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COVID-19 related occupational stress in teachers in Ireland

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ABSTRACT

Background: Sporadic school closures and a shift to online teaching have resulted in significant work changes for teachers in Ireland during the COVID-19 pandemic. Such rapid changes are likely to compound other personal or family stressors resultant from the pandemic.

Method: This study examines occupational stress levels during COVID-19 amongst a national sample of 245 teachers in Ireland using the Copenhagen Burnout Inventory as the main outcome measure.

Results: Moderate or high levels of personal burnout was reported by 82% (n = 202) of the sample and 79% (n = 193) reported work burnout. COVID-19 related adverse effects were reported by teachers on physical (43%) and mental health (67%), with deterioration in eating (34%), sleeping (70%) and alcohol use (33%). 100 (42%) participants felt unable to keep safe at work. Low levels of job satisfaction were present (66%), negatively correlating with burnout scores (r = -0.405, p < .01). 142 (58%) teachers had seriously considered changing jobs in the previous 6–12 months.

Conclusion: Plans for continued educational access for students must urgently include interventions optimising the occupational environment and resources for teachers. This is necessary to prevent the deleterious impact of personal burnout on teacher wellbeing and to minimise the likelihood of increased staff turnover, early retirement and adverse impacts on teaching quality relating to work burnout.

1. Introduction

The COVID-19 pandemic, declared by the World Health Organisation (WHO) in March 2020, significantly changed work practice in an effort to mitigate against viral spread. Ireland’s lockdowns were sudden and severe, and considered amongst the longest lasting and most restrictive globally. Citizens were asked to work from home with only work categories designated as essential continuing to allow in person work. The essential workforce faced the everyday uncertainty around the infection status of co-workers or public, with fears of infection and/or transmission to others (Dennerlein et al., 2020). High levels of psychological distress, anxiety and depression were reported in some settings (Agarwal, 2021). Both the pandemic itself as well as the associated and changing restrictions contributed to a state of acute stress for many (Agarwal, 2021).

During the pandemic, teachers experienced unprecedented and sudden changes in their work practice. Schools were ordered to close with immediate effect from March 12th, 2020, and proposed reopening timelines were extended in an unpredictable manner as the pandemic evolved. As teachers grappled with the sudden change in teaching format and without any specific Department of Education guidance, teaching moved online (Burke & Dempsey, 2020). There was early recognition of the stark disparity between student’s access to this format of teaching. Numerous factors including at the most basic access to screens and Wi-Fi in the home, together with variability in student/parent IT skills significantly disadvantaged certain students (Farsaci, 2020). Moreover, teachers’ willingness to engage with this format of teaching varied considerably (The National Forum, 2020).

For the first time since the foundation of the state examination system, Junior Certificate exams were cancelled, and the Leaving Certificate examinations postponed and ultimately cancelled, with a lack of clarity over alternative assessments and marking systems. Phased reopening of schools occurred (Irish National Teachers’ Organisation, 2021), and this introduced an uneven playing field, with some...
teachers being allowed return to a somewhat normal working day, others continuing teaching online from home. Many teachers, who were parents, had to make appropriate plans for their own children. Teachers expected to return to work were fearful for their safety, or the threat of their potential exposure to the virus on vulnerable family members. The threat of industrial action arose (O’Brien, McGuire, Wall, Clarke & McQuinn, 2021), and public sentiment was divided on how best to support teachers yet ensure educational provision for students (Hosford & Loughlin, 2021). The removal of teachers from a priority group to receive early vaccination and designation within the standard vaccination category with vaccination access based on age, despite forced exposure to face-to-face work and perceived high-risk environments, led to increased teacher dissatisfaction, stress and threats of strike action by teachers (O’Brien et al., 2021).

Teacher stress if not managed can result in numerous negative consequences including loss of job satisfaction, reduced effectiveness in teaching and can even result in burnout (Kumawat, 2020). In the international classification of diseases 11th revision (ICD-11) Burnout is defined as “a syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed” (World Health Organization, 2019). Symptoms of burnout include depleted energy or exhaustion, mentally distant from one’s job and reduced professional efficacy (World Health Organization, 2019).

