased differences by social background compared to the pre-pandemic period. However, the pattern of reduction in alcohol consumption appeared to slightly narrow the pre-pandemic social gap in drinking.

TRENDS IN MENTAL HEALTH

At both 20 and 22 years, young adults were administered the Center for Epidemiological Studies (CES-D) depression scale, which categorises those with a score of seven or more (out of 24) as being 'depressed'.[2] There was a large increase between 20 and 22 years of age for both men (22 per cent to 41 per cent) and women (31 per cent to 55 per cent) in the proportion classified as depressed. The disruption caused by the pandemic – particularly losing their main job, finding it

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[2] This suggests a clinically significant level of psychological distress but does not mean that the young adult has a clinical diagnosis of depression.

difficult to study and less face-to-face contact with friends – contributed to this increased depression rate.

Both patterns and drivers of depression differed significantly by gender. For men, losing their main job had a stronger effect, while being involved in team sports before the pandemic and confiding in a boy/girlfriend served as protective factors. For women, depression was strongly associated with reduced face-to-face contact with friends while supportive peer relationships and positive family relationships helped to protect against depression.

IMPLICATIONS FOR POLICY

Rather than being a 'great leveller', the COVID-19 pandemic has exacerbated existing inequalities across society. Among this cohort of 22-year-olds, already vulnerable groups were most at risk of job loss, financial strain and poorer mental health. While there was little variation in the probability of job loss by family socio-economic background, young adults from a lone-parent family were much more likely to have experienced loss of their main job. Experience of financial strain was strongly socially patterned, although receipt of the PUP was protective. These results highlight the importance of pandemic income supports, and anti-poverty measures and supportive social policies more generally, in supporting young people and families experiencing job loss and financial strain during the pandemic.

Six-in-ten of the young adults in Cohort '98 were in full-time education when the pandemic hit and had to adapt to remote learning. These young adults reported better access to educational resources (broadband, devices and a quiet place to study) than their younger peers in Cohort '08 (*Growing Up in Ireland* Study Team, 2021). However, the nature of remote provision appeared to vary across institutions and over half of the young adults reported finding it difficult to study during the pandemic, a factor in increased depression levels. These results highlight the importance of accelerated rollout of high-quality broadband, and support for higher education institutions in incorporating remote learning, feedback and assessment into existing courses. The findings also highlight the potential for further and higher education institutions to play a role in providing mental health supports for young adults in the post-pandemic period.

The scale of mental health difficulties among young adults, particularly young women, is of significant concern. Given the unprecedented nature of the pandemic, it is difficult to determine how long-lasting these effects will be. The findings point to two main groups of young adults who are particularly vulnerable: those who experienced depression before the pandemic and continued to do so during the pandemic; and those for whom the disruption caused by the pandemic resulted in depressive symptoms. It is too early to say how long-lasting these

effects will be but there appears to be a considerable risk of a longer-term scarring effect for some groups of young adults. Research has already pointed to the level of unmet need for community mental health services in the population as a whole (Brick et al., 2020). At the age of 20 (in 2018/19), 16 per cent of this cohort who had high depression levels did not consult with a general practitioner, psychologist/counsellor or psychiatrist in the previous year (O'Mahony et al., 2021). During the pandemic, 22 per cent of those classified in the depressed group reported that they did not have 'access to necessary support for emotional or mental health problems'. While policy (see Government of Ireland, 2020) has rightly moved towards emphasising a continuum of support, the scale of difficulties among young adults will place considerable demands on community mental health services.

This cohort experienced widespread disruption to their day-to-day activities, including contact with friends, and sports and cultural participation. Increases in the prevalence of smoking and junk food consumption among those with poor mental health point to worrying trends in the use of negative coping strategies to deal with the stress of the pandemic. Overall, alcohol consumption levels during the pandemic declined a good deal among young adults but the small group who increased their consumption had poorer mental health. The findings therefore highlight the potential for broader health promotion (focusing on sports participation and reducing drinking, smoking and unhealthy diet) to have a positive spill-over effect on mental health difficulties. In conclusion, GUI Cohort '98 will next be surveyed at 25 years of age, which will yield important insights into the longer-term effects of the pandemic.

CHAPTER 1

Background

1.1 INTRODUCTION

The COVID-19 pandemic and associated public health measures resulted in the widespread and lengthy closures of schools, colleges and workplaces, and reduced social interaction, throughout 2020 and 2021. A large body of evidence now shows that the COVID-19 pandemic, rather than being a 'great leveller', has exacerbated existing inequalities across society (by age, gender, socioeconomic background, ethnicity, geography, etc.) (Blundell et al., 2020; Crossley et al., 2021; Major et al., 2020). While rates of serious illness and mortality among young people have been low, the impact on their daily lives has been substantial. Data from Ireland, and from other countries, show that young people have been disproportionately affected by job loss, and that they have experienced the greatest declines in mental health and wellbeing (Central Statistics Office, 2020a; 2020b; 2021b; OECD, 2020; 2021b).

In this report, we examine how young people in Ireland have been affected by disruptions to employment, education and social activities, and how these disruptions have affected their mental health and wellbeing. We use data from the '98 Cohort of *Growing Up in Ireland* (GUI), the national longitudinal study of children and young people, and specifically data from the COVID-specific survey conducted in December 2020 when cohort members were on average 22 years of age. This chapter sets out the Irish context (Section 1.2), describes the policy response (Section 1.3), provides an overview of the data used in this report (Section 1.4), and outlines the research questions and report structure (Section 1.5).

1.2 CONTEXT

1.2.1 Job loss

There was a very significant increase in unemployment in Ireland as the pandemic restrictions were introduced in March 2020 (Figure 1.1). Rates of youth unemployment (defined as those aged 15-24 years of age) have been consistently above those of older workers (25+) throughout the pandemic in Ireland. In October 2020, for example, the COVID-19 adjusted unemployment rate[3] for those aged 25-74 was 16.8 per cent; however, among those aged 15-24, almost half (47.7 per cent) were unemployed. Youth unemployment rates were also much more

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[3] The COVID-19 adjusted measure of unemployment includes all those who are in receipt of the Pandemic Unemployment Payment (PUP) as unemployed.

responsive to the cycle of restrictions, increasing more in the first wave of business closures in March-May 2020 and in the second wave in January 2021. These patterns largely reflect the concentration of young adults in sectors such as hospitality and retail which were more affected by restrictions. Rates of unemployment subsequently declined for both young and older adults (Figure 1.1).

FIGURE 1.1   COVID-19 ADJUSTED UNEMPLOYMENT RATE BY AGE GROUP FOR MARCH 2020-DECEMBER 2021, WITH SEASONALLY ADJUSTED RATES FOR JANUARY AND FEBRUARY 2020 FOR COMPARISON
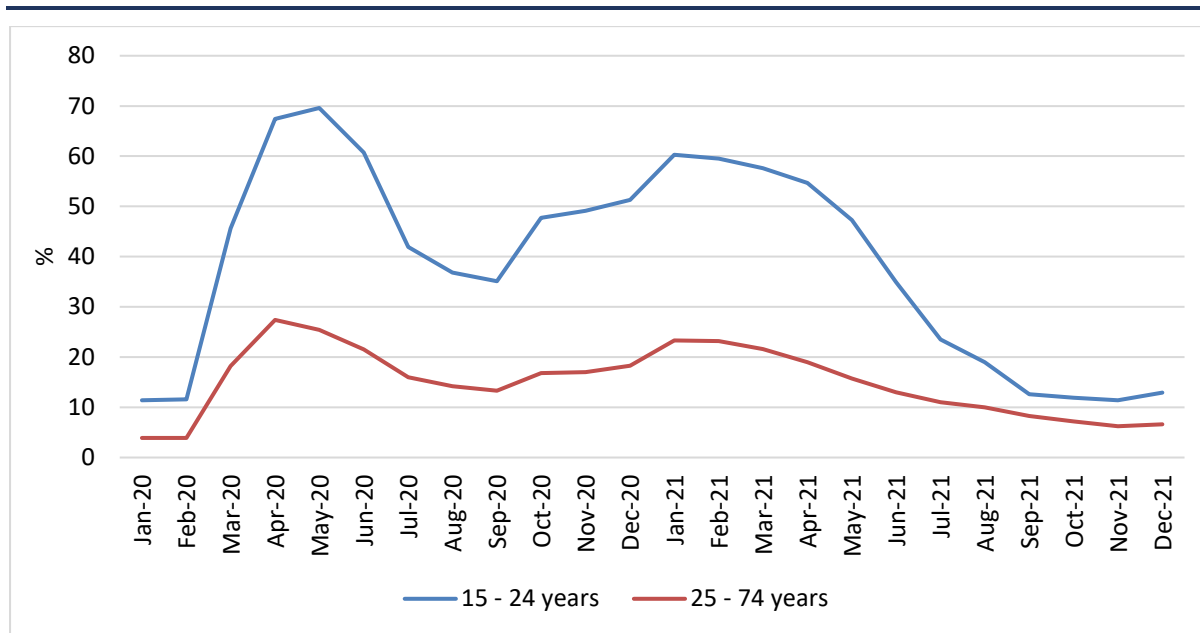
Source: https://www.cso.ie/en/statistics/labourmarket/monthlyunemployment.
Note: The COVID-19 adjusted measure of unemployment assumes that all those who are in receipt of the Pandemic Unemployment Payment (PUP) would be classified as unemployed.

Work is core to people's livelihood, their identity, and their well-being (McGinnity et al., 2021). While the relationship between unemployment and health is likely to be bi-directional, there is strong evidence that unemployment has causal impacts on health, and mental health in particular (Bartelink et al., 2020; Clark et al., 2001; Daly and Delaney, 2013; Gebel and Voßemer, 2014; Korpi, 2001; Mousteri et al., 2018). For young people, unemployment can be particularly damaging, with evidence of 'scarring' effects of early unemployment on lifetime employment and earnings, on socioeconomic outcomes such as marriage and fertility, and health (Garrouste and Godard, 2016; Schwandt and von Wachter, 2019; Strandh et al., 2014; von Wachter, 2020).

Entering the labour market during a recession or economic downturn can similarly lead to longer-term negative effects (Bell and Blanchflower, 2011; Cutler et al., 2015; Maclean, 2013; Oreopoulos et al., 2012; Regan and Roantree, 2021). The youth labour market is highly sensitive to economic cycles; having been hired relatively recently, young people tend to have had fewer chances to accrue firm-

specific skills and experience (OECD, 2021b). In addition, young people are disproportionately concentrated in more volatile sectors and jobs (Grotti et al., 2019). Indeed, data from Ireland have shown the 'scarring' effects of entering the labour market during the Great Recession; average weekly earnings for workers born in the 1990s were no higher than for those born in the 1960s at ages 20 to 22, and had by age 26 yet to surpass that of either the 1970s or 1980s cohorts. This reflected a halt in earnings growth that has been observed across generations in Ireland (Roantree et al., 2021). The COVID-19 pandemic has exacerbated these existing vulnerabilities as young people are more likely to work in sectors most affected by lockdown and social distancing measures, such as hospitality and retail (OECD, 2021b; Roantree et al., 2021).

1.2.2   Educational disruption

There has been less evidence about the impact of the pandemic on further and higher education students than on the school-going population (Darmody et al., 2020). Like schools, third-level (higher education) institutions shifted to remote learning, generally offering live online lectures. Less is known about how further education fared during the pandemic, although a report by Quality and Qualifications Ireland (2020) indicates a move to various forms of remote learning, including phone, post and online contact. Among apprentices, employment placements were affected by broader sectoral restrictions, and the off-the-job components of their training were affected by the closure of educational institutions.[4] Both further and higher education providers reported challenges around ICT and broadband access, digital skills and adapting modes of assessment (Quality and Qualifications Ireland, 2020). Greater challenges were reported in catering for more disadvantaged groups, such as those taking part in the Youthreach programme[5] (CDETB, 2020).

1.2.3   Social disruption

Public health measures to restrict the transmission of COVID-19 have resulted in major disruptions to social interactions and the types of activities that individuals can participate in (e.g. clubs/societies, gyms, arts/culture, etc.). Data from the latest wave of the Healthy Ireland Survey (conducted between March 2020 and October 2021) show that 81 per cent of the population aged 15+ felt less socially connected as a result of the public health restrictions, and while the proportions were high across all age groups, the proportion was highest among those aged 45-54 (85 per cent) (Department of Health, 2021). In terms of health behaviours, 42 per cent of drinkers reported that they drank less during the pandemic, with the proportion reporting that they drank less alcohol highest among young people

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[4]   See for example: https://www.irishtimes.com/news/education/fall-in-apprenticeship-numbers-last-year-despite-expansion-plans-1.4678231 and https://apprenticeship.ie/news-events/news/plan-to-address-backlog-in-craft-apprenticeship-training.

[5]   Youthreach centres offer second-chance education and training opportunities to early school leavers.

aged 15-24 (62 per cent). The decline in 'occasional smoking' was also highest among the younger age groups, reflecting the reduced opportunities for socialising in bars and restaurants during the pandemic. Research conducted by Sport Ireland during the pandemic found that, in comparison with 2019, participation in sports[6] had declined by Q1 2021. However, levels of recreational walking[7] had increased. Among those aged 16-24, the proportion engaging in sport had declined from 73 per cent in 2019 to 58 per cent in 2021, with the proportion engaged in recreational walking increasing from 55 per cent in 2019 to 72 per cent in 2021. For all age groups, 55 per cent felt that they were doing less activity than before the pandemic, with the proportion reporting less activity highest among those aged 16-24 (at 62 per cent) (Sport Ireland, 2021).

1.2.4   Mental health and wellbeing

Turning to mental health and wellbeing, data from the Central Statistics Office (CSO) Social Impact of COVID-19 Survey on Wellbeing (carried out in February 2021) found that 57 per cent of respondents reported that their mental health/wellbeing had been negatively affected by the COVID-19 pandemic. Amongst those aged 18-34, the proportion reporting negative effects was 74 per cent, in comparison with 32 per cent among those aged 70+ (see Figure 1.2). Comparing trends pre-pandemic (2013, 2018) and during the pandemic (April, August and November 2020, February 2021), the data show similar declines in all three dimensions of mental health and wellbeing examined (life satisfaction, feelings of depression, loneliness). Females reported worse mental health and greater declines than males across the three dimensions, and those aged 18-34 fared worst (Central Statistics Office, 2021b). Similar findings have been observed in the latest wave of the Healthy Ireland Survey, collected between March 2020 and October 2021. For example, while 30 per cent of the population aged 15+ reported that their mental health had declined during the pandemic, the proportions were substantially higher among those aged 15 to 24 (45 per cent) (Department of Health, 2021). These patterns (of widespread declines in mental health and wellbeing, with women and young people suffering the largest declines) have also been observed internationally (Daly et al., 2020; Gao et al., 2021; Helliwell et al., 2021; Henderson et al., 2020; Li and Wang, 2020; OECD, 2021a; Oreopoulos et al., 2012; Pierce et al., 2020).

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[6]   Defined as participating in sport in the previous seven days.
[7]   In the previous seven days.

FIGURE 1.2   MENTAL HEALTH/WELLBEING AFFECTED BY THE COVID-19 PANDEMIC
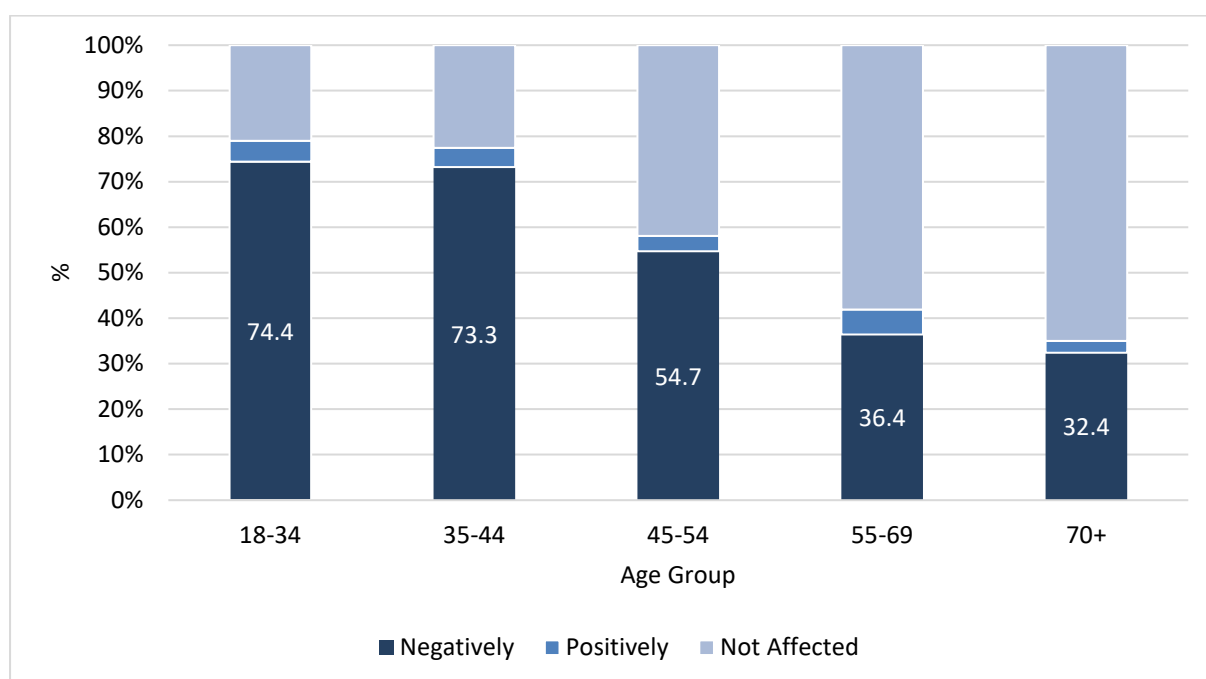
Source: Central Statistics Office, 2021a.

Due to young adults being at a critical point in their careers, social life, and education, COVID-19 related disruptions may be particularly damaging to their mental health and wellbeing (Preetz et al., 2021; Stroud and Gutman, 2021). In addition, previous research has emphasised that young adults, who may have less experience of previous life disruptions and adaptation processes, are particularly vulnerable in times of crises (Weinberger et al., 2018). An increasing prevalence of mental health difficulties in young adulthood is also of concern as poor mental health in early adulthood has been shown to impact on later health and socio-economic status, by disrupting educational attainment and early labour market participation (Attanasio et al., 2020; Currie et al., 2010; Fletcher, 2008; Goodman et al., 2011; Lundborg et al., 2014; Smith and Smith, 2010). Early-onset depression (before the age of 21) has been shown to be associated with longer first episodes, higher rates of recurrence, longer hospitalisations, and higher overall rates of comorbid disorders, including substance use disorders (Fletcher, 2008).

1.3   THE POLICY RESPONSE

As in other countries, the government acted quickly to support the incomes of those who lost their jobs (or could not work) as a result of the COVID-19 pandemic. The Pandemic Unemployment Payment (PUP) was introduced on March 13, 2020 for those who lost their jobs as a result of the pandemic, initially at a rate of €203 per week (comparable with the maximum personal rate of existing unemployment payments). The PUP was raised to €350 per week from March 24, 2020 (Beirne et al., 2020; Keane et al., 2021). It was paid at a flat-rate of €350 per week for a number of months, before the rate of payment was tied more closely to previous

earnings. In December 2020, when the GUI COVID-19 survey was carried out, there were four rates of payment, ranging from €203 to €350 per week. In contrast to existing unemployment supports, such as Jobseeker's Benefit and Jobseeker's Allowance, there was no requirement to have sufficient social insurance contributions and/or to pass an income means test. This meant that recently-employed young adults, those living in the parental home and students who had lost their term-time job could all avail of the full rate of PUP, at least in the initial period. It is estimated that approximately one-third of PUP recipients under the age of 25 in April 2021 were full-time students (Keane et al., 2021).

The Employment Wage Subsidy Scheme (EWSS), previously the Temporary Wage Subsidy Scheme (TWSS), allowed workers to receive government support directly through their employer's payroll, thereby maintaining the firm-worker link (Byrne et al., 2020). By the end of the first full month of the pandemic (April 2020), 620,000 individuals were claiming the PUP, and 43,000 employers with 427,400 employees were registered for the TWSS. Together, this represented 40 per cent of all those employed in Q4 of 2019 (Byrne et al., 2020). However, younger workers (less than 25 years of age) were much less likely to be on the EWSS (or TWSS) than on the PUP (Keane et al., 2021).

Like health services in general, mental health services were severely disrupted by the pandemic, with a reduction in referrals in the aftermath of the first lockdown followed by a sharp increase thereafter (College of Psychiatrists Ireland, 2020). Similar patterns were reported for Child and Adolescent Mental Health Services (CAMHS) (McNicholas et al., 2021). Some counselling services moved to video, phone or online contact. It is estimated that specialist mental health services were operating at 85-90 per cent of pre-pandemic capacity by June 2021[8] but this must be set against high levels of unmet demand (measured by waiting lists) for community mental health services even before the pandemic onset (Brick et al., 2020). Universities spent more than €5.1 million on mental health supports for students during the pandemic.[9]

1.4   DATA AND METHODOLOGY

1.4.1   Data

The data analysed in this report relate to Cohort '98 of *Growing Up in Ireland* who had been surveyed previously at 9, 13, 17/18 and 20 years of age. Having a specific COVID-19 survey was motivated by the gap in knowledge on the experiences of Irish children and young people during the pandemic (Darmody et al., 2020) and

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[8]   https://www.oireachtas.ie/en/debates/debate/dail/2021-06-03/35/.

[9]   https://www.irishtimes.com/news/ireland/irish-news/irish-universities-spend-5-1m-on-mental-health-services-during-pandemic-1.4643211.

was funded by the Department of Children, Equality, Disability, Integration and Youth (DCEDIY) to provide evidence to inform a policy response. Public health restrictions meant that an online survey was used rather than the usual face-to-face interview with the young person/young adult. This meant that the questionnaire had to be much shorter than usual, taking about ten minutes to complete. Interviewers were used to collate email contact details for the study participants and participants were sent a link to the survey, hosted by the Central Statistics Office, via email or text (Kelly et al., 2021). There was a very short window for completion, 11 to 31 December 2020 for the Cohort '98 participants. The questionnaire was completed by 2,277 young adults, giving a response rate of 33 per cent. The data have been reweighted to take account of attrition since the wave at 20 years of age. It is worth noting that 13 per cent (297) of those who did the COVID survey had not taken part in the wave at 20. Analyses that use variables measured at 20 therefore exclude this small group of young adults. At the time of the survey, 87 per cent of the sample were 22 years of age, with 13 per cent being 23 years of age. For simplicity, all of the sample are referred as 22-year-olds in the remainder of the report.

As context, it is worth noting the time at which the survey was conducted (mid- to late December 2020). Schools had reopened but higher education institutions continued with remote learning. Non-essential retail and services had reopened on 1 December 2020 after a closure period of six weeks while restaurants reopened on 6 December. Households were permitted to mix with two other households, and travel outside the county was permitted from 18 December. However, rising COVID-19 cases resulted in the announcement of further restrictions on social mixing, restaurants and services after the Christmas period.

1.4.2 Methodology

1.4.2.1 Outcome variables

The analyses presented in this report focus on five sets of outcomes; disruption to employment, financial strain (great or very great difficulty making ends meet), disruption to education, changes in social activities, and depressive symptoms. All outcomes are reported by the young adult. These outcome variables, along with the appropriate modelling approaches, were based on a review of the key themes that emerged from the national and international literature (discussed in greater detail in Chapter 2).

In relation to employment, the analyses focus on the subgroup who retrospectively reported being in employment just before the pandemic (February 2020)[10] and distinguish between those for whom employment was their main activity (hereafter 'full-time' or 'main' job) and those who combined a term-time job with full-time study in looking at experiences of job loss.

Those who were in education were asked whether (at the height of the COVID-19 restrictions) it was 'always', 'sometimes' or 'not' true that: they had a quiet space to study; they had access to a laptop/PC to do their work; their broadband was good enough to engage with online learning; their institution provided live online lectures/classes; their institution provided on-campus lectures/classes; their institution sent links to online learning resources; they received feedback on their work; they had regular contact with their course mates; and they enjoyed the chance to learn on their own. These items were summed to give an overall scale of positive learning experiences (with scores ranging from 1 to 27 and a reliability of 0.65). In addition, an item on the self-reported effect of the pandemic ('I found it difficult to study') was used to capture potential challenges in coping with the disruption to learning.

To capture changes in social activities, the young adults were asked about whether they did the following 'more', 'about the same' or 'less' (with a 'doesn't apply' category) at the time of the survey (December 2020) compared with before the pandemic (early March 2020): taking part in sports/physical exercise; taking part in organised cultural activities; seeing friends face-to-face; talking to friends online or by phone; seeing their boy/girlfriend; and spending them with their friends. Similar response categories were used to capture potential changes in healthy/unhealthy behaviours, namely drinking alcohol; smoking/vaping; eating junk food or sweets; spending time on informal screen-based activities; sleeping; and spending time outdoors.

Mental health was measured using the eight-item Centre for Epidemiological Studies' Depression Scale (CESD-8), which was also used at age 20. This is a short self-report screening instrument for depressive symptoms, with respondents asked to rate how frequently within the previous seven days they experienced a number of symptoms of depression, for example, 'How often within the last week… did you feel lonely?'. Answers are given on a four-point rating scale, ranging from 1 (rarely or none of the time – less than 1 day) to 4 (most or all of the time – 5-7 days). A composite score is calculated by summing responses across the eight items (range: 0-24), with composite scores of 7 or more being classified as 'depressed'

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[10] In the survey, information on employment experiences was also collected from those who had been *employed at any time since* February 2020. To distinguish more clearly the impact of the pandemic, the analyses focus only on those in employment in February 2020.

and scores below 7 defined as 'not depressed'. While a score greater than or equal to 7 suggests a clinically significant level of psychological distress, it does not necessarily mean that the participant has a clinical diagnosis of depression (see O'Mahony et al., 2021). The analyses in this report focus mainly on those who fall above or below the depression score threshold. However, sensitivity analyses are also conducted to examine potential differences when the full range of scores is analysed.

The chapters begin by presenting descriptive analyses of the outcome variables before including multivariate analyses of the relationship between background factors and these outcomes. The background factors employed are discussed in the following subsection.

1.4.2.2   Background factors

A number of common background factors are used in analysing the outcomes considered. These include: gender; mother's education (measured at age 20, ranging from 'lower secondary or less' to 'degree or higher'); family structure (i.e. whether the young adult's family of origin was a lone-parent family at age 20); financial strain (whether the family reported difficulty or great difficulty making ends meet at 20);[11] whether the family was living in a rural or urban area when the young adult was aged 9; whether the young adult had a chronic illness or disability when they were aged 9; and whether they were of migrant origin (i.e. both parents were born outside Ireland or one parent if in a lone-parent family).

In looking at job loss, the models also take account of the kind of job (if any) the young adult held when they were 20 years of age (recoded into four social class categories, ranging from 'professional/managerial' to 'semi/unskilled manual), and their report of how secure they felt that job was (on a scale of 1 to 10).

In looking at disruption to education, the models take account of prior Leaving Certificate performance, as it was hypothesised that higher-achieving students might be better prepared to study independently. Young adults were classified into three groups on the basis of their 'points',[12] with the small number of those who had left school early or taken the Leaving Certificate Applied programme grouped with the lowest-performing category; an additional category for whom points were not available was included to retain case numbers. In addition, the type of institution (university or institute of technology) was included to capture potential variation between sectors, and a dummy variable to distinguish those in their final

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[11]   In the COVID-19 survey, information was collected on the experience of financial strain on the part of the young adult but no information is available on financial strain or job/income loss on the part of their parents.

[12]   Leaving Certificate candidates are assigned 'points' on the basis of the subject level taken and grade received; this is used for higher education entry purposes.

year of the course was included as this group might be expected to experience greater challenges.[13]

In looking at the likelihood of being in the 'depressed' group, a series of nested logistic regression models was used, with prior depression (at age 20) included to capture change relative to the earlier timepoint. To more directly model change, a multinomial logit model was used to compare those who became depressed during the pandemic and those who remained depressed between 20 and 22 years with those who did not experience depression at either timepoint. This approach was chosen over alternative approaches such as fixed effects modelling as the latter requires all dependent and independent variables to be repeatedly measured across waves, and the COVID-specific survey measures were often quite different from those collected at age 20 (in order to capture the pandemic experience). Further, such an approach cannot identify the effect of time-invariant variables (such as gender, mother's highest level of education). Given previous research on socio-emotional wellbeing has shown very different patterns for males and females (see Nolan and Smyth, 2021), directly capturing gender differences in results was considered crucial.

These nested models began by including the common background factors outlined above along with employment status in February 2020 (retrospectively reported by the young adult in December 2020) and added variables capturing employment disruption (lost full-time job, lost term-time job, moved to remote working and other changes) and disruption to learning (the scale of learning experiences and finding it difficult to study). Whether the young adult was living with their parents at the time of the survey was included in the model as this will affect the extent of social isolation and potential access to parental support. Direct experience of COVID-19 was captured using self-reports on whether the young adult themselves had had the illness and on whether a family member or close friend had had it.

Subsequently, four sets of factors expected to influence mental health in the wake of the pandemic were included separately. Firstly, peer factors measured at age 20 included the number of friends; whether they could rely on their friends (distinguishing between those who said 'always' and those who said 'sometimes', 'rarely' or 'never'); and whether they talked to their boy/girlfriend about their personal feelings. The disruption to peer networks caused by the pandemic was captured by measures of changes in face-to-face contact with friends, seeing their boy/girlfriend, and contact with friends online or by phone. Secondly, family factors measured at age 20 included how well they got on with family members

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[13]   No direct measure of year group was available, so this was proxied by being in full-time education in February 2020 and no longer in education in December 2020. This measure should be reliable given the very small number of respondents who reported dropping out of education during the pandemic.

(ranging from 0 'we don't get on at all' to 10 'we get on very well') and whether they talked to their mother and father about their personal feelings. A measure of potential changes in contact with family since the pandemic was also included. Thirdly, activities at age 20 included whether the young adult was involved in team sports or individual sports and whether they were involved in singing/playing a musical instrument, to capture participation in structured sports and cultural activities. Changes in involvement in sports, cultural activities and time spent outdoors since the pandemic were also included in the models. Fourthly, analyses were conducted on whether personal resources at age 20 helped protect the young adult from experiencing depression. The measures included coping strategies – both positive (such as talking to friends or parents) and negative ('taking to the bed', drinking) – and self-esteem (using the Rosenberg measure). Coping behaviour since the pandemic was captured by asking about potential changes in drinking alcohol, smoking/vaping, sleeping, eating junk food/sweets and informal screentime. The multinomial logistic model of changes in depression between 20 and 22 then looked at background factors, pandemic disruption, peer factors, family factors and personal resources simultaneously.

The focus was mainly on whether the young adult was above or below the depression threshold on the CESD-8 measure. However, sensitivity analyses were also conducted using the full range of scores, to look at whether the risk and protective factors remained the same.

A limitation of the analyses is the fact that some key characteristics such as type of job, relationship with peers and family and involvement in activities may have changed in the period between 20 years of age and the start of the pandemic. Nonetheless, the GUI study represents the only longitudinal study of the experience of young adults before and during the pandemic and the analyses provide rich insights into the way in which the disruption to their day-to-day lives impacted on their mental health. The study therefore provides an important source of evidence for policy development on mental health as well as education and employment.

1.5   REPORT STRUCTURE

In this report, we focus on disruption to employment, education and social activities, and associations with mental health and wellbeing, among the 22-year-olds from the '98 Cohort of *Growing Up in Ireland* (GUI). Using information from a dedicated COVID-19 survey that was carried out in December 2020, combined with information from earlier surveys at ages 9, 13, 17/18 and 20, we ask the following research questions:

- Which groups of young adults were more likely to experience job loss? What were the consequences of job loss for their wellbeing?

- How did the pandemic impact on young adults' educational experiences?

- How did the pandemic-related restrictions impact on contact with friends and family and on involvement in structured sports and cultural activities?

- Which groups of young adults experienced an increase in depressive symptoms between the ages of 20 and 22 years of age? What aspects of the pandemic experience had the greatest impact on the prevalence of depressive symptoms? What protective and risk factors were evident?

Chapter 2 provides a more detailed overview of the relevant national and international literature on these issues. Chapter 3 presents the results for disruptions to employment, education and social activities while Chapter 4 presents the results for mental health and wellbeing. We conclude in Chapter 5 with a summary and discussion of the findings, along with a set of implications for policy.

CHAPTER 2

Literature review

2.1   INTRODUCTION

In this chapter we provide an overview of recent evidence on the impact of the COVID-19 pandemic on the aspects of the lives of young people that are examined in this report, namely employment, education and social disruption, and mental health and wellbeing. The purpose of this chapter is to survey this recent evidence with a view to identifying the key themes and hypotheses that will be examined in the empirical analyses in Chapters 3 and 4.

Darmody et al. (2020) provide a detailed overview of the early international and Irish research on the impact of the COVID-19 pandemic on the lives of children and young people, and it is worth summarising the main findings from this review before presenting an overview of more recent evidence. The review focuses on four main domains of life: relationships with family and peers; education (covering formal and informal learning); physical and mental health and wellbeing; and transitions to post-school education, training and the labour market. In terms of the labour market, the review found that job loss was concentrated among younger and more disadvantaged groups, with concerns expressed over the longer-term 'scarring' effects of prolonged periods of unemployment on future career pathways and other outcomes (e.g. family formation). For mental health and wellbeing, there was evidence that deteriorations in mental health and wellbeing were more pronounced among young adults, and young women in particular. Concern was also expressed over the longer-term impacts of delayed access to mental health treatment and supports for those with more serious mental health needs. Across all domains of life, a key finding was that existing inequalities (by age, gender, socioeconomic status, etc.) were likely to have been exacerbated by the COVID-19 pandemic.

A key recommendation from the Darmody et al. (2020) study was the need for high-quality evidence on the impact of the COVID-19 pandemic. They note that many of the early studies were based on online or convenience samples. Whilst such surveys have the advantage of being quick to administer and thus flexible in responding to emerging issues, the findings cannot be generalised to the population as a whole due to the selective nature of study participants. The added benefit of evidence from longitudinal studies, which can control for prior characteristics and risk and protective factors, was also highlighted. Longitudinal studies will also provide an invaluable resource for tracking the medium- and longer-term impacts of the pandemic (Demakakos, 2021). As a result, we focus also on studies based on representative, ideally longitudinal, samples of the population.

The purpose of this chapter is therefore to update the evidence summarised in Darmody et al. (2020), focusing on more recent studies on employment, education and social disruption (Section 2.2) and mental health and wellbeing (Section 2.3) among young adults. Section 2.4 concludes with a summary of the main themes emerging from this evidence.

2.2 DISRUPTIONS TO EMPLOYMENT, EDUCATION AND SOCIAL ACTIVITIES

2.2.1 Job loss

As highlighted previously in Chapter 1, young people have been disproportionately affected by unemployment during the COVID-19 pandemic in Ireland. While other changes to employment have been common during the pandemic (e.g. movement to remote working, taking paid/unpaid leave, etc.), differences across age groups in these other aspects of employment change have been less stark than for job loss (Central Statistics Office, 2020b). The disproportionate impact of job losses on young workers is in part because they are more likely to work in sectors that have been most heavily affected by the public health measures put in place to suppress the spread of the virus (Beirne et al., 2020; Byrne et al., 2020). An analysis of changes over time indicates two patterns: workers in Ireland are likely to move out of sectors such as hospitality, retail and arts and leisure as they grow older; but the importance of these sectors for employment among young adults has been growing across generations, with almost 40 per cent of workers born between 1985 and 1994 working in retail, hospitality, arts or leisure in their mid-20s compared to around 20 per cent of those born in the 1970s (Roantree et al., 2021).

While previous experience shows that young people suffer 'scarring' effects from early unemployment (see Section 1.2.1 for further discussion), and entering the labour market during economic downturns, an additional concern relates to the pre-pandemic situation of younger workers. In Ireland, employment rates of those aged less than 25 on the eve of the pandemic were still far below the rates that were observed before the Great Recession. Most worryingly, the rate of 'not in employment, education or training' (NEET) among those aged 20-24 before the pandemic (at 13 per cent) was still in excess of the rate that was observed prior to the Great Recession (Roantree et al., 2021). Similar concerns over the already precarious starting position of young workers have been expressed by the OECD (OECD, 2020).

Data from international longitudinal surveys provide further insights into the disproportionate impact of COVID-related labour market shocks on younger

workers. Wielgoszewska et al. (2020) used data from four British cohort studies[14] to analyse changes in employment and effects on household finances (data collection was carried out in April and May 2020). Employment loss was widespread; the proportion of those previously working who stopped work altogether ranged from 30 per cent for those age 50, to 62 per cent for those aged 19.[15] While there was a broad balance between those who reported they were better off and those who said they were worse off in the younger generations (largely due to reduced opportunities for spending), existing inequalities were widened, with those who were 'living comfortably' before the lockdown most likely to report having become better off, and those who were 'struggling' most likely to report having become worse off. Similar results have been observed using data from Understanding Society, the UK Household Longitudinal Survey. Crossley et al. (2021) found that those with precarious employment, aged under 30 and from minority ethnic groups experienced the biggest labour market shocks (unemployment, changes in hours, earnings loss, etc.) during the early months of the pandemic (up to May 2020). The impact was also distributed unequally by pre-pandemic income; while approximately 50 per cent of individuals reported declines in household earnings of at least 10 per cent, declines were most severe in the lowest income quintiles.