Aim: The aim of this study is to examine occupational stress and burnout in teachers in Ireland during COVID-19.

2. Materials and method

2.1. Participants

Following ethical approval, refLS-19–103-Minihan-McNicholas (UCD ethics committee, November 2020) email invitations were sent to all members of the Irish Learning Support Association (ILSA) and the Irish National Teachers’ Organisation (INTO). A second recruitment strategy consisted of sending study information with an invitation to participate to principals of a number of schools (n = 101). Recruitment was stratified to include representation from mainstream primary, special primary and post-primary. A spreadsheet for each school type (mainstream primary, special primary and post primary) was accessed on the department of education website then schools were randomly selected through a random numbers generator which correlated to a number assigned to each school listed on each spreadsheet.

2.2. Questionnaire

A study specific online questionnaire was devised, along with a paper and pencil option. 74 questions used either a 5- or 6-point Likert scale response, with 8 questions offering free text response options. Demographic information included participant’s gender, age, and number of years working in education. General work-related questions were asked relating to job satisfaction, current work ability, stress reduction training, and desire to remain in teaching. COVID-19 study specific questions included COVID-19 status, access to PPE, impact of COVID-19 on workload, physical and mental health were asked. The Copenhagen Burnout Inventory (CBI), a validated measure of burnout (BO), was the main instrument used. The CBI has three subcategories examining personal burnout (6 questions), work-related burnout (7 questions), and student/pupil related burnout (7 questions). All questions use a 5-point Likert scale response ranging from Always/Very high degree, Often/high degree, sometimes/somewhat, seldom/low degree, Never/almost never. Higher scores indicate higher burnout, scores <50 are considered to reflect no/low BO, 50–74 moderate BO levels, and scores >75 high/severe BO.

2.3. Analysis method

IBM SPSS v25 software was used for data analysis. Categorical variables are presented in terms of frequency (n) and percentage (%). Kolmogorov-Smirnov tested normal distribution fitness of continuous variables. Student t-test was used for comparison of continuous variables with normal distribution, with the non-parametric equivalent, Mann-Whitney U test. Pearson’s r and Fisher’s exact tests were used examining categorical variables and Spearman’s correlation test conducted to examine potential associations between Burnout and other variables. A one-way ANOVA was used to examine various categorical variables with total burnout as the dependant variable. Bonferroni post hoc test was used to examine differences between the groups. Significance level was set at p <0.05.

3. Results

245 participants responded; due to the anonymous nature of the study it was not possible to determine a response rate. 224 (89%) participants were female, the mean age of the sample was 44 (range 22–66, SD 10.23). Most respondents had been teaching for 20 years (range 1–44, SD 10.45). Female teachers were overrepresented in this sample in comparison to the national teaching population (79%).

Job satisfaction decreased for 161 participants (66%) since COVID-19 onset, with 135 (55%) rating their current work ability worse than their lifetime best (Table 1). 84 participants (34%) did not feel valued in their job. The majority (n = 142, 58%) had seriously thought about changing jobs in the last 6–12 months. 98 participants (40%) felt they did not have anyone in their organisation or school they could talk to about work-related stress. Just over half the participants (53%) reported presenteeism, which is defined as occasions when they should have taken time of for illness but did not (Aronsson, 2020).

3.1. Working during COVID-19

220 participants (90%) stated their overall workload increased during the COVID-19 pandemic, with a rise in student contact/demands reported by the majority (n = 175, 74%) (Table 2). Participants indicated there was either no change in staffing levels (n = 176, 72%) or they were reduced (n = 28,12%) and reported reduced academic/student learning support (n = 52 22%).

Perceptions as to adequate access to PPE were mixed, 98 (42%) reporting adequate access and 83 (34%) inadequate access. Almost half, (n = 112, 46%), reported inadequate information was provided on COVID-19 from the Department of Education. 100 participants (42%) lacked confidence in their ability to remain safe while at work and 109 (65%) felt they had not received the necessary support from occupational health.