Zhou and Kan (2021) extended the period of analysis to include the early months of 2021, thereby providing evidence on whether these early effects were sustained throughout the first year of the pandemic. Using data from Understanding Society[16] on working-age adults aged 20-65, they found that the scale of the disruption to employment and earnings was stark: one year after the onset of the pandemic in the UK, earnings were still 7.4 per cent lower than in the pre-pandemic period. Overall, the initial outbreak of COVID-19 and the first national lockdown brought the largest change in earnings and time use. Female workers experienced less reduction in their earnings than male workers, explained by the relatively high proportion of women working in essential industries such as health and social care. Non-degree holders were more severely affected by reduced earnings and hours than those with degrees.

Focusing on the links between employment and mental health in the UK during the COVID-19 pandemic, Ferry et al. (2021) used data from the first wave of the Understanding Society COVID-19 survey (carried out in April 2020) to examine how reduced working[17] impacted on psychological distress[18] in the early months of the

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[14] Aged 19 (from the Millennium Cohort Study), aged 30 (from Next Steps), aged 50 (from the British Cohort Study '70) and aged 62 (from the National Child Development Study).

[15] These figures do not include those who were 'furloughed', i.e. not working but still paid by their employer.

[16] Eight waves of the Understanding Society COVID-19 survey were analysed (2020: April, May, June, July, September, November and 2021: January and March).

[17] Includes those who became unemployed as well as those whose hours of work were reduced.

[18] Measured using the 12-item Generalised Health Questionnaire (GHQ).

COVID-19 pandemic, and also whether the effect on mental health differed depending on the reason for reduced working. They found that after adjusting for socio-demographic characteristics, there was a positive association between psychological distress and reduced working. However, this association was attenuated fully after controlling for baseline mental health and assessment of current financial situation. In terms of the association between reasons for reduced working and mental health, redundancy was associated with the largest negative effects; other types of reduced working (e.g. caring, furlough) were not associated with poorer mental health after adjustment for other confounders and baseline mental health. An important factor that attenuated associations between reduced working and poor mental health was subjective financial position, confirming prior research that found that negative effects of transitions such as unemployment and beneficial effects of reemployment were partially mediated by financial position (Thomas et al., 2007). Similar results were observed by Etheridge and Spantig (2020), again using data from Understanding Society.

Kromydas et al. (2021) examined the relative importance of income, poverty and work for mental health in the UK, using data over ten years (2009-2019) from Understanding Society. They found that moving into unemployment was most strongly associated with common mental disorder,[19] with poverty also important but income changes less so. Men were most sensitive to employment changes, while women were more sensitive to changes in poverty. Potential explanations for the finding that job loss was more harmful for male than female mental health include increased stigma associated with male unemployment and paid work being particularly central to masculine identity.

Disentangling the direction of the association between unemployment and mental health is challenging. For example, based on a systematic review of 17 studies, Bartelink et al. (2020) found an association between unemployment and poor mental health in young people (aged 16-30). However, there was less evidence that the relationship was causal, i.e. that unemployment leads to poorer mental health. For many of the studies, the association was attenuated when prior mental health difficulties were accounted for in the analysis. Similarly, Gessa et al. (2021) analysed the association between pre-existing psychological distress and disruptions since the start of the pandemic to healthcare (medication access, procedures or appointments); economic activity (employment, income or working hours); and housing (change of address or household composition) by pooling data across 12 UK longitudinal studies. In terms of economic activity, they found that those with prior psychological distress were significantly more likely to experience employment loss, reduction in income, and reduced hours/furlough. It is apparent

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[19]   Individuals with a score of 4 or greater on the 12-item GHQ were classed as suffering from 'common mental disorder'.

therefore that prior mental health is an important confounder that needs to be taken into account in statistical modelling.

2.2.2 Educational disruption

In contrast to the growing evidence base on the effects of the pandemic on school-going children and young people (Bray et al., 2021; Central Statistics Office, 2021a; Darmody et al., 2021; Émon et al., 2021; Mohan et al., 2021), relatively few studies have focused on the experiences of those in further and higher education. The OECD has noted that while higher education institutions replaced face-to-face lectures with online learning, they struggled with insufficient experience and time to develop new forms of instructional delivery and assessment. Examinations were affected, resulting in disruptions to learning and progression. Student wellbeing declined, and these declines were exacerbated by increases in financial difficulties due to widespread loss of term-time employment (OECD, 2021c). Data from a survey of European university students in April 2020 revealed a clear preference for face-to-face learning. In addition to viewing online alternatives as incomplete and insufficient, respondents also noted practical difficulties in terms of internet access, having a suitable place to study and access to adequate course materials (Doolan et al., 2021). Lack of physical learning opportunities and economic distress increase the risk of disengagement and dropout from education and training. While no data are available on dropout from further and higher education during the pandemic, the rate of 'not in employment, education and training' (NEET) among young people had been increasing prior to the pandemic. As discussed previously, for those aged 20-24 the NEET rate rose from 10 per cent in 2007 to 26 per cent in 2011, and, while it subsequently declined, the rate (13 per cent) had yet to return to its pre-crisis level on the eve of the pandemic (Roantree et al., 2021).

2.2.3 Social disruption

In addition to widespread disruptions to employment and education, the COVID-19 pandemic and public health restrictions have altered substantially the day-to-day activities of the population. While it is difficult to assess changes in levels of social contact from the pre-pandemic period (as these data were not routinely collected), data from the Social Activity Measure (SAM), a fortnightly survey of a stratified sample from an online panel of the Irish population aged 18+ that started in January 2021, show that those aged less than 40 have fewer daily contacts than those aged 40-69, although all age groups have been trending upwards in recent months from the lows of the strict lockdown period in early 2021 (Lunn, 2021). Data from the UK show a similar age gradient in contacts; data from the Avon Longitudinal Study of Parents and Children (ALSPAC) in the UK in April/May 2020 showed that younger participants (aged between 23 and 29 years of age) had fewer daily face-to-face contacts than older adults (aged 30 to 59), although those aged 60+ had the lowest number of daily contacts.

Promoting resilience[20] and self-efficacy[21] among the public has been identified as a key component of an effective government response to managing the transition period for easing the measures put in place to control the COVID-19 pandemic (Habersaat et al., 2020). Using data from Understanding Society in the pre-pandemic and pandemic (April-November 2020) periods, Johnston et al. (2021) examined the impact of seven different financial, human capital and social resources[22] on changes in psychological distress. They found that, contrary to expectations, financial resources did not affect the probability of suffering from a severe increase in psychological distress during the pandemic. By far the largest effect was found for self-efficacy, with those with higher self-efficacy scores pre-pandemic much less likely to experience an increase in severe psychological distress. Focusing on the activities that are associated with greater resilience during the pandemic, Killgore et al. (2020) found that spending time outdoors, daily exercise, family support, social support from friends, lower severity of insomnia, care and support from a significant other, and greater frequency of prayer were associated with higher resilience in a sample of US adults. In terms of social support, experience of COVID-19 illness may itself affect relationships. For example, Hu and Qian (2021) found that family members' experiences of COVID-19 symptoms and illness undermined adolescents' peer relationships. This may be because COVID-19 symptoms or illness entailed self-isolation and social distancing that directly restricted the adolescents' peer interactions. Furthermore, the authors suggest that stigmas associated with COVID-19 may have rendered the adolescents susceptible to being bullied and socially marginalised.

A related literature considers the coping strategies that individuals use to deal with stressful events. In terms of health behaviours, evidence from previous recessions suggests that some unhealthy behaviours such as drinking, smoking and unhealthy eating decline (Adda et al., 2009; Jofre-Bonet et al., 2018; Ruhm and Black, 2002). Section 1.2.3 provided an overview of data from the Healthy Ireland Survey (conducted over the period October 2020 – March 2021), which showed relatively larger declines in drinking and smoking behaviour among young adults than among other age groups during the pandemic. Evidence from the UK points to similar effects. Niedzwiedz et al. (2021) used data from Understanding Society to examine changes in mental health and health behaviours from the pre-pandemic period in the UK. They found that smoking declined, but binge drinking and frequent drinking (drinking four or more days per week) increased (although only in those aged 25+). Clay et al. (2021) used data from four UK cohort studies[23] to examine changes in alcohol consumption in the early months of the pandemic. For all age

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[20] Resilience refers to the ability of individuals to adequately cope with disruptive events and adversity (Johnston et al., 2021).

[21] Self-efficacy reflects having a self-confident view of one's capability to deal with life's stressors (Johnston et al., 2021).

[22] Income, savings, debt, cognition, religiosity, social capital and self-efficacy.

[23] MCS (age 19), Next Steps (age 30), BCS70 (age 50), NCDS (age 62).

groups, alcohol consumption either stayed the same or declined. Using data from eight UK longitudinal studies, Wielgoszewska et al. (2021) found that those who were furloughed were more likely than those who remained working to report increased fruit and vegetable consumption, exercise, and hours of sleep. Unemployment (rather than furlough) was associated with 'atypical sleep'[24] in 16-29-year-olds only.

2.3   MENTAL HEALTH AND WELLBEING

A large and growing body of evidence has been tracking the impact of the pandemic on the mental health and wellbeing of young people. Section 1.2.4 provided an overview of Irish data (from the CSO and Healthy Ireland) showing widespread declines in mental health and wellbeing over the course of the pandemic, with young people experiencing both higher rates of mental ill-health prior to the pandemic, and greater declines during the pandemic. In terms of risk and protective factors for mental health and wellbeing decline during the pandemic, a number of direct and indirect mechanisms have been identified (Chandola et al., 2020; Gruber et al., 2021; Hu and Qian, 2021; Le and Nguyen, 2021; Preetz et al., 2021; Serrano-Alercon et al., 2021). The pandemic may have a direct effect on mental health and wellbeing via increased fear, anxiety and stress about one's own and family members' risk of infection, illness or hospitalisation due to the virus (Le and Nguyen, 2021). Focusing on indirect mechanisms among young adults in particular, Preetz et al. (2021) put forward two primary hypotheses for mental health deterioration as a result of the pandemic:

- the COVID-19 pandemic may particularly hurt young adult's educational and occupational opportunities;

- the COVID-19 crisis has also changed young adults' interpersonal relationships, via social distancing rules, the closure of public and educational facilities, and restricted mobility which limits the amount of time spent with family members, peers, and partners.

Stroud and Gutman (2021) examined the trajectory of mental health[25] in young adults aged 18-25 over the period April-November 2020 in the UK using data from the Understanding Society COVID-19 surveys. The results showed that mental health scores were at their worst in April, improved somewhat over the summer months, but started to deteriorate again from September. Females, those with a pre-existing mental health condition, and those with low household income were found to be particularly vulnerable to poor mental health during the period. In

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[24]   Hours outside of the 'typical' 6-9 hour range.
[25]   Mental health was measured using the 12-item Generalised Health Questionnaire (GHQ). The 12-item GHQ focuses on; concentration, loss of sleep, playing a useful role, ability to make decisions, coping under the stain, overcoming difficulties, enjoying activities, facing problems, depression and unhappiness, confidence, feeling worthless and general happiness (Gao et al., 2021).

addition to their poorer mental health overall, the scores of females were also more closely aligned with the lifting and imposition of lockdown restrictions. Behavioural risk factors for poor mental health included alcohol and tobacco consumption, but these factors did not affect the trajectory of mental health over the study period.

In a similar analysis using Understanding Society, Gagné et al. (2021) extended the time period to consider time trends in GHQ scores among young adults aged 16-24 between 2009 and September 2020. They found that psychological distress (as measured by the GHQ score) increased over the period, with young women, younger adults (those aged 16-18) and those living in the most deprived areas experiencing the greatest increase in psychological distress.

Kwong et al. (2021) examined how various indicators of mental health and wellbeing (depression, anxiety and mental wellbeing) changed between the pre-pandemic and pandemic periods for young adult respondents to the Avon Longitudinal Study of Parents and Children (ALSPAC) survey in the UK (average age 28).[26] Unlike other British studies, the percentage of young adult ALSPAC participants with probable depression was found to be lower during the pandemic, at 18 per cent compared with 24 per cent at the most recent pre-pandemic assessment. However, the percentage of participants with probable anxiety disorder almost doubled during the pandemic (to 24 per cent from 13 per cent), as did the percentage experiencing lower wellbeing (from 8 per cent to 13 per cent). Higher depression and anxiety were experienced by young women during the pandemic in comparison with young men. Other risk factors for depression, anxiety and lower wellbeing in this cohort included financial problems, prior history of mental health problems and poorer health behaviours (e.g. alcohol abuse). A similar analysis on the same dataset, focusing on transitions in anxiety, found that almost 15 per cent of young adults were 'persistently anxious' between April and June 2020 (Kwong et al., 2020). Females, those with pre-existing mental health conditions, a history of financial problems and those who had reported difficulties accessing mental health information were at greater risk of persistent anxiety.

While focusing on slightly younger age groups, two studies provide insights into the risk and protective factors for mental health outcomes during the pandemic. Essau and de la Torre-Luque (2021) examined the role of different psychopathological profiles at age 17 in predicting the impact of the COVID-19 pandemic on mental health at age 19.[27] Profiles were constructed using latent class

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[26]   Data from the ALSPAC parents sample (average age 59) and Generation Scotland (average age 59) were also examined, but these results are not summarised here.

[27]   Four indicators of mental health were examined: the Kessler Distress Scale, the Warwick-Edinburgh Mental Wellbeing Scale, Patient Health Questionnaire, and Generalized Anxiety Disorder Scale.

analysis of 11 indicators of problematic behaviours (e.g. substance abuse, poor sleep, etc.) and poor mental health. Using data from the Millennium Cohort Study (MCS), they identified four distinct groups at age 17: 'low-symptom' (60 per cent), 'high symptom' (23 per cent), 'substance/behavioural addictions' (12 per cent) and 'emotional dysregulation' (5 per cent). Young adults in the 'high symptom' and 'emotional dysregulation' classes (who were predominately female) had the worst mental health outcomes during the pandemic. Hu and Qian (2021) also used data from Understanding Society, but focused on adolescents aged 10-16, and changes in their Strengths and Difficulties Questionnaire (SDQ) scores between pre-pandemic and July 2020. The analysis showed that adolescents with relatively low levels of socio-emotional difficulties before the pandemic experienced a notable worsening of such difficulties during the pandemic. In contrast, those with greater socio-emotional difficulties before the pandemic experienced an improvement in all five SDQ subscales. The authors note that it is possible that enhanced parent-child interactions and increased adult supervision during the pandemic have helped ameliorate difficulties among adolescents with a high level of pre-existing difficulties. The adverse effects of the pandemic were found to be particularly severe in one-parent, one-child, and low-income families, highlighting the importance of parent-child and peer interactions as well as economic resources in shaping adolescents' mental resilience and vulnerability during the pandemic.

Gruber et al. (2021) note that the pandemic is a multi-dimensional stressor, affecting individual, family, educational, occupational, and medical systems. They also discuss how the protections needed to safeguard against infection (social distancing, stay at home orders, etc.) impede access to protective factors that are known to promote wellbeing such as social relationships, enjoyable activities, etc. A number of articles have examined the role of increased loneliness in explaining deteriorating mental health and wellbeing over the course of the pandemic. Using data from the Understanding Society COVID-19 surveys, Hu and Gutman (2021) examined the trajectory of loneliness in young adults (aged 18-25) from June to November 2020. They found a U-shaped trend in self-reported loneliness, with a sharp rise during the winter months (when restrictions were re-introduced in the UK). Young adults with long-standing physical or mental health conditions, those with lower household income, and those who were unemployed or not in education reported higher levels of loneliness. Greater emotional support was associated with less loneliness in males, but not in females. Similar findings were also reported by Bu et al. (2020). Etheridge and Spantig (2020) also identified a difference between men and women in the role of social networks in explaining wellbeing declines during the pandemic. Using data from Understanding Society, they found that most of the gender gap was explained by social factors: having a larger social network before the pandemic was strongly associated with larger wellbeing declines. Women reported more close friends before the pandemic than men, and higher loneliness than men after the start of the pandemic.

Most studies focus on broad, validated measures of wellbeing that are employed in population surveys, rather than measures that identify young people with clinical diagnoses. However, the prevalence of mental health difficulties among some young people highlights the role for primary care and specialist services as well as broader preventive strategies. In Ireland, for those requiring specialist mental health treatment, the suspension of treatment in the early months of the pandemic and subsequent social distancing measures have further lengthened already long waiting times for mental health care and treatment (Brick et al., 2020; McNicholas et al., 2021).

Finally, it is worth noting that a number of early papers from the UK suggested that after an initial sharp drop, mental health and wellbeing recovered as restrictions were eased over the summer of 2020 (Fancourt et al., 2021; Gagné et al., 2021). However, more recent analyses suggest that these findings may have been premature (Patel et al., 2021; Pierce et al., 2020; Zhou and Kan, 2021). Pierce et al. (2020) also note that some of the results that showed 'bounce back' in mental health after initial lockdown were based on convenience samples (and health-related attrition could have accounted for these findings).

2.4   SUMMARY

In conclusion, there is a fairly substantial emerging literature on the effects of the pandemic on job loss, mental health and wellbeing, and their interactions. This research has identified greater difficulties among younger adults and among those with pre-existing mental health difficulties. While it is difficult to identify the direction of the association between job loss and poor mental health, prior financial situation emerges as an important mediator of the association. Reflecting on the multidimensional nature of the COVID-19 pandemic (i.e. it is not solely an economic shock like previous recessions), the literature has highlighted the fact that the measures put in place to protect public health during the COVID-19 lockdowns impeded access to protective factors that are known to protect young adults' mental health (e.g. participation in sports and cultural activities, contact with friends, etc.).

These studies have largely focused on disruption to employment and, to some extent, social activities. However, there has been much less focus on the disruption to higher education experiences or to the full range of activities (including sports and cultural activities) in which young adults engage, and how these interact with mental health. Building on the existing literature, the current study addresses this gap by looking at the effects of the disruption to education, employment and day-to-day activities on mental health among young adults. It also takes advantage of the longitudinal nature of *Growing Up in Ireland* to seek to identify risk and protective factors, as well as coping strategies that may have helped young adults to fare better during the pandemic.

CHAPTER 3

The impact of the pandemic on employment, education and social activities among young adults

3.1   INTRODUCTION

This chapter outlines the scale of disruption experienced by 22-year-olds during the pandemic. Section 3.2 looks at the extent of job loss and other employment changes among the young adults while Section 3.3 examines the disruption to their education. Section 3.4 outlines the extent to which social activities, such as contact with friends and involvement in physical exercise, were curtailed in the wake of public health restrictions.

3.2   EMPLOYMENT LOSS AND DISRUPTION

Chapter 1 has outlined the disproportionate job loss suffered by young adults during the pandemic. The COVID-adjusted unemployment rates do not distinguish between those who were previously in employment as their main activity and those who were full-time students and lost their part-time (term-time) jobs, but an advantage of the GUI survey data is that they can be used to disentangle the relative effects of the two kinds of job loss. As context, it is worth examining the employment status of the 22-year-olds just before the pandemic hit – in February 2020.[28] A majority (63 per cent) were then in full-time education, including the 16 per cent who were combining their education with part-time employment (Figure 3.1). Just under a third of the cohort were in employment while 5 per cent were not in employment, education or training (NEET).[29]

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[28]   It should be noted that the figures for the proportion in employment differ from those reported by the GUI Study Team (2021) as the latter includes 'those who were in employment at the start of the pandemic or at some time since then'.

[29]   NEET prevalence for Cohort '98 22-year-olds is therefore lower than for 20-24-year-olds in the Irish population as a whole. This may reflect higher attrition rates among the NEET group over waves (even taking account of weighting).

FIGURE 3.1   STATUS OF 22-YEAR-OLDS IN FEBRUARY 2020 (%)
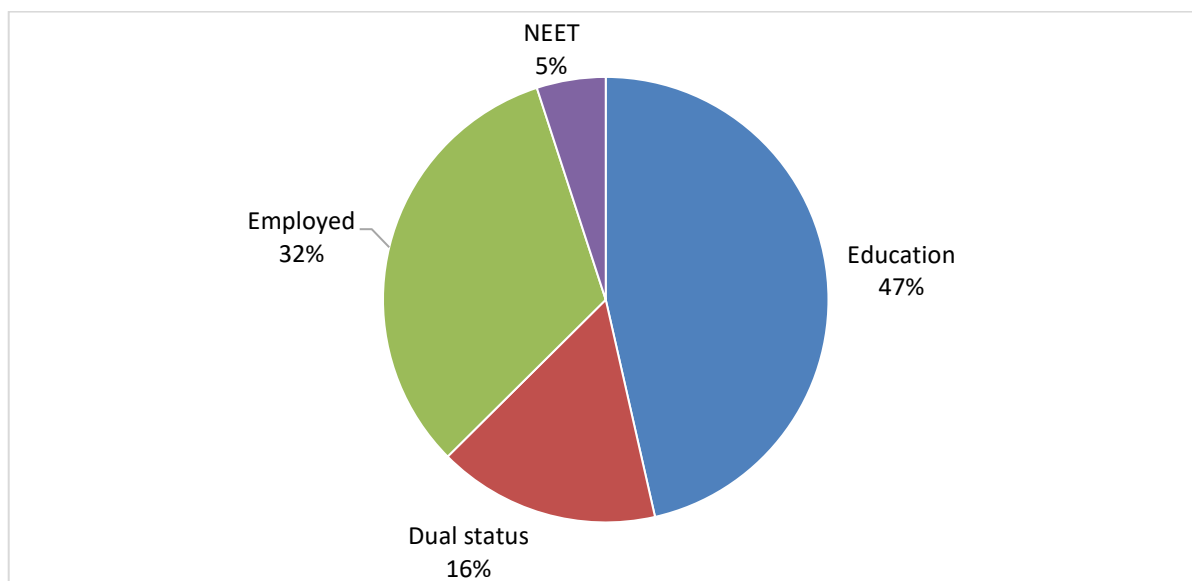
Source: COVID-19 Survey of Cohort '98.

Young adults from more advantaged families were more likely to still be in full-time education in February 2020; over four-fifths (82 per cent) of those whose mothers had degrees were in education compared with 46 per cent of those whose mothers had lower secondary education. Those whose mothers had lower levels of education were more likely to be in employment full-time or in the NEET category.

FIGURE 3.2   TYPES OF DISRUPTION TO EMPLOYMENT DUE TO THE PANDEMIC (% OF THOSE WORKING IN FEBRUARY 2020)
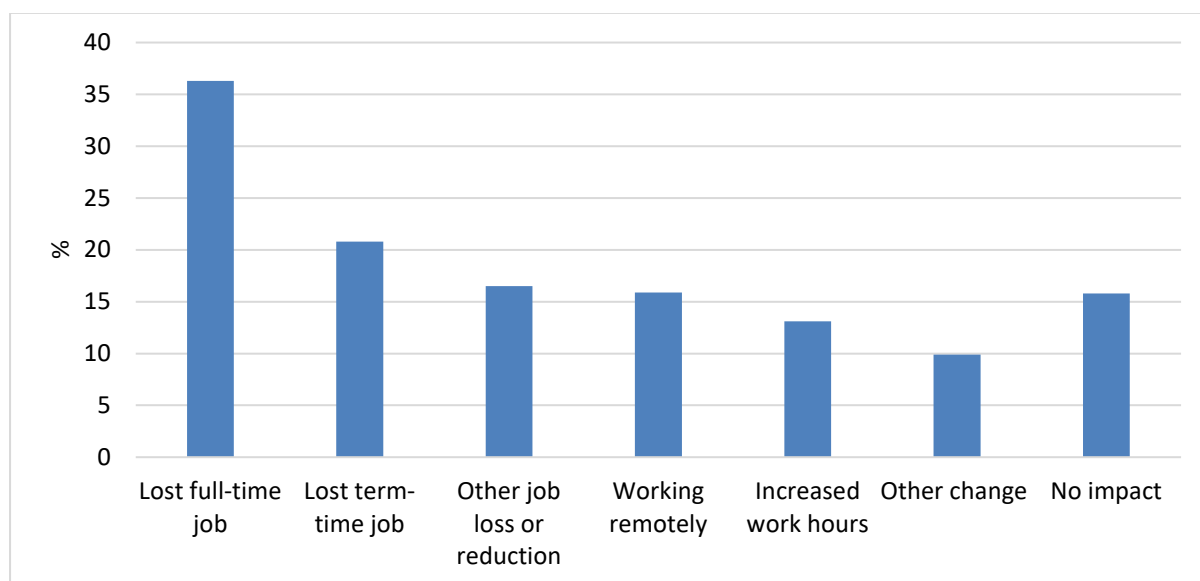
Source: COVID-19 Survey of Cohort '98.
Note: All respondents who were working or in an apprenticeship in February 2020 (or anytime in the period up to December 2020) were asked 'was your employment situation or way of working affected by COVID-19 in any of the following ways?'. Respondents were asked to tick all that applied. Those that ticked 'none of the above' were coded to the 'no impact' group.

Of those in employment (either as their main activity or while studying) at the start of the pandemic, the vast majority (84 per cent) experienced some type of employment disruption (Figure 3.2). The most common forms were losing a full-time job (36 per cent) or losing a term-time job (21 per cent). The term 'full-time' is used to indicate those whose main activity was employment. It is possible that some of this group were working part-time hours but this cannot be determined from the survey data. The 22-year-olds were much more likely to have experienced job loss than the parents of the 12-year-olds from Cohort '08; around a fifth of parents previously in employment had lost their jobs, less than half the levels of loss found for young adults (*Growing Up in Ireland* Study Team, 2021). Only 16 per cent of the young adults had started working remotely or increased the hours they worked at home; this was much lower than the comparable figures of over four-in-ten of the parents of Cohort '08 (mostly aged in their 30s and 40s) (*Growing Up in Ireland* Study Team, 2021).

Table 3.1 shows the results of logistic regression models of the factors associated with job loss for those who had been in full-time and term-time employment respectively. The results are presented as odds ratios. Odds greater than 1 mean that a group (e.g. young people from lone-parent families) was more likely to experience job loss than those in the reference group (i.e. those from a two-parent family background). An odds ratio of less than 1 indicates that the group has lower odds of experiencing job loss. Model 1 shows the background factors linked with job loss while Model 2 analyses the smaller number of cases with information on prior characteristics. There is little systematic variation by family background characteristics, perhaps reflecting the sectoral nature of job loss. However, young adults from a lone-parent family were much more likely to have experienced loss of their main job. It is difficult to determine the reasons behind this pattern; further analyses (not shown here) suggest that the concentration of lone-parent families in more deprived areas may play a part, but a large difference remains unexplained. Furthermore, those in urban areas were significantly less likely than those in rural areas to lose either their main or term-time job, when other background factors are taken into account. There were no overall differences in job loss rates between those with and without a disability.[30]

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[30] The fact that disability becomes significant in Model 2 merely reflects the very strong relationship between having a chronic illness/disability and lower exam performance. Additional analyses (not shown here) using the measure of chronic illness/disability at 20 (rather than at age 9) show very similar patterns.

TABLE 3.1   LOGISTIC REGRESSION MODELS OF EMPLOYMENT LOSS AMONG 22-YEAR-OLDS IN EMPLOYMENT IN FEBRUARY 2020 (ODDS RATIOS), CONTRASTED AGAINST THOSE WHO EXPERIENCED NO JOB LOSS

Coefficients	Lost main job		Lost term-time job	
	Model 1	Model 2	Model 3	Model 4
Intercept	0.738	0.312	1.882	6.662
Female	1.102	1.042	1.028	0.370*
Mother's education:				
Leaving Certificate	0.782	0.685	0.704	0.893
Post-secondary	0.844	0.769	0.692	1.085
Degree or higher	0.852	0.961	0.845	0.480
(Ref.: Lower secondary)				
Lone-parent family	2.449***	3.363***	0.833	0.828
Migrant origin	1.334	1.239	2.300	2.703
Urban	0.722*	0.495**	0.753	0.423*
Chronic illness/disability (at 9)	0.776	0.449*	1.654	2.267
Family financial strain at 20	0.935	0.841	0.849	0.669
Leaving Certificate points:				
300-400		0.914		0.243±
>400		0.186***		0.187*
(Ref.: <300/LCA/ESL)				
In higher education at 20		1.786±		0.532
Perceived job security at 20		1.127*		1.194*
Type of job at 20:				
Professional/managerial		0.246*		2.174
Skilled		2.767**		0.377
Semi/unskilled		1.366		1.892
(Ref.: Non-manual)				
Nagelkerke R^2	5.2	23.6	3.0	20.7
N	529	300	388	165

Source: COVID-19 Survey and Wave 4 Survey of Cohort '98.
Notes: LCA – Leaving Certificate Applied Programme; ESL – early school leaver (i.e. left prior to Leaving Certificate).
        *** $p<.001$; ** $p<.01$; * $p<.05$; ± $p<.10$.

In Model 2, it is clear that having received higher Leaving Certificate grades is protective against job loss (both for main and term-time jobs). Loss of a main job was significantly more likely among those who had been in skilled occupations (most likely reflecting the closure of the construction sector) and much less likely among those who had been in professional/managerial jobs. However, loss of term-time work did not vary by type of job at 20. Somewhat surprisingly, job loss was greater among those who perceived the job they held at 20 as more secure. This could reflect the nature of business closures which were largely sectoral rather than involving the shedding of less secure jobs within sectors. In addition, we cannot determine whether the young adults were in the same job as they had been at 20, so some may have moved occupations and/or sectors in the intervening period.

The extent to which job loss impacted on the mental health and wellbeing of the 22-year-olds is explored in Chapter 4. Here we look at the extent to which job loss was associated with higher levels of financial strain for young adults or whether the Pandemic Unemployment Payment (PUP) played a role in mitigating these effects. Overall, just over a tenth (11 per cent) of the young adults reported difficulty or great difficulty making ends meet at the time of the survey; this is higher, but not remarkably so given the scale of job loss, than the 7 per cent reported at age 20. What is notable too is that financial strain is only slightly higher among those who lost their full-time job (13 per cent) than among those who lost their term-time job (9 per cent) or those who remained in employment (9 per cent) and this difference is not statistically significant.

Two other sets of factors may influence the experience of financial strain: living in the parental home and receipt of PUP or other social welfare payments. At the time of the survey, 72 per cent of the young adults were living with their parents (or guardians); this figure is made up of 51 per cent who were in this situation before and during the pandemic and 21 per cent who moved back in with their parents during the pandemic. Moving back in with parents was more common among those who had been in full-time education at the start of the pandemic, presumably reflecting the shift to remote learning and no further requirement to rent term-time accommodation. The vast majority (90 per cent) of those who lost their jobs reported receiving the PUP. It is unclear on the basis of available data why the remainder did not do so, and the numbers are too small for further analysis; they may have been in irregular jobs and so unable to establish eligibility.

TABLE 3.2 LOGISTIC REGRESSION MODELS OF THE FACTORS ASSOCIATED WITH FINANCIAL STRAIN (DIFFICULTY OR GREAT DIFFICULTY MAKING ENDS MEET) AMONG 22-YEAR-OLDS (ODDS RATIOS), CONTRASTED AGAINST THOSE WHO DID NOT REPORT FINANCIAL STRAIN

	Model 1	Model 2
Intercept	0.104	0.109
Female	1.468**	1.435*
Mother's education:		
Leaving Certificate	0.913	0.919
Post-secondary	0.680±	0.688
Degree or higher	0.570*	0.562*
(Ref.: Lower secondary)		
Lone-parent family	1.493***	1.511*
Migrant origin	1.699*	1.705*
Urban	1.170	1.168
Chronic illness/disability (at 9)	1.188	1.195
Family financial strain at 20	1.981**	2.013**
Living with parents at 22	0.850	0.835
Prior employment status:		
Dual status	0.892	0.945
Employed	0.691±	0.712
NEET	2.393**	2.190**
(Ref.: Full-time education)		
Lost main job	1.457	1.960*
Lost term-time job	0.806	1.093
Received Pandemic Unemployment Payment		0.669±
Received other social welfare payment		1.230
Nagelkerke R^2	6.1	6.5
N	2,224	2,224

Source: COVID-19 Survey and Wave 4 Survey of Cohort '98.
Note: NEET – not in education, employment or training. *** $p<.001$; ** $p<.01$; * $p<.05$; ± $p<.10$.

A number of family background factors were significantly associated with experience of financial strain, that is reporting difficulty or great difficulty making ends meet. Young adults were more likely to report financial strain if they were from a lone-parent family, were of migrant origin, were from families experiencing financial strain when they were 20, or were from less highly educated families. Living with parents during the pandemic did not appear to have a protective effect but this may reflect the high proportion of 22-year-olds doing so at the time of the survey (72 per cent). Over and above other factors, women were more likely to experience financial strain than men. It is not clear what accounts for this pattern, but it is worth noting that women were also more likely to report higher levels of strain than men at the age of 20 (O'Mahony et al., 2021). Those who had NEET status prior to the pandemic were more than twice as likely as those who had been in full-time education to report financial strain. Interestingly, those who lost their jobs – either their main job or a term-time job – did not differ from other young adults in their experience of financial strain. Model 2 suggests that receipt of the PUP is protective against financial strain; the coefficient is at the margins of

significance (p<.10), but this reflects the very small numbers who lost their jobs but did not claim PUP. In fact, losing a main job in Model 2 is now significantly associated with financial strain; in other words, those who lost their job but did not claim PUP were much more likely to suffer financial difficulties.

3.3   DISRUPTION TO EDUCATION

While a number of studies have documented the effects of the pandemic on school-going children and young people (Darmody et al., 2020), little evidence has been available to date on the experiences of those in further and higher education. In the COVID-19 survey, those who were in education/training when the pandemic hit were asked a number of questions about the conditions for learning and the kinds of provision made by their educational institution. The vast majority (91 per cent) reported that it was 'always true' that they had access to a laptop or PC to do their work, a higher figure than that reported by the 12-year-olds surveyed (74 per cent of whom said it was always true). Half of the group said it was 'always' true that they had adequate broadband to engage with online learning while 41 per cent said this was sometimes true and 9 per cent that it was not true. A similar pattern was evident for having access to a quiet place to study, with 46 per cent reporting this was always true, 47 per cent sometimes true and 7 per cent not true.

Figure 3.3 shows the nature of provision from educational institutions during the pandemic. Not surprisingly, given the largescale closures, the young adults reported a shift away from on-campus classes, though around a third continued to have at least some on-site learning. Three-quarters indicated regular live online lectures or classes but for over a fifth this was more irregular ('sometimes true') and a small number (4 per cent) reported no live classes. There was greater variation in the extent to which respondents always received links to online learning resources (with 44 per cent indicating they always did so) while less than a third (30 per cent) said they received regular feedback on their work. The majority (75 per cent) reported at least some contact with course mates.

FIGURE 3.3 **NATURE OF EDUCATIONAL PROVISION EXPERIENCED DURING THE PANDEMIC (AMONG THOSE IN EDUCATION IN FEBRUARY 2020)**
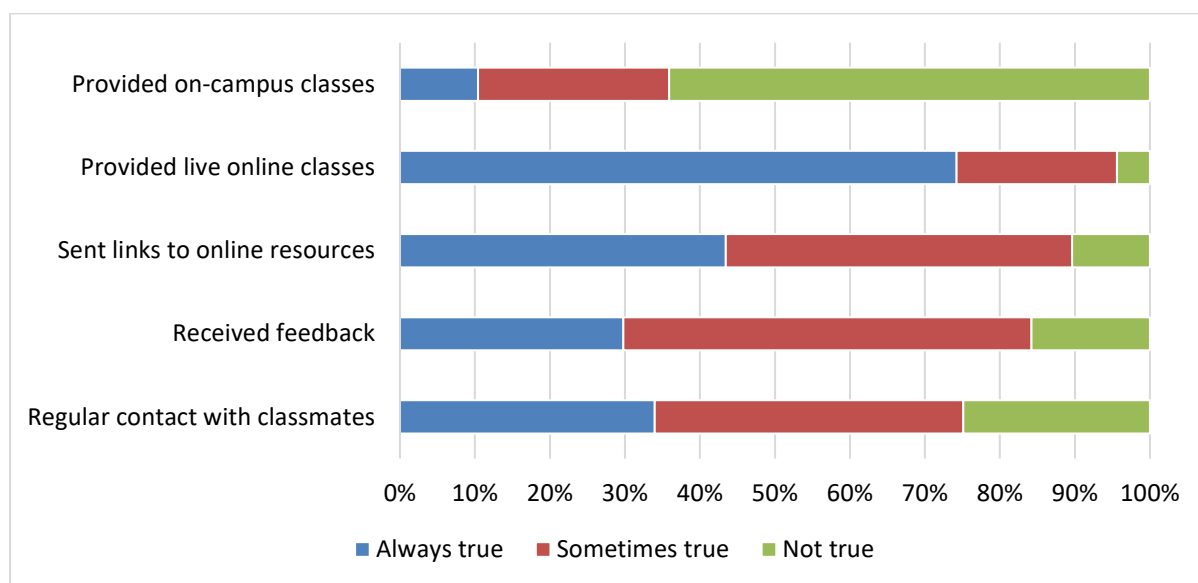
Source: COVID-19 Survey of Cohort '98.
Note: All respondents who were engaged in a full- or part-time education course in February 2020 (or anytime in the period up to December 2020) were asked 'please say whether each of the following is always true, sometimes true or not true'.