3.2. Changes in physical and mental health during COVID-19

Respondents reported changes in both physical and mental health during COVID-19 (Table 3). 101 participants (43%) stated their physical health deteriorated while 159 participants (67%) stated there was a deterioration in their mental health. Deterioration in physical (n = 78, 37%) and mental health (n = 136, 59%) of family members was also reported. Adverse effects on eating were reported with both an increase (n = 80, 34%) and decrease (n = 71, 30%) described. In addition, a reduction in sleep was noted by 170 (70%) with increased alcohol consumption reported by one in three participants (n = 77, 33%). Just over half the participants 125 (52%) reported an increase in exercise habits. A slight majority of participants, 126 (52%) reported a likelihood of changes continuing.
Table 1
Study Specific Questions.

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relative to your usual satisfaction with your work, has this changed during COVID-19?</td>
<td>n = 243</td>
</tr>
<tr>
<td>Do you feel valued in your job?</td>
<td>n = 245</td>
</tr>
<tr>
<td>Have you seriously thought of changing jobs in the last 6–12 months?</td>
<td>n = 244</td>
</tr>
<tr>
<td>Do you have anyone in your organisation/school you can talk to about work-related stress or burnout?</td>
<td>n = 245</td>
</tr>
<tr>
<td>How would you rate your current work ability compared with your lifetime best?</td>
<td>n = 243</td>
</tr>
<tr>
<td>There were occasions when I think I should have taken time off for illness but did not</td>
<td>n = 243</td>
</tr>
</tbody>
</table>

3.3. The Copenhagen burnout inventory

The total mean (SD) burnout score was 54 (15.39) indicating moderate burnout (BO) levels overall, with student related BO mean lower (35, SD 20.60) than either personal (65, SD 18.39) or work-related (61, SD 18.40) burnout (Table 4). Overall, 202 (82%) teachers reported moderate or higher levels of personal burnout and 195 (79%) work-related BO. These high levels contrasted with student related BO, rated by 59 (25%) respondents to be moderate or high.

There was no significant difference in mean total burnout scores by gender (U = 1896, p = .918). Neither age (rpb = -0.45, p = .484) or years’ experience (rp = 0.24, p = .736) correlated with burnout. However, the lack of correlation and significant difference could be attributed to an under-representation of male participants in this study’s population or possibly due to an unknown response rate due to anonymity. There was a significant negative correlation between total burnout score and having someone to talk to (rt = -0.284, p < .01), feeling valued in your job (rt = -0.529, p < .01), and perceived job satisfaction (rt = -0.405, p < .01). Furthermore, there was a positive correlation with total burnout scores and intention to change job (rt = 0.475, p < .01).

3.4. One-way ANOVA

Using an analysis of variance there was an association with higher total burnout scores in teachers who felt unable to stay safe in work (p < .001) and those lacking adequate access to PPE (p < .001). Both adverse effects on physical and mental health were related to higher BO levels (p < .001).

4. Discussion

High rates of personal and work-related BO were found amongst a group of 245 teachers. Reduced job satisfaction reported by 66% of the sample, coupled with reduced work ability reported by 55%, suggests many teachers are struggling to work effectively during the current pandemic. It is reasonable to hypothesis that this is also contributing to the high rate of turnover intention (58%).

Past research characterises teaching as a high stress job, with lower levels of job satisfaction and higher stress levels compared to other professions (nursing, dental and police) (Johnson et al., 2005). The results of this study suggest that the current situation has led to heightened risk of occupational stress amongst teachers. Occupational stress can have myriad negative effects on an individual’s physical and psychological wellbeing. Maslach and Jackson described a range of physical and psychological symptoms of burnout in an individual, including loss of self-esteem, depression, alcohol abuse, and exhaustion (Maslach, Schaufeli & Leiter, 2001).

This study reveals higher levels of burnout and stress amongst teachers than those reported pre-pandemic. Data gathered from 2000 primary school teachers in 2007/2008 in the Growing up in Ireland (GUI) study, revealed much lower reported stress. In the GUI study 55% of teachers who participated reported little or no occupational stress with 45% reporting occupational stress to some extent (Darmody & Smyth, 2011). In comparison, this study’s COVID-19 data reveals 79% of this study’s population reporting moderate or higher levels of work-related burnout and 82% personal burnout. Additionally, the very high turnover consideration, reported by over half of the sample (58%) is higher than that reported (30%) by frontline clinical radiographers during the COVID-19 crisis (Foley, O’Loughlin & Creedon, 2020). The data suggests increases in burnout and stress levels in teachers in Ireland are likely to have been accelerated by the pandemic.