As well as capturing the nature of provision, the young adults were asked about how they had found remote learning and the potential disruption to aspects of their learning. Only a fifth of those in education/training reported no appreciable impact of the pandemic restrictions on their learning. Some of the young adults felt they enjoyed the chance to learn on their own, with 12 per cent describing this as always true and 49 per cent as sometimes true. However, over half (57 per cent) found it difficult to study in the circumstances. Other disruption included not getting to take exams (27 per cent), not doing as well as expected (22 per cent), not getting to do work experience/an internship (23 per cent) and dropping out of their course (3 per cent).

FIGURE 3.4   IMPACT OF CHANGES IN EDUCATIONAL EXPERIENCES (AMONG THOSE IN EDUCATION IN FEBRUARY 2020)
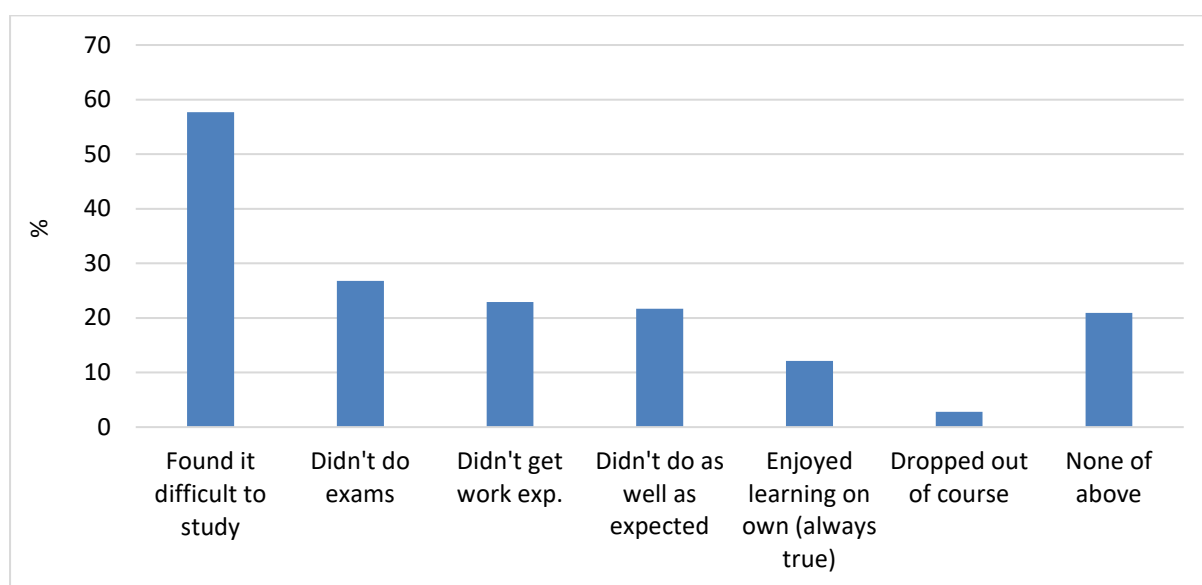
Source: COVID-19 Survey of Cohort '98. The percentages total to more than 100 per cent as respondents were asked to indicate all that apply.

The items on the nature of provision and access to educational resources in the pandemic along with enjoyment of learning alone[31] were combined to give an overall measure of learning experiences during the pandemic, with higher values indicating more positive experiences. There is little systematic variation by individual characteristics with these explaining only 4 per cent of the variation in experiences (Table 3.3). Women reported significantly poorer experiences than men. Those whose mothers had Leaving Certificate or post-secondary qualifications had worse experiences than those with mothers with lower secondary or degree-level qualifications, though there is no apparent reason for this pattern. Other factors such as migrant status, being from an urban area and illness/disability were not significantly related to the quality of the learning experience. Those who were living with their parents reported a somewhat more positive learning experience, most likely reflecting their access to resources such as a quiet place to study or broadband.

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[31]   The items were: having a quiet place to study; access to a laptop/PC; good enough broadband; live online classes; on-campus classes; online learning resources; regular feedback; contact with classmates; and enjoyed learning on my own. The items were totalled to give an overall scale with a reliability of 0.64.

TABLE 3.3   ORDINARY LEAST SQUARES (OLS) REGRESSION MODEL OF THE FACTORS ASSOCIATED WITH MORE POSITIVE EDUCATIONAL EXPERIENCES DURING THE PANDEMIC

	Coefficients
Intercept	20.642
Female	-0.955***
Mother's education:	
Leaving Certificate	-0.495*
Post-secondary	-0.579*
Degree or higher	0.240
(Ref.: Lower secondary)	
Lone-parent family	0.436±
Migrant origin	0.204
Urban	-0.291
Chronic illness/disability (at 9)	-0.334
Family financial strain at 20	-0.380
Living with parents at 22	0.410*
Leaving Certificate points:	
300-400	-0.455
>400	0.269
No information	-0.746±
(Ref.: <300/LCA/ESL)	
Educational institution at 20:	
Institute of Technology/TU	-0.063
Other	-0.298
(Ref.: University)	
In final year of course	-0.404*
(Ref.: in other year of course)	
Nagelkerke R²	4.3
N	1,322

Source: COVID-19 Survey and Wave 4 Survey of Cohort '98.
Note: NEET – not in education, employment or training. *** p<.001; ** p<.01; * p<.05; ± p<.10.

It might have been expected that those with higher prior performance might be better able to cope with independent learning but no such pattern was evident. Because of space limitations, the COVID-19 survey did not collect information on the type of course or institution attended in 2020. Using institution at 20 as a proxy measure for current institution, no variation was found by type of institution. Status in February and December 2020 was used to derive a proxy measure identifying those who were in their final year at the onset of the pandemic.[32] This group were more negative about their learning experiences, which may reflect uncertainty about the nature of their final assessments for the course.

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[32]   A limitation of this measure is that it will not identify those who progressed immediately from an undergraduate to a postgraduate course or between courses of different kinds.

TABLE 3.4   LOGISTIC REGRESSION MODEL OF THE FACTORS ASSOCIATED WITH FINDING IT DIFFICULT TO STUDY DURING THE PANDEMIC (ODDS RATIOS)

	Coefficients
Intercept	29.730
Female	0.960
Mother's education:	
Leaving Certificate	0.949
Post-secondary	0.727
Degree or higher	0.735
(Ref.: Lower secondary)	
Lone-parent family	1.062
Migrant origin	1.133
Urban	1.333*
Chronic illness/disability (at 9)	0.889
Family financial strain at 20	0.964
Leaving Certificate points:	
300-400	2.153***
>400	1.235
No information	0.920
(Ref.: <300/LCA/ESL)	
Educational institution at 20:	
Institute of Technology/TU	0.774±
Other	0.761
(Ref.: University)	
In final year of course	0.502***
Experiences of learning during the pandemic	0.864***
Nagelkerke R^2	10.9
N	1,644

Source: COVID-19 Survey and Wave 4 Survey of Cohort '98.
Note: NEET – not in education, employment or training. *** $p<.001$; ** $p<.01$; * $p<.05$; ± $p<.10$.

A different dimension of the educational experience, reported difficulty in being able to study, did not vary by gender or social background (Table 3.4). However, difficulties were somewhat greater among those from urban areas. The group with medium (300-400) Leaving Certificate points reported the greatest difficulties studying. Those in their final year of education reported much fewer difficulties studying than those at other stages, which most likely reflects the fact that these students may already have established regular study habits which they could sustain during the period of restrictions. In addition, having had a more positive experience of learning during the pandemic was associated with less difficulty studying.

3.4   DISRUPTION TO SOCIAL ACTIVITIES

The COVID-19 survey covered the disruption to social activities resulting from pandemic-related restrictions by asking 22-year-olds whether they were doing specific activities more, about the same or less than previously. Some respondents answered 'doesn't apply', indicating that, for example, they had not engaged in

sports/physical exercise prior to the pandemic. The survey covered a period when face-to-face contact with non-household members was curtailed for at least part of the time while indoor structured activities (such as gym or drama classes) were restricted.

FIGURE 3.5   CHANGES IN ENGAGEMENT IN SOCIAL ACTIVITIES
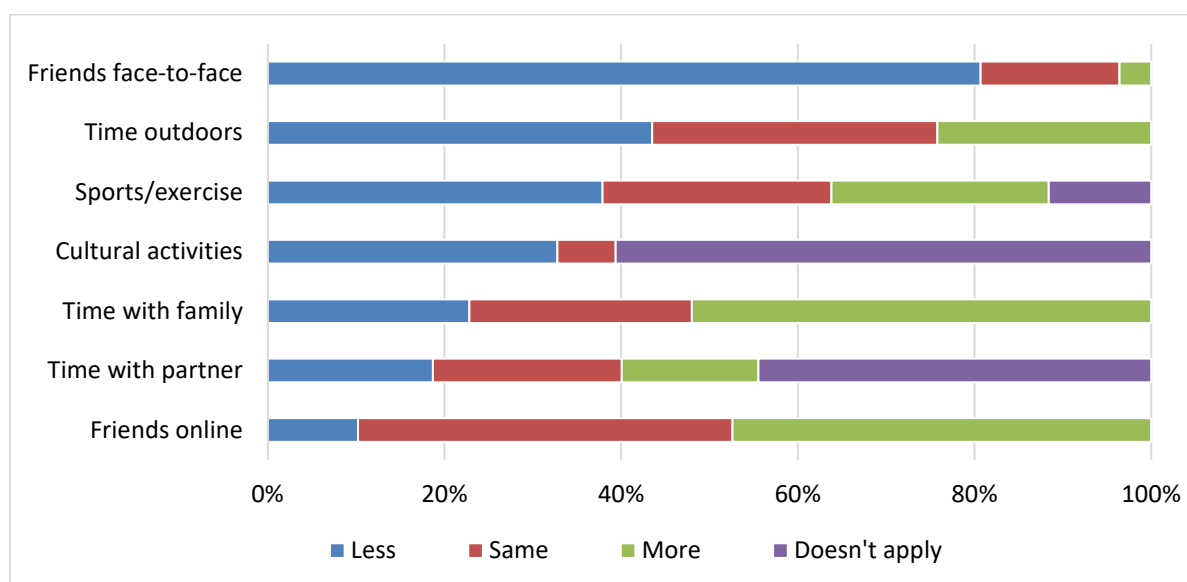
Source: COVID-19 Survey of Cohort '98.
Note: For seeing friends face-to-face or online, spending time outdoors and spending time with family, the numbers stating 'doesn't apply' were too small to report.

Figure 3.5 shows the scale of disruption to social activities. The greatest change reported related to face-to-face contact with friends, with four-fifths saying they had less contact than previously. The degree of online or phone contact with friends increased for almost half (47 per cent) of the group while time with family increased for just over half (52 per cent) of the 22-year-olds. Fewer of the cohort (55 per cent) had a boy/girlfriend but among those who did, the groups who indicated an increase or a decrease in the time they spent with them were similar in size. It is noteworthy that the reduction in time spent with a partner was much lower than face-to-face time with friends (of those with a boy/girlfriend about a third reported less contact, compared with 81 per cent for friends). Involvement in sports/physical exercise and time spent outdoors both declined for about four-in-ten of the young adults but these activities increased for around a quarter of the cohort. Fewer young adults had engaged in organised cultural activities before the pandemic (with only 40 per cent doing so) but such activities declined for about a third of the total group.[33]

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[33]   Because of small numbers in the 'more' group, 'more' and 'same' are combined for organised cultural activities.

Excluding those for whom the activity 'did not apply', there was some variation by individual and background characteristics in the disruption to activities but little variation by migrant status, urban/rural location or illness/disability. The reduction in face-to-face contact with friends was similar for males and females but was somewhat less for those from families with lower levels of education (75 per cent for Junior Certificate compared with 85 per cent where mothers were graduates). In contrast, those from more highly educated families were more likely to report increased contact with family (56 per cent for graduate households compared with 47 per cent where mothers had a Junior Certificate). This pattern most likely reflects the fact that those in full-time education prior to the pandemic (who tended to be from more highly educated families) were more likely to move back in with their parents during the pandemic (29 per cent compared with 11 per cent of those in employment). It may also relate to whether parents were working remotely during the pandemic, which was more likely for those in professional occupations (Central Statistics Office, 2020b). Those who found it difficult to study while learning remotely were more likely to report reduced contact with friends (87 per cent compared with 78 per cent). In contrast to face-to-face contact, contact with friends online or by phone did not vary systematically by individual or background factors.

Gender and social background differences were evident in involvement in structured activities. Men were more likely to fall into the decreased sports participation group (47 per cent compared with 39 per cent for women) while those women who had been involved in sport prior to the pandemic were more likely to have increased their involvement (32 per cent compared with 24 per cent). Increases in sports participation were largely similar across social groups, though those from more highly educated families were more likely to take part in sport before the pandemic. The decline in sports participation was somewhat greater among those who experienced a disruption in their employment (lost their main job) or education; 48 per cent of those who found it difficult to study decreased their sports participation compared with 40 per cent of those who did not. Losing their main job and disrupted education were also associated with a reduction in time spent outdoors (50 per cent for those having difficulty studying compared with 40 per cent of others).

In relation to organised cultural activities, there were few differences by gender or background in the reduction in participation, though pre-pandemic levels of involvement had varied markedly. A decline in involvement was more common among those who reported finding it difficult to study (86 per cent compared with 76 per cent).

FIGURE 3.6   CHANGES IN BEHAVIOURS DURING THE PANDEMIC
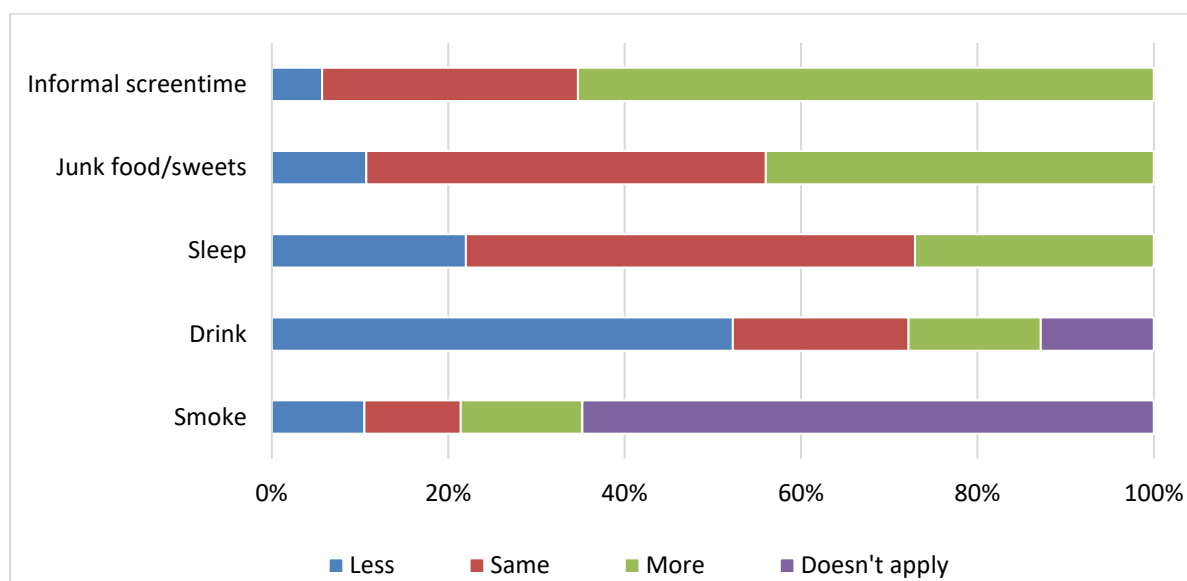
Source: COVID-19 Survey of Cohort '98.
Note: For informal screentime, consumption of junk food/sweets and sleeping patterns, the numbers stating 'doesn't apply' were too small to report.

The 22-year-olds were also asked about changes in other behaviours, largely relating to less healthy activities, in the wake of the pandemic (Figure 3.6). Two-thirds reported an increase in the amount of informal screentime with only a small number (6 per cent) indicating a reduction in screentime. The consumption of junk food or sweets increased for a sizeable proportion – around four-in-ten – of young adults. In contrast, the consumption of alcohol decreased for over half (60 per cent) with only 17 per cent increasing their consumption. Most (65 per cent) of the cohort did not smoke or vape prior to the pandemic onset, with the remainder somewhat more likely to have increased rather than decreased their smoking. Over a fifth (22 per cent) reported getting less sleep while over a quarter (27 per cent) indicated getting more sleep.

Informal screentime increased somewhat more for women than men (70 per cent compared with 62 per cent), for those from more highly educated families (71 per cent compared with 63 per cent) and for those from urban areas (72 per cent compared with 62 per cent). Screentime increased more for those who lost their job – either full-time or term-time – and for those who found it difficult to study.

These behaviours varied, to some extent, by gender, social background and employment disruption. The consumption of junk food increased more among women than men (49 per cent compared with 40 per cent) but increased less for those from more highly-educated households (38 per cent of those where mothers have degrees compared with 45 per cent where mothers have lower secondary education or less). Those who lost their main job were more likely to increase their

consumption of junk food (56 per cent compared with 43 per cent of those who did not lose their job). The decline in drinking was somewhat greater among those from more highly educated households (64 per cent compared with 58 per cent). The reduction in drinking was also lower among those who lost their main job, and this group were more likely to increase their smoking (46 per cent of those who already smoked compared with 37 per cent of those who did not lose their job). Women were somewhat more likely to report more sleep (30 per cent compared with 24 per cent) while those from families with lower levels of education reported less sleep time (31 per cent compared with 17 per cent).

3.5 CONCLUSIONS

The survey findings indicate that the pandemic led to very significant disruption across the domains of young adult lives. The vast majority of those in employment when the pandemic hit experienced some disruption to their job, with over half of them losing their job. Such disruption was evident across different groups of young adults, but the findings suggest that those with higher Leaving Certificate grades and the small group who had held professional or managerial jobs at 20 years of age were somewhat sheltered from job loss. The Pandemic Unemployment Payment appears to have protected those who lost their jobs from financial strain (having difficulty making ends meet) but experience of financial strain among young adults was still largely influenced by family background and pre-pandemic employment status.

There has been little Irish evidence to date on the disruption wrought by the pandemic on those in further or higher education. The findings show that almost all students had the IT equipment to cope with remote learning but varied in their access to adequate broadband and a quiet place to study. Most had access to live online lectures or classes but the experience of receiving regular feedback on their work varied across students. Over half found it difficult to study when learning remotely, with such difficulties less common among those in the final year of their course and those who reported more positive remote learning experiences.

Pandemic-related restrictions also resulted in a change in social activities and healthy behaviours. The majority reported a curtailment in face-to-face contact with friends, a shift that was not matched in scale by an increase in online/phone contact. On the other hand, time spent with family increased for around half of the cohort. Participation in cultural and sports activities and time spent outdoors declined for many, though some became more involved in exercise. Such a decline appeared to be greater for those who had also experienced a disruption to their employment and/or education situation, which may further impact on their mental health, an issue explored in Chapter 4. There was a decline in some less healthy behaviours – alcohol consumption – and an increase in others – eating junk food

and sweets. Overall, changes in diet and smoking/vaping tended to result in increased social differentiation compared to the pre-pandemic period. However, the pattern of reduction in alcohol consumption appeared to slightly narrow the pre-pandemic social gap in drinking. There was some evidence too that loss of the main job was associated with greater consumption of alcohol, cigarettes and junk food – more negative coping strategies.

CHAPTER 4

The impact of the pandemic on mental health among young adults

4.1 INTRODUCTION

This chapter looks at the extent to which young adults reported depressive symptoms during the pandemic, using the threshold for the Center for Epidemiological Studies (CES-D) depression scale. This is an eight-item short self-report screening instrument for depression in the general population. The reference point relates to the previous seven days and items include 'I felt depressed' and 'I had crying spells'. Answers are given on a four-point rating scale, ranging from rarely or none of the time (less than once a week) to most or all of the time (5-7 days a week). A composite score is calculated by summing responses across the eight items (range: 0-24) (Murphy et al., 2018). Respondents are categorised according to the recommended criterion for depression, with composite scores of 7 or more being classified as 'depressed' and scores below 7 defined as 'not depressed' (Devins et al., 1988). While a score above or equal to 7 suggests a clinically significant level of psychological distress, it does not necessarily mean that the participant has a clinical diagnosis of depression. This measure has been used for the parents since the inception of the GUI study and for the young adult since the age of 20. Section 4.2 examines the scale of depressive symptoms found among the 22-year-olds and relates these patterns to individual characteristics and the disruption caused by the pandemic as well as to potential protective and risk factors prior to the pandemic (at 20 years of age). Section 4.3 explores the factors associated with changes in depressive symptoms between the ages of 20 and 22.

4.2 DEPRESSIVE SYMPTOMS AMONG YOUNG ADULTS

4.2.1 Variation by gender, family background and disruption to employment and education

Figure 4.1 shows a large increase in the proportion of both women and men above the depressive symptom threshold between the ages of 20 years (pre-pandemic) and 22 years (in the midst of the pandemic); for men, the prevalence of depression increased from 22 to 41 per cent, while for women the level increased from 31 to 55 per cent. Large gender differences were evident at both timepoints, with higher rates of depression among women than men. During the pandemic, over half (55 per cent) of women were exceeding the depression threshold compared with 41 per cent of men.

FIGURE 4.1   **PROPORTION OF YOUNG ADULTS OVER THE CESD-8 DEPRESSIVE SYMPTOMS THRESHOLD BY GENDER AT 20 AND 22 YEARS OF AGE**
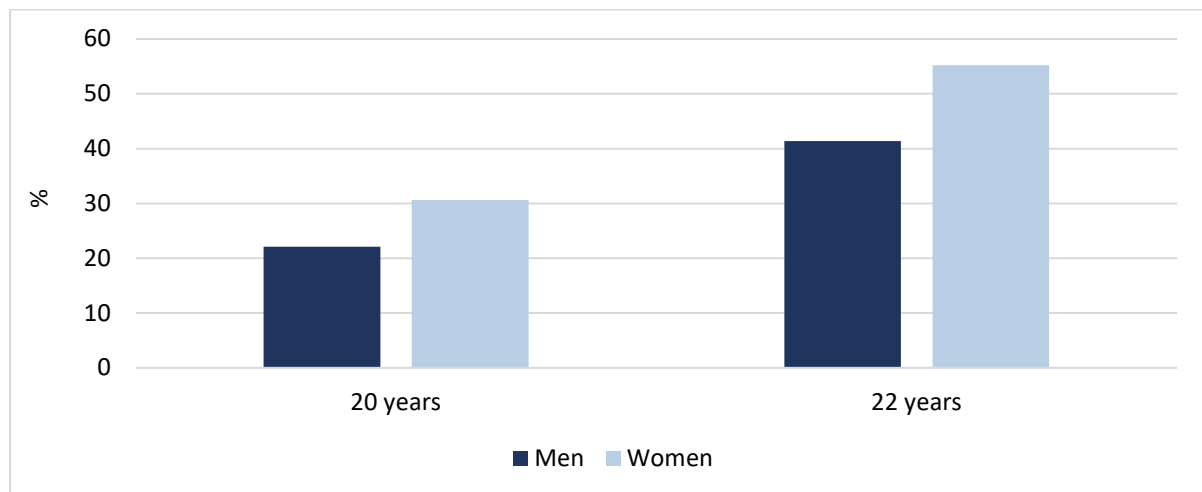
Source: COVID-19 Survey and Wave 4 Survey of Cohort '98.

Tables 4.1 to 4.5 present a series of logistic regression models looking at the factors associated with experience of depressive symptoms during the pandemic. Because of the marked gender differences in prevalence, the models are estimated separately for women and men. In Table 4.1, we begin by examining the impact of background characteristics, as well as disruptions to education and employment. Model 1 examines the relationship between depression and background characteristics while Model 2 takes account of employment status and living situation prior to the pandemic's onset. Model 3 includes the disruption caused by the pandemic in terms of direct experience of COVID-19, employment loss or other disruption, and disruption to learning. Model 4 takes account of whether the young adult had been above the depression threshold when surveyed at age 20.

In general, there is little systematic variation by family background factors but, for both men and women, depression rates are higher where the family was experiencing financial strain (two years previously) and for those from urban areas. For men, having a chronic illness or disability (as measured at the age of nine) was associated with higher depression rates but no such pattern was apparent for women. The pattern for men appeared to be related to the representation of men with disabilities in the NEET group (compare Models 1 and 2 in Table 4.1A). Depression rates were particularly high among the small group of women and men who were not in employment, education or training (NEET) prior to the pandemic onset.[34] Rates were also higher among those who had been combining education and term-time employment; the reason for this pattern is not clear but it most

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[34]   Comparing Models 2 and 4 indicates that part of this difference is related to higher depression rates among NEETs prior to the pandemic. However, Model 4 indicates that rates increased to a greater extent among NEETs relative to their higher initial rate.

likely relates to them experiencing disruption in two domains of their lives (employment and education).

TABLE 4.1A LOGISTIC REGRESSION MODELS OF THE FACTORS ASSOCIATED WITH DEPRESSION (ODDS RATIOS) FOR MEN

	Model 1	Model 2	Model 3	Model 4
Intercept	0.507	0.411	0.143	0.128
Mother's education:				
Leaving Certificate	1.144	1.151	1.263	1.108
Post-secondary	0.757	0.793	0.823	0.711
Degree or higher	1.110	1.202	1.431	1.394
(Ref.: Lower secondary)				
Family under financial strain at 20	2.048**	2.013***	2.071**	1.833*
Lone-parent family	1.002	1.052	0.882	0.931
Migrant origin	0.992	1.080	1.004	1.060
Urban	1.418*	1.351*	1.290±	1.373*
Chronic illness/disability (at 9)	1.400±	1.259	1.301	1.102
Prior employment status (Feb. 2020):				
Dual status		1.806**	2.106**	2.254**
Employed		1.239	1.685±	1.267
NEET		4.974***	5.280***	3.865**
(Ref.: Full-time education)				
Living with parents (pre-pandemic)		0.990	0.936	0.874
Had COVID-19:				
Self			0.984	0.905
Family/close friend			1.356	1.450
Employment disruption:				
Lost full-time job			2.283**	2.554**
Lost term-time/part-time job			1.236	1.278
Other loss/hours reduction			0.826	0.795
Remote working			1.019	1.298
Disruption to learning:				
Positive learning experience			0.995	0.988
Difficulty studying			3.360***	3.212***
Final year			1.523	1.267
Experienced depression at 20				5.927***
Nagelkerke R^2	3.2	6.4	14.8	26.9
N	702	702	702	702

Source: COVID-19 Survey and Wave 4 Survey of Cohort '98.
Notes: LCA – Leaving Certificate Applied Programme; ESL – early school leaver (i.e. left prior to Leaving Certificate).
*** p<.001; ** p<.01; * p<.05; ± p<.10.

TABLE 4.1B LOGISTIC REGRESSION MODELS OF THE FACTORS ASSOCIATED WITH DEPRESSION (ODDS RATIOS) FOR WOMEN

	Model 1	Model 2	Model 3	Model 4
Intercept	0.867	0.652	0.493	0.321
Mother's education:				
Leaving Certificate	1.207	1.335±	1.349±	1.346
Post-secondary	1.254	1.433±	1.481±	1.423
Degree or higher	1.105	1.278	1.443	1.413
(Ref.: Lower secondary)				
Family under financial strain at 20	1.710*	1.912**	1.920**	1.738*
Lone-parent family	0.982	0.935	0.985	0.880
Migrant origin	0.804	0.928	0.853	0.870
Urban	1.653***	1.597**	1.607**	1.623**
Chronic illness/disability (at 9)	0.830	0.820	0.838	0.717
Prior employment status (Feb. 2020):				
Dual status		1.787**	1.891**	1.960**
Employed		1.348±	1.280	1.160
NEET		4.702***	4.370***	3.880**
(Ref.: Full-time education)				
Living with parents (pre-pandemic)		0.899	0.904	0.846
Had COVID-19:				
Self			1.013	1.221
Family/close friend			0.954	0.921
Employment disruption:				
Lost full-time job			1.276	1.336
Lost term-time/part-time job			0.775	0.826
Other loss/hours reduction			0.874	0.762
Remote working			0.558*	0.607*
Disruption to learning:				
Positive learning experience			0.980	0.990
Difficulty studying			3.404***	3.166***
Final year			1.027	0.998
Depressed at age 20				4.751***
Nagelkerke R^2	3.1	6.9	14.9	25.5
N	1,248	1,248	1,248	1,248

Source: COVID-19 Survey and Wave 4 Survey of Cohort '98.
Notes: LCA – Leaving Certificate Applied Programme; ESL – early school leaver (i.e. left prior to Leaving Certificate).
    *** p<.001; ** p<.01; * p<.05; ± p<.10.

Four per cent of the 22-year-olds reported having had COVID-19 by the time of the survey (December 2020) while 15 per cent had a family member or close friend who had had COVID-19. Having had COVID-19 or having a family member or close friend who had it were not significantly associated with depression rates, when other factors were taken into account.[35] Rates of depression were twice as high among men who lost their full-time job; levels for women were slightly higher but the difference was not statistically significant. Loss of term-time employment was not associated with depression for either women or men. For women, being able

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[35]   Descriptive statistics do indicate somewhat higher depression rates where family/friends had had COVID-19 (53 per cent compared with 48 per cent).

to work remotely appeared to have a protective effect but no such effect was evident for men. In terms of education, both men and women who reported having had difficulties studying had much higher depression rates, over three times higher than those who reported no difficulties studying. Those in their final year of education when the pandemic hit were no more likely to be above the depressive threshold than other students.

In Model 4, it is evident that there is a strong relationship for both women and men between experience of depression prior to the pandemic and being depressed during the pandemic. However, the pattern for the other results does not change appreciably, meaning that the factors associated with depression during the pandemic hold, even taking account of prior mental health difficulties.

4.2.2   Role of peer factors

Chapter 3 has shown that a very high percentage of young adults experienced significant disruption across the different domains of their lives during the pandemic. The longitudinal nature of the GUI study means that we can trace back to their characteristics and experiences before the pandemic, using information collected at 20 years of age. This allows us to explore the extent to which prior social networks, activities and personal resources (such as self-confidence and coping strategies) help protect young adults when faced with the pandemic. Table 4.2 looks at the relationship between peer networks at 20 years of age and depressive symptoms two years later. Because peer relationships (and other factors) may have been influenced by experience of depressive symptoms at that life-stage, the analyses control for being above the depressive symptoms threshold at 20.

Over and above prior mental health, peer networks were found to have differential effects by gender (Table 4.2). Men with a larger friendship network (more than ten friends) were less likely to experience depression (though this was only significant at the p<.10 level); in contrast, women who had six to ten friends tended to have somewhat higher depression rates than other groups. Women who felt that they could not always rely on their friends were 1.7 times more likely to report depressive symptoms. For men, however, not being able to rely on friends was associated with lower depression rates. This is somewhat surprising but may reflect men being less likely to talk about personal feelings with friends. Moreover, men who reported talking about personal feelings with their boy/girlfriend and men who did not have a boy/girlfriend at age 20 were much less likely to be depressed, while no such difference was apparent for women.

TABLE 4.2   LOGISTIC REGRESSION MODELS OF THE PEER FACTORS ASSOCIATED WITH DEPRESSION (ODDS RATIOS) FOR MEN AND WOMEN

	Men		Women	
	Model 1	Model 2	Model 1	Model 2
Above depression threshold at 20	6.411***	5.730***	4.523***	5.091***
Number of friends at 20:				
6-10	1.251	1.334	1.438±	1.297
More than 10	0.671	0.767	1.229	1.071
(Ref.: <6)				
Whether can rely on friends at 20:				
Sometimes/rarely/never	0.601**	0.591**	1.711**	1.837**
(Ref.: Always)				
Whether talked to boy/girlfriend about				
personal feelings (at 20)	0.445***	0.593*	0.864	0.957
Had no boy/girlfriend at 20	0.686±	0.706	0.870	0.825
(Ref.: Had boy/girlfriend and didn't talk about personal feelings)				
Impact of the pandemic:				
Less face-to-face contact with friends		1.353		2.614***
More online/phone contact with friends		1.173		0.876
Less contact with boy/girlfriend		4.650***		2.770***
No boy/girlfriend at 22		3.591***		1.639*
(Ref.: Same/more contact)				
Nagelkerke R^2	30.1	36.2	26.9	32.5
N	700	700	1,247	1,247

Source: COVID-19 Survey and Wave 4 Survey of Cohort '98.
Notes: These models control for background factors, prior employment status, living with parents, experience of COVID-19, employment disruption and learning disruption (as in Table 4.1). *** p<.001; ** p<.01; * p<.05; ± p<.10.

Model 2 adds in contact with friends during the pandemic. For both women and men, less contact with a partner is associated with much higher depression rates. Furthermore, not having a partner prior to or during the pandemic is also associated with higher depression, with a stronger effect for men than for women.[36] For women, less face-to-face contact with friends is also linked to higher depression rates but no such difference is apparent for men. Increased online contact with friends does not appear to play a protective role for either men or women.

4.2.3   Family factors

Table 4.3 looks at the family factors associated with depression at the time of the survey, controlling for depression two years previously. As with peer factors, there are very marked gender differences in the patterns found. For men, none of the family factors are associated with depressive symptoms during the pandemic. For women, reporting that their family get on well together and talking to their father about personal feelings were found to play a protective role. In contrast,

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36   For men, there are differing effects of having a partner at age 20 and having a partner before/during the pandemic. This may reflect the fact that relationship status had changed in the intervening two years. Furthermore, the capacity to form new relationships during the period of restrictions was constrained, making having a partner even more salient.

talking to their mother about personal feelings did not have a significant effect, though this is likely because the rates of talking to mothers was quite high across the cohort. Changes in contact with family did not have a significant effect for either women or men; this should be placed in the context of the majority of young adults living in the parental home at this stage.[37] Comparing the variance explained in the models in Table 4.3 with those in Table 4.2 suggests that peer factors explain more of the variation in depressive symptoms than family factors.

TABLE 4.3   LOGISTIC REGRESSION MODELS OF THE FAMILY FACTORS ASSOCIATED WITH DEPRESSION (ODDS RATIOS) FOR MEN AND WOMEN

	Men		Women	
	Model 1	Model 2	Model 1	Model 2
Above depression threshold at 20	5.677***	5.650***	3.965***	3.920***
How well get on with family at 20 (high scores = better)	1.013	1.014	0.853**	0.854***
Talk to father about personal feelings (at 20)	0.747	0.750	0.703*	0.703*
Talk to mother about personal feelings (at 20)	1.041	1.043	0.874	0.881
Impact of the pandemic:				
More contact with family		0.950		1.014
Less contact with family		1.122		1.406
Nagelkerke R^2	27.2	27.3	28.3	28.6
N	701	701	1,245	1,245

Source: COVID-19 Survey and Wave 4 Survey of Cohort '98.
Notes: These models control for background factors, prior employment status, living with parents, experience of COVID-19, employment disruption and learning disruption (as in Table 4.1). *** p<.001; ** p<.01; * p<.05; ± p<.10.

4.2.4   Social activities

Chapter 3 has outlined the changes in social activities associated with pandemic restrictions. Table 4.4 examines the potential impact of the kinds of activities engaged in prior to the pandemic and later mental health outcomes. As with family and peer factors, the risk and protective factors appear to operate differently for women and men. Having taken part in team sports appears to be related to lower levels of depression among men but no significant difference is found for women. In contrast, men who had been involved in individual sports were somewhat more likely to be depressed. Attending the gym/running or singing/playing a musical instrument had no significant relationship with later outcomes. Spending less time on sport was associated with higher depression rates among men. Furthermore, men who did not participate in sports/exercise pre-pandemic had higher rates of depression; this effect was smaller and only on the margins of significance for women. Spending less time outdoors was linked to greater depression for both men and women. Women who reduced their time on cultural activities were more

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[37]   Moving back in with parents during the pandemic is not included in the model as it is closely related to prior status (being a student) and changes in the level of time with their family.

likely to be depressed as were those who were not involved in such activities before the pandemic; no such difference was found for men. Social activities are found to explain about the same amount of variation in depression as family factors (compare with Table 4.3).

TABLE 4.4   LOGISTIC REGRESSION MODELS OF THE ACTIVITIES ASSOCIATED WITH DEPRESSION (ODDS RATIOS) FOR MEN AND WOMEN

	Men		Women	
	Model 1	**Model 2**	**Model 1**	**Model 2**
Above depression threshold at 20	5.427***	5.136***	4.783***	4.620***
Involved in team sports at 20	0.603**	0.606***	1.075	1.047
Involved in individual sports at 20	1.372±	1.441*	1.100	1.032
Involved in singing/playing a musical instrument at 20	1.248	1.291	0.944	0.950
Involved in gym/running at 20	0.822	0.847	1.143	1.149
Impact of the pandemic:				
Less time on sports		2.050**		0.895
More time on sports		1.235		0.974
Didn't participate in sports pre-pandemic		2.496**		0.606±
Less time outdoors		1.727**		1.412±
More time outdoors		1.425		0.985
Less time on cultural activities		1.087		1.839*
Didn't participate in cultural activities pre-pandemic		0.881		1.643±
Nagelkerke R^2	28.8	32.1	25.6	27.1
N	702	702	1,248	1,248

Source: COVID-19 Survey and Wave 4 Survey of Cohort '98.
Notes: These models control for background factors, prior employment status, living with parents, experience of COVID-19, employment disruption and learning disruption (as in Table 4.1). *** p<.001; ** p<.01; * p<.05; ± p<.10.

4.2.5   Personal resources

At 20 years of age, information was collected on the coping strategies young adults employed as well as on their self-esteem. It is hypothesised that young adults who have more positive coping strategies and a more positive view of themselves will be better able to cope with the challenges of the pandemic. Model 1 in Table 4.5 looks at the relationship between these factors and depression two years later. Model 2 adds in changes in behaviour during the pandemic, which includes factors like drinking more, which represent less positive ways of coping with stress.

Among both women and men, those who had reacted to difficulties by 'taking to the bed' – an avoidant coping strategy – were more likely to report depressive symptoms. This cannot be interpreted as a causal effect, as those with depression may take to their beds as a result. Men who reported having talked to friends when

experiencing difficulties prior to the pandemic were more likely to report depression, most likely in the context of reduced face-to-face contact (see above). No such effect was apparent for women, whereas, for them, talking to family when in difficulty tended to have a protective effect. Higher levels of self-confidence at 20 years of age were protective two years later for both women and men.

TABLE 4.5   LOGISTIC REGRESSION MODELS OF THE PERSONAL RESOURCE FACTORS ASSOCIATED WITH DEPRESSIVE SYMPTOMS (ODDS RATIOS) FOR MEN AND WOMEN

	Men		Women	
	Model 1	Model 2	Model 1	Model 2
Above depression threshold at 20	3.997***	4.785***	2.334***	2.159***
Coping strategies at 20:				
Taking to the bed	1.210*	1.283**	1.217*	1.230*
Drinking	1.200*	1.098	1.085	1.056
Talking to friends	1.265*	1.206±	0.935	0.986
Talking to parents	1.051	1.040	0.786*	0.894
Self-esteem (Rosenberg scale)	0.893***	0.927*	0.881***	0.873***
Behaviour during the pandemic:				
Drink more		1.912*		1.727±
Drink less		1.179		1.081
(Ref. Drink the same)				
Didn't drink pre-pandemic		1.637		1.097
Smoke more		0.871		1.335
Smoke less		0.690		0.416*
(Ref.: Smoke the same)				
Didn't smoke pre-pandemic		0.536*		0.698
Sleep more		1.350		1.365±
Sleep less		2.754***		3.301***
(Ref.: Sleep the same)				
Eat more junk food/sweets		1.215		1.435*
Eat less junk food/sweets		0.912		0.734
(Ref.: Eat the same amount)				
More informal screentime		1.707**		1.444±
Less informal screentime		0.073***		1.158
(Ref.: The same screentime)				
Nagelkerke R²	31.0	39.7	30.6	37.7
N	697	697	1,242	1,242

Source: COVID-19 Survey and Wave 4 Survey of Cohort '98.
Notes: These models control for background factors, prior employment status, living with parents, experience of COVID-19, employment disruption and learning disruption (as in Table 4.1). *** p<.001; ** p<.01; * p<.05; ± p<.10.

Some of the behaviours reported during the pandemic can be viewed as coping strategies (e.g. drinking more or smoking more) while others (such as sleep disruption) may be a result of increased mental health difficulties. For both men and women, the smaller group who reported drinking more during the pandemic were more likely to be depressed. Those who did not drink prior to the pandemic did not differ from those who kept their alcohol constant in their likelihood of depression. For women smoking less appeared to have a protective effect, while men who did not smoke had lower depression rates. Eating more junk food or

sweets was associated with depression for women but not for men. For both women and men, sleeping less was related to depression but sleeping more than usual also seemed to have a depressive effect for women. For men, spending more time on screen was linked to depression (with this being on the margins of significance for women) while having less screentime had a strongly protective effect.

4.2.6 Sensitivity analyses

The analyses presented in this chapter have focused on falling above or below the depressive symptoms threshold. Sensitivity analyses were conducted to examine whether the size of the change in depression score between 20 and 22 years varied by depression score at 20 (Figure 4.2) and whether the factors associated with being over the depression threshold differ when the full range of the CESD-8 depression scale is considered (see Tables A4.1 to A4.5).

FIGURE 4.2   MEAN CHANGE IN DEPRESSION SCORE BETWEEN 20 AND 22 YEARS OF AGE BY DEPRESSION SCORE AT 20 YEARS
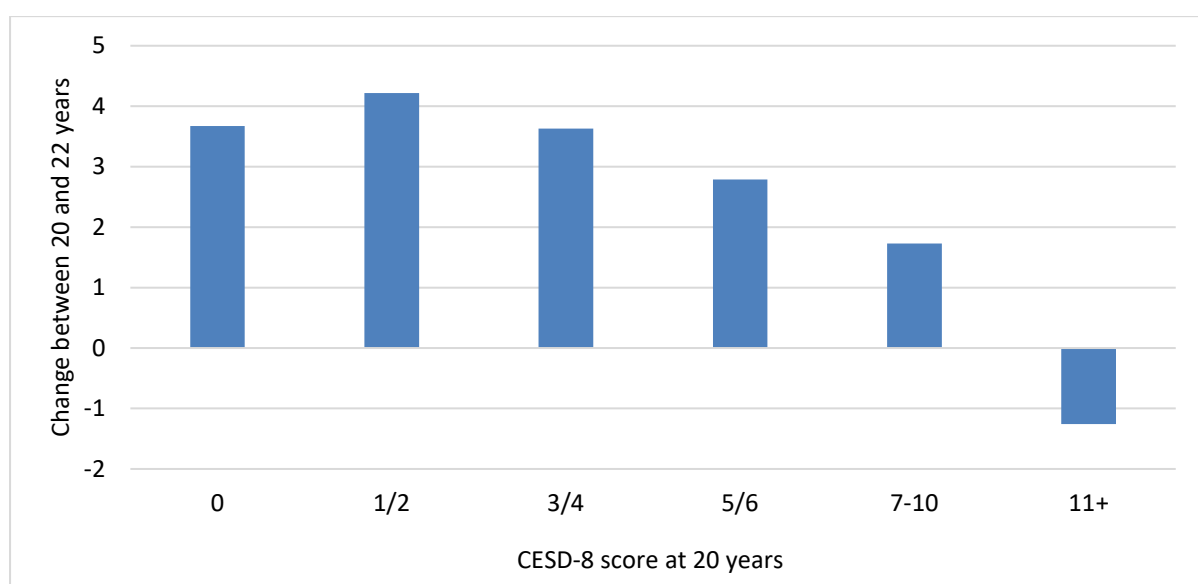
Source: COVID-19 Survey and Wave 4 Survey of Cohort '98.

Figure 4.2 shows that there was an increase in depression scores for all groups of young adults between 20 and 22 years of age. The exception to this pattern was for those with very high scores at 20 years who, on average, experienced a reduction in scores during the pandemic. This may be a ceiling effect whereby it would be difficult for very high scores to increase further. Alternatively, it may be that some of the pre-pandemic stressors for this group (such as social interaction or employment) were reduced during the period of restrictions. Further analyses would be needed to unpack this pattern further.

Analyses of family background factors and pandemic-related disruption gave broadly similar results to the analyses based on the 'depressed-not depressed' classification (Table A4.1). However, some differences were evident. There was no significant difference in the total score for those experiencing financial strain once prior score was taken into account, supporting the finding that this group had already had high levels of depression. There was some worsening of the score for males who had experience of COVID-19 in their close circle of family/friends while scores improved for males who had a positive learning experience during the pandemic. Scores were slightly lower for those living with their parents pre-pandemic for both males and females (though this was at the margins of significance).

The patterns for peer factors remain broadly similar as in the depression threshold model, with talking to a partner about personal feelings having a protective effect for males, and both males and females experiencing worsening scores when seeing their partners less (Table A4.2). Reduced contact with friends is also a negative factor for women. Looking at family factors (Table A4.3), the models indicate that talking to their fathers is associated with lower scores and seeing their family less during the restrictions is linked to higher scores for both men and women. Thus, it would seem that these factors result in a change in socio-emotional difficulties but not necessarily of a scale to tip people into depression.[38]

Looking at the full range of scores makes little difference to the results relating to activities (Table A4.4). However, in contrast to the patterns for depression risk, depression scores appear to decline somewhat for women previously involved in team sports. Patterns were also broadly similar in relation to personal resources, though the association between unhealthy behaviours and increased depression scores becomes more evident for both women and men. A reduction in depression score was evident for women who had more positive self-esteem, but not for men (Table A4.5).

4.3   THE DYNAMICS OF DEPRESSIVE SYMPTOMS

This section takes a somewhat different approach to Section 4.2 by looking at the factors associated with changes in depression status between 20 and 22 years of age. This results in four groups: those who did not fall above the depression threshold at either timepoint (the never depressed); those who were depressed at 20 but not at 22 (the improved); those who were depressed at 22 but not at 20 (the disimproved); and those who were depressed at both timepoints (the always

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[38]   However, talking to their fathers about personal feelings does have a protective effect against depression for women.

depressed).[39] Fewer than four-in-ten young adults had not been depressed at either timepoint with the group who became depressed between 20 and 22 years of age being larger than the group who was depressed at both timepoints (Figure 4.2). Put differently, 38 per cent of those who were not above the depressed threshold at 20 were depressed during the pandemic.

Marked gender differences are found, with women more likely to have had some experience of depression (Figure 4.3); they were more likely to have been depressed prior to the pandemic and to have had an onset of depression in the wake of the pandemic. Interestingly, there was no gender difference in the small proportion who 'improved' between 20 and 22 years of age.

FIGURE 4.3   COMBINED DEPRESSION STATUS AT 20 AND 22 YEARS OF AGE BY GENDER
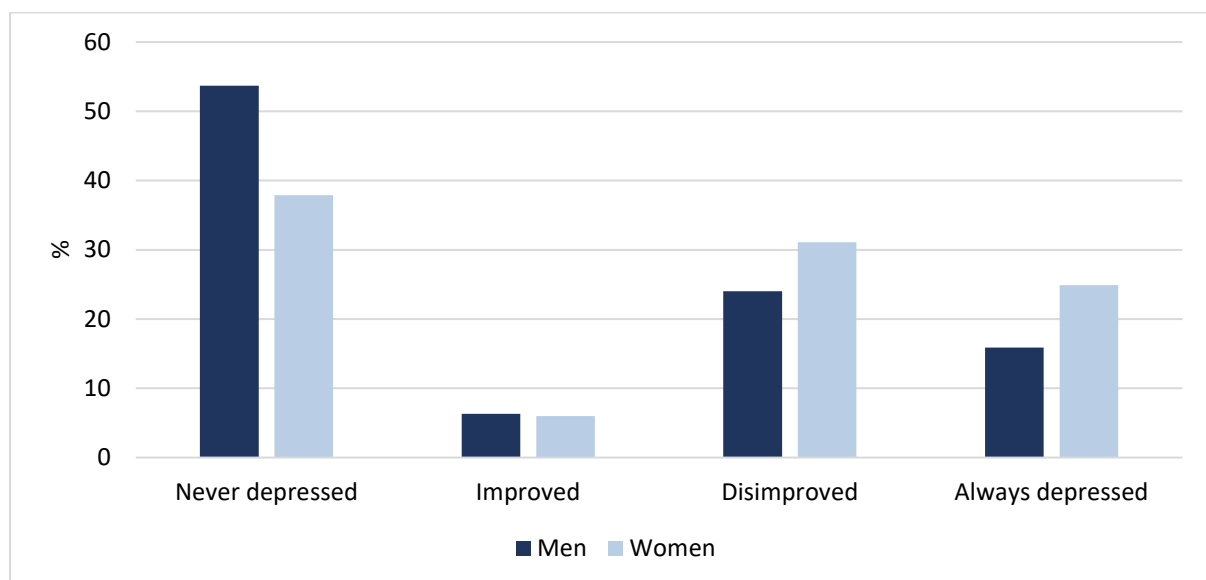
Source: COVID-19 Survey and Wave 4 Survey of Cohort '98.

Table 4.6 looks at the factors associated with changes in depressive symptoms over time, including family, peers and activities along with the disruption to employment, education and contact with friends. The model only includes the set of factors that were found to be associated with depression in the above analyses. The model pools information on women and men in order to provide a direct estimate of the gender differences in the dynamics of depression. Because of the small size of the 'improved' group (and resulting difficulties in model convergence), this group is combined with the 'never depressed' group for the purposes of analyses.

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[39]   This modelling approach was chosen in preference to a fixed effects modelling approach as the latter requires all variables to be repeatedly measured and cannot identify the effect of time-invariant variables (e.g. gender, mother's highest level of education).

TABLE 4.6 **MULTINOMIAL LOGISTIC REGRESSION MODEL OF THE FACTORS ASSOCIATED WITH CHANGES IN DEPRESSION (ODDS RATIOS), CONTRASTED WITH THE NEVER DEPRESSED/IMPROVED GROUP**

	Disimproved (became depressed)	Always depressed (depressed at both 20 and 22)
Female	1.526**	1.329±
Family under financial strain (at 20)	1.558*	2.741***
Employment status pre-pandemic:		
Dual status	2.220***	1.257
Employed	1.166	1.218
NEET	3.145**	3.241**
(Ref.: Education)		
Lost main job	1.992**	1.126
Found it difficult to study	3.059***	3.383***
Less face-to-face contact with friends	2.126***	1.565*
Social supports at 20:		
Talked to mother	0.644	1.356
Talked to father	0.580*	0.780
Talked to boy/girlfriend	0.659±	1.044
Talked to friends	0.935	1.241
Activities at 20:		
Team sports	0.758*	0.709±
Individual sports	1.434**	1.238
Personal resources at 20:		
Taking to the bed	1.219**	1.483***
Drinking	1.099	1.249**
Talking to parents	1.052	0.635***
Self-esteem (Rosenberg scale)	0.960***	0.630***
Nagelkerke R^2	40.9	
N	1,901	

Source: COVID-19 Survey and Wave 4 Survey of Cohort '98.
Notes: These models control for background factors, prior employment status, living with parents, experience of COVID-19, employment disruption and learning disruption (as in Table 4.1). *** p<.001; ** p<.01; * p<.05; ± p<.10.

We look first at those who were not depressed at 20 but had become depressed by 22. In keeping with the descriptive analyses, women were much more likely to fall into this group. Those whose families had been experiencing economic strain were also more likely to become depressed as were those in the NEET group and those combining work and study before the pandemic onset. The reason for the latter pattern is unclear but it may relate to both domains (education and employment) of their lives being disrupted by the pandemic. Pandemic-related disruption in employment (losing their full-time/main job),[40] education (finding it difficult to study) and social contact (having less contact with friends) all contributed to an increased risk of depression. In terms of protective factors, being able to share personal feelings with their father and their boy/girlfriend as well as

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[40] Losing a term-time job is not included in these models as it did not have a significant effect in the analyses presented in Section 4.2.

participation in team sports and having a more positive self-concept helped to reduce the risk. Involvement in individual sports and adopting an avoidant coping strategy (taking to the bed) were linked to an increased risk of depression.

As context, it is worth examining the factors associated with being depressed at both 20 and 22 years of age. This group were more likely to be female, from families experiencing economic strain and not in employment, education or training prior to the pandemic. It is interesting to note that this group found it more difficult to study and reported less contact with friends during the pandemic. It may be that their prior vulnerability meant they were less able to sustain involvement in day-to-day activities during the pandemic. Those who took to the bed or drank alcohol as a response to stress were more likely to fall into this group while those who were more likely to talk to their parents about their personal feelings or had a more positive view of themselves were less likely to be depressed at the two timepoints.

4.4   CONCLUSIONS

This chapter has indicated very high rates of depression among young adults, especially women, in the wake of the pandemic; 55 per cent of women and 41 per cent of men were above the 'depressed' threshold on the widely-used CESD-8 measure of depressive symptoms in December 2020. These were much higher than the (significant) levels of depression (31 per cent for women and 22 per cent for men) found at 20 years of age. The disruption caused by the pandemic, particularly loss of their main job, finding it difficult to study and reduced face-to-face contact with friends, contributed to this increased risk of depression.

The findings indicate an increased risk of depression for those who were already vulnerable, namely those in families experiencing financial strain and those not in employment, education and training. These groups of young adults were more likely to become depressed by 22, or to be depressed at both 20 and 22 years of age.

Patterns of depression were highly gendered but so too were the effects of risk and protective factors. For men, loss of the main job had a stronger effect on depression while prior involvement in team sports and confiding in a boy/girlfriend operated as protective factors. For women, loss of face-to-face contact with friends was a stronger trigger of depression while supportive peer relationships and positive family relationships served as protective factors. For both women and men having a more positive view of themselves helped protect against depression.

TABLE A4.1 REGRESSION MODELS OF THE FACTORS ASSOCIATED WITH DEPRESSION SCORE FOR MEN AND WOMEN

	Men	Women
Intercept	3.809	4.505
Mother's education:		
Leaving Certificate	0.472	-0.099
Post-secondary	0.167	-0.060
Degree or higher	0.774	0.034
(Ref.: Lower secondary)		
Family under financial strain	-0.144	-0.218
Lone-parent family	0.746±	0.277
Migrant origin	-0.054	0.223
Urban	0.598±	1.090**
Chronic illness/disability (at 9)	0.380	-1.010±
Prior employment status (Feb. 2020):		
Dual status	1.088*	1.006*
Employed	0.091	1.668**
NEET	1.844*	2.134**
(Ref.: Full-time education)		
Living with parents (pre-pandemic)	-0.562±	-0.650±
Had COVID-19:		
Self	-1.510±	0.306
Family/close friend	1.218*	0.226
Employment disruption:		
Lost full-time job	2.635***	0.600
Lost part-time job	0.581	-0.583
Other loss/hours reduction	0.178	-0.261
Remote working	0.496	-1.055±
Disruption to learning:		
Positive learning experience	-0.119**	-0.046
Difficulty studying	1.953***	2.342***
Final year	0.309	-0.005
Depression scale score at 20	0.560***	0.588***
Adjusted R²	27.7	33.3
N	817	817

Source: COVID-19 Survey and Wave 4 Survey of Cohort '98.
Notes: LCA – Leaving Certificate Applied Programme; ESL – early school leaver (i.e. left prior to Leaving Certificate).
             *** p<.001; ** p<.01; * p<.05; ± p<.10.

TABLE A4.2 REGRESSION MODELS OF THE PEER FACTORS ASSOCIATED WITH DEPRESSION SCALE SCORE FOR MEN AND WOMEN

	Men	Women
Depression scale score at 20	0.524***	0.590***
Number of friends at 20:		
More than 10	-0.180	0.135
(Ref.: <6)		
Whether can rely on friends at 20:		
Sometimes/rarely/never	-0.178	0.445
(Ref.: Always)		
Whether talked to boy/girlfriend about personal		
feelings (at 20)	-1.790**	0.015
(Ref.: Had boy/girlfriend and didn't talk about		
personal feelings or had no boy/girlfriend)		
Impact of the pandemic:		
Less face-to-face contact with friends	0.764	1.681**
More online/phone contact with friends	-0.638	0.243
Less contact with boy/girlfriend	1.908**	2.076***
(Ref.: Same/more contact or had no boy/girlfriend)		
Adjusted R²	33.8	38.8
N	700	1,247

Source: COVID-19 Survey and Wave 4 Survey of Cohort '98.
Notes: These models control for background factors, prior employment status, living with parents, experience of COVID-19, employment disruption and learning disruption (as in Table 4.1). *** p<.001; ** p<.01; * p<.05; ± p<.10.

TABLE A4.3 REGRESSION MODELS OF THE FAMILY FACTORS ASSOCIATED WITH DEPRESSION SCALE SCORE FOR MEN AND WOMEN

	Men	Women
Depression scale score at 20	0.562***	0.542***
How well get on with family at 20	0.208*	-0.291**
Talk to father about personal feelings (at 20)	-0.881*	-1.007***
Talk to mother about personal feelings (at 20)	0.331	0.093
Impact of the pandemic:		
More contact with family	-0.376	0.580
Less contact with family	1.132*	1.270*
Adjusted R²	29.3	35.0
N	701	1,245

Source: COVID-19 Survey and Wave 4 Survey of Cohort '98.
Notes: These models control for background factors, prior employment status, living with parents, experience of COVID-19, employment disruption and learning disruption (as in Table 4.1). *** p<.001; ** p<.01; * p<.05; ± p<.10.

TABLE A4.4 REGRESSION MODELS OF THE ACTIVITIES ASSOCIATED WITH DEPRESSION SCALE SCORE FOR MEN AND WOMEN

	Men	Women
Depression scale score at 20	0.527***	0.570***
Involved in team sports at 20	-0.628±	-0.903*
Involved in individual sports at 20	0.679*	0.574
Involved in singing/playing a musical instrument at 20	0.013	-0.087
Involved in gym/running at 20	-0.308	0.503
Impact of the pandemic:		
Less time on sports	0.848*	0.264
More time on sports	0.281	-0.098
Less time outdoors	1.483***	0.660±
More time outdoors	-0.353	-0.342
Less time on cultural activities	-0.214	0.942*
Adjusted R^2	30.6	34.5
N	702	1,248

Source: COVID-19 Survey and Wave 4 Survey of Cohort '98.

Notes: These models control for background factors, prior employment status, living with parents, experience of COVID-19, employment disruption and learning disruption (as in Table 4.1). *** $p<.001$; ** $p<.01$; * $p<.05$; ± $p<.10$.

TABLE A4.5 REGRESSION MODELS OF THE PERSONAL RESOURCE FACTORS ASSOCIATED WITH DEPRESSION SCALE SCORE FOR MEN AND WOMEN

	Men	Women
Depression scale score at 20	0.464***	0.421***
Coping strategies at 20:		
Taking to the bed	0.060	0.263±
Drinking	0.525**	-0.048
Talking to friends	0.298	-0.073
Talking to parents	-0.063	-0.150
Self-esteem (Rosenberg scale)	-0.008	-0.148*
Behaviour during the pandemic:		
Drink more	1.138*	1.676*
Drink less	-0.319	0.501
(Ref. Drink the same)		
Smoke more	1.129*	1.959***
Smoke less	0.102	-0.553
(Ref.: Smoke the same/doesn't apply)		
Sleep more	0.222	1.002**
Sleep less	2.824***	2.750***
(Ref.: Sleep the same)		
Eat more junk food/sweets	0.707*	0.766*
Eat less junk food/sweets	-0.588	-0.578
(Ref.: Eat the same amount)		
More informal screentime	0.542±	0.807*
Less informal screentime	-0.443	2.145**
(Ref.: The same screentime)		
Adjusted R²	36.4	41.4
N	697	1,242

Source: COVID-19 Survey and Wave 4 Survey of Cohort '98.
Notes: These models control for background factors, prior employment status, living with parents, experience of COVID-19, employment disruption and learning disruption (as in Table 4.1). *** p<.001; ** p<.01; * p<.05; ± p<.10.

CHAPTER 5

Summary, discussion and policy implications

5.1   SUMMARY

While rates of serious illness and mortality due to COVID-19 among young people have been low, the impact on their daily lives has been substantial. Using data from 22-year-olds from the '98 Cohort of *Growing Up in Ireland*, the analysis in this report has documented the disruptions to employment, education and daily activities of this group, and assessed the implications for their mental health and wellbeing. The scale of the disruption, and impact on mental health and wellbeing, was extensive.

Of those in employment (as their main status or while studying) at the start of the pandemic, nearly 85 per cent experienced some type of employment disruption. The most common forms were losing a full-time job (36 per cent) or losing a term-time job (21 per cent). Job loss (both main and term-time) was more prevalent among those from lone-parent backgrounds and among those living in rural areas. Higher achievement in the Leaving Certificate was associated with a lower risk of job loss. Loss of a main job was significantly more likely among those who had been in skilled occupations at age 20 (most likely reflecting the closure of the construction sector) and much less likely among those who had been in professional/managerial jobs at age 20. The pandemic was associated with a slight increase in financial strain (i.e. reporting difficulty or great difficulty making ends meet) but this increase was modest (from 7 per cent at age 20 to 11 per cent at age 22), reflecting the cushioning of income after job loss with the Pandemic Unemployment Payment.

In February 2020 (before the pandemic and restrictions took effect), 63 per cent of the 22-year-olds were in full-time education, including the 16 per cent who were combining their education with term-time employment. Availability of resources to support the shift to remote learning varied, with some supports (e.g. availability of a laptop) much more prevalent than others (e.g. having a quiet place to study). Similar variation was evident in the supports put in place by third-level institutions (e.g. online classes, regular feedback, etc.). In terms of overall learning experience, females, those with higher Leaving Certificate achievement and those in their final year of study reported a more negative learning experience. Over half of the cohort reported difficulty in studying during remote learning.

The scale of the disruption to day-to-day activities was stark. Over 80 per cent of the 22-year-olds reported less face-to-face contact with friends, although online or

phone contact increased for almost half (47 per cent of the 22-year-olds), as did contact with family (52 per cent reported increased contact). Increased informal screentime was widespread (two-thirds reported an increase in the amount of informal screentime with only a small number (6 per cent) indicating a reduction in screentime). Of those who were engaged in sports/physical activity before the pandemic, a higher proportion reported that their involvement in sports/physical exercise and time spent outdoors declined rather than increased. Men were more likely to fall into the decreased sports participation group, while those women who had been involved in sport prior to the pandemic were more likely to have increased their involvement. Difficulty studying was associated with decreases in sports participation, time spent outdoors and involvement in cultural activities. For many health behaviours, the cohort was equally divided between those who consumed more and those who consumed less (smoking, sleep). In contrast, increased rather than decreased consumption of junk food or sweets was more prevalent, while decreased alcohol consumption was more common than increased consumption. There was evidence that job loss was associated with an increase in unhealthy behaviours (smoking, alcohol consumption and junk food consumption) – more negative coping strategies.

In terms of mental health, the data show large and significant increases in depressive symptoms between the ages of 20 and 22, with over 55 per cent of females, and 41 per cent of males, exceeding the threshold for clinically significant depression at age 22. The findings indicate an increased risk of depression for those who were already vulnerable, namely those in families experiencing financial strain and those not in employment, education and training (NEET). These groups of young adults were already more likely to be depressed at 20 years of age but were also more likely to become depressed by 22.

Disruptions to employment, education and daily activities and social support were associated with depression at age 22. Rates of depression were higher among men who lost their full-time job; levels for women were slightly higher but the difference was not statistically significant. Loss of term-time employment was not associated with depression for either women or men. Both men and women who reported having had difficulties studying had much higher depression rates. For women, less face-to-face contact with friends was associated with higher depression rates but no such difference was apparent for men. There was no protective effect from increased online contact with friends. Spending less time on sport and less time outdoors during the pandemic were associated with higher depression rates among men. In terms of coping strategies and self-image, those who had reacted to difficulties by 'taking to the bed', an avoidant coping strategy, were more likely to report depressive symptoms. Having a boy/girlfriend and talking to them about personal feelings had a protective effect for men, whereas for women, talking to family when in difficulty tended to have a protective effect.

Higher levels of self-confidence at 20 years of age were protective two years later for both women and men. For both men and women, increased alcohol consumption was associated with higher depression, while for women increased smoking and junk food consumption were also associated with depression.

5.2   STRENGTHS AND LIMITATIONS

It is worth highlighting the strengths and limitations of this analysis before discussing the implications of these results for policy and practice. In terms of strengths, the availability of data from a dedicated COVID-19 survey of this cohort of young adults, combined with the rich characterisation of their lives from earlier surveys carried out at ages 9, 13, 17/18 and 20, allows us to examine the impact of the pandemic on this cohort of young people in a robust and methodologically rigorous way. Typically, evidence from around the world on changes in population mental health potentially attributable to the COVID-19 pandemic has been limited by use of convenience samples, modified or unvalidated mental health measures, and a lack of comparable, pre-COVID-19 baseline data against which to measure change (Pierce et al., 2020).

The timing of the survey (December 2020) is important, given it took place in a period when restrictions were easing (before a further period of restrictions in early 2021). Recall may affect reports of disruption to education 'at the height of the restrictions'. Asking about changes in social activities in December 2020 compared with the pre-pandemic period will likely underestimate the scale of disruption caused by the pandemic to face-to-face contact and other activities as some restrictions had begun to ease. It is possible that depressive symptoms had started to wane as restrictions eased (though international evidence on this phenomenon has been mixed; see Chapter 2) but levels did remain very high.

The dedicated COVID-19 survey was, by necessity, shorter and more limited in content than the main waves of GUI data collection. The move to an online format restricted the amount and nature of information that could be collected, and decisions had to made about what questions to prioritise (Kelly et al., 2021). This meant that potentially important confounders, such as job loss of other family members (parents, siblings, partner, etc.), were not available for this analysis. Caution also needs to be exercised in inferring causality from the results in this report. For many risk and protective factors, the direction of the relationship is unclear; for example, while declines in daily activities (e.g. sports participation) may be associated with increased depressive symptoms, it is also possible that those with depression may have reduced their daily activities due to their illness. Finally, non-response and attrition are a feature of longitudinal surveys, and were exacerbated by the short data collection timeframe and web-based nature of the COVID-19 survey. As expected, there was an under-representation of those in less

advantaged socio-economic circumstances, lone-parent families and those with lower reading achievement scores at age 9, while males were also less likely to respond (Kelly et al., 2021). As described in Section 1.4, the data were weighted prior to analysis to ensure that the results represent the population of 22-year-olds.

5.3   POLICY IMPLICATIONS

It is increasingly clear that the COVID-19 pandemic, rather than being a 'great leveller', has exacerbated existing inequalities across society (by age, gender, socioeconomic background, ethnicity, geography, etc.) (Blundell et al., 2020; Crossley et al., 2021; Major et al., 2020). Among the cohort of 22-year-olds examined in this study, already vulnerable groups were most at risk of job loss, financial strain and poorer mental health. While there was little variation in the probability of job loss by family socio-economic background, young adults from a lone-parent family were much more likely to have experienced loss of their main job, while those in professional occupations were less likely to lose their job. Experience of financial strain was strongly socially patterned, although receipt of the PUP appeared to play a protective role in cushioning incomes against job loss. These results highlight the importance of pandemic income supports and anti-poverty measures more generally in supporting young people and families experiencing job loss and financial strain during the pandemic (Bourquin et al., 2020; Keane et al., 2021). Evidence from the US also suggests that more supportive social policies (e.g. public health insurance, unemployment insurance, suspended utility shut-offs during the pandemic) weaken the association between job loss, income shocks and mental health (Donnelly and Farina, 2021).

One of the most striking findings of this research concerns the increase in depressive symptoms experienced among this cohort of 22-year-olds, and the differences between men and women in both the prevalence of depressive symptoms as well as risk and protective factors. Forty-one per cent of young men and over half of young women exceeded the threshold for clinically significant depression at age 22. It is worth noting that these mental health difficulties did not vary by social background, mirroring similar patterns at 20 years of age, though financial strain emerged as an important driver of poor mental health. For men, loss of the main job had a stronger effect on depression while prior involvement in team sports and confiding in a boy/girlfriend operated as protective factors. For women, loss of face-to-face contact with friends was a stronger risk factor for depression while supportive peer relationships and positive family relationships served as protective factors. Etheridge and Spantig (2020) also identified a difference between men and women in the role of social networks in explaining wellbeing declines during the pandemic; having a larger social network (which was more common among women) before the pandemic was strongly associated with larger wellbeing declines. For the GUI cohort of 22-year-olds, online contact with

friends (which had increased) was not a substitute for face-to-face contact in terms of protecting against depressive symptoms. In the context of longer-term moves towards remote and hybrid work and study, these findings provide a challenge to employers, educational institutions and policymakers in ensuring that the protective effect of face-to-face social interactions is maintained.

Gruber et al. (2021) have noted that the pandemic is a multi-dimensional stressor, affecting individual, family, educational, occupational, and medical systems. They also discuss how the protections needed to safeguard against infection (social distancing, stay at home orders, etc.) impede access to factors that are known to protect mental health such as social relationships, enjoyable activities, etc. This cohort experienced widespread disruption to their day-to-day activities, including contact with friends, and sports and cultural participation. Previous research (see, for example, Lunn, 2010) has indicated that participation in structured activities can decline over key periods of transition. There is a risk that the rupture to routine caused by the pandemic may have longer term implications for sports and cultural participation, highlighting the ongoing importance of policy efforts designed to encourage young adult involvement in these domains.

Increases in the prevalence of smoking, drinking and junk food consumption among those with poor mental health point to worrying trends in the use of negative coping strategies to deal with the stress of the pandemic. There was also evidence that some existing socio-economic inequalities in unhealthy behaviours (e.g. in smoking prevalence) were exacerbated during the pandemic. Overall, alcohol consumption levels during the pandemic declined a good deal among young adults but the small group who increased their consumption had poorer mental health. The findings therefore highlight the potential for broader health promotion (focusing on reducing drinking, smoking and unhealthy diet) to have a positive spill-over effect on mental health difficulties.

Over half of the cohort of 22-year-olds examined in this study lost their job due to COVID-19. Evidence from previous recessions points to potential 'scarring' effects from long-term unemployment and/or entering the labour market during economic downturns. Young people entered the pandemic in an already precarious position; rates of 'not in employment, education or training' (NEET) were not yet back to the levels observed before the 2008 recession, and young people were more likely to work in precarious sectors and jobs (Grotti et al., 2019; Roantree et al., 2021). At the time of writing, youth unemployment levels have fallen to around the levels they were just before the pandemic. However, no information is available on the quality of jobs obtained by those who were unemployed during the period of restrictions or on the nature of the transition from education to employment among recent graduates. The next wave of GUI at 25 years of age will be crucial in capturing potential scarring effects from the

disruption to employment and education on both educational outcomes and integration into employment. More generally, it has been noted that the pandemic offers an opportunity to rethink further education and vocational training to make societies more resilient to big shocks that change the returns to different skills after people have entered the labour market (Blundell et al., 2020).

Previous research has shown the interplay of early school leaving and poor mental health, and the need to provide socio-emotional supports for those far removed from employment (Smyth et al., 2019; Whelan et al., 2020). The fact that those not in employment, education or training were more likely to be depressed at both 20 and 22 years or to become depressed during the pandemic highlights the need to target holistic supports on this group of young people to re-engage them in education/training or employment.

There has been less evidence about the impact of the pandemic on further and higher education students than on the school-going population. While many of those in education had access to appropriate supports for the transition to online learning, there was significant variation across the cohort in access to adequate broadband, a quiet place to study, and in receipt of adequate feedback on their work. Over half (57 per cent) found it difficult to study while learning remotely. While there was little systematic variation across the cohort in terms of overall learning experience during the pandemic, those who were in their final year of their course at the onset of the pandemic were more negative about their learning experiences. Ideally, further information on the types of supports put in place to support independent learning among students would have been available to unpick the factors associated with more negative learning experiences in greater detail. Research from the OECD has shown that further and higher education institutions were generally ill-prepared for the transition to remote learning (OECD, 2021c). As aspects of remote or, at least, hybrid learning become more embedded in further and higher education courses, these results highlight the importance of accelerated rollout of high-quality broadband, and support for further and higher education institutions in incorporating remote learning, feedback and assessment into existing courses. The findings also point to the need to balance the potential flexibility obtained from remote or hybrid learning with the potential isolation and lack of access to developing some skills, for example around teamwork. Given the high levels of participation in further/higher education among young adults, there is considerable potential for the provision of mental health supports through educational institutions.

The high prevalence of depressive symptoms identified in this research highlights the role for primary care and specialist services as well as broader preventive strategies. Among those with depressive symptoms at the age of 20, 16 per cent had not consulted a GP, psychologist/counsellor and/or psychiatrist in the previous

12 months (O'Mahony et al., 2021). The suspension of treatment in the early months of the pandemic, and subsequent social distancing measures, have further lengthened already long waiting times for mental health care and treatment (Brick et al., 2020; McNicholas et al., 2021) and highlight the funding of mental health services as a policy priority.

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