The use of online teaching methods has been specifically linked to teacher stress with negative impacts on teaching effectiveness identified (Christian, Purwanto & Wibowo, 2020). The term techno-complexity has been coined to describe the process of being suddenly forced to upskill in complex technology leading to feelings of stress, anxiety and a sense
of being overwhelmed which in turn impacts on teacher performance (Christian et al., 2020).

Fear of infection was a concern for teachers returning to the classroom during the pandemic. In Ireland the overwhelming majority of teachers are under the age of 49 (89%) (Gilleece, Shiel, Perkins & Proctor, 2009), so the age-based vaccination roll-out plan left many teachers unvaccinated despite working in schools resulting in fear and further stress for teachers.

The majority of participants (67%) reported a deterioration in their mental health, additionally a further 62% reported a deterioration in the mental health of a family member. Extant data indicates that this is a predictable finding based on the mental health outcomes associated with previous pandemics, that adverse mental health effects are not only common, but often greater than any physical ones, and longer lasting (O’Connor, Wrigley, Jennings, Hill & Niazi, 2021). Adverse physical health effects were also noted in almost half (43%) of the sample. Increased eating and alcohol use may be maladaptive coping mechanisms used to combat the stress of COVID-19 and have been noted in other countries (Di Renzo et al., 2020). Given that 52% of participants felt behavioural changes made may continue post pandemic, such mal-adaptive coping strategies is a cause for concern.

Although prior research suggests male gender (Mondal, Shrestha & Bhaila, 2011), older age (Darmody & Smyth, 2011) and years spent teaching (Alhija, 2015) increase vulnerability to BO, this was not found in our study. Gender, age or years teaching were not associated with higher levels of stress. A plausible hypothesis as to why this association was not evident in this study, may be the possibility that the pandemic represents a unique cluster of stressors which are experienced equally by all groups such as fear of infection, safe working environments and unprecedented changes in working practice leading to increased workloads. Alternatively, the overrepresentation of female participants and inability to determine a response rate due to anonymity could be factors in why no associated was found.

The impact of occupational stress and burnout on teacher retention is a central concern raised by this study. The majority, 66% of this study’s population (n = 161), felt their satisfaction with work had decreased since COVID-19, and the majority (58%) had seriously considered changing jobs in the last 6–12 months. A majority of respondents (65%) in this study reported not receiving adequate support from occupational health during COVID-19 when they needed it. The data indicates that the majority of respondents are dissatisfied with their job and have seriously considered changing jobs.

Table 2
Working During COVID-19.

<table>
<thead>
<tr>
<th>Question</th>
<th>n</th>
<th>Increased: n = 135 (55%)</th>
<th>Increased: n = 85 (35%)</th>
<th>No change: n = 11 (4.5%)</th>
<th>Decreased: n = 11 (4.5%)</th>
<th>Significantly decreased: n = 3 (1%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Was there a change in your workload during COVID-19?</td>
<td>245</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relative to usual activity, has your student contact/demands changed during COVID-19?</td>
<td>239</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was there any change in staffing levels in your workplace/school during COVID-19?</td>
<td>243</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was there any change in level of academic/student learning support you received during COVID-19?</td>
<td>240</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did you feel you had adequate access to PPE during COVID-19?</td>
<td>233</td>
<td>Always/very high degree: n = 50 (21%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In general, how confident did you feel about your ability to do your work and keep safe during COVID-19?</td>
<td>241</td>
<td>Always/very high degree: n = 14 (5%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did you feel you were provided with adequate information on COVID-19 from the Department of Education?</td>
<td>241</td>
<td>Always/very high degree: n = 11 (5%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If you needed it, did you feel you were provided with adequate support from occupational health during COVID-19?</td>
<td>167</td>
<td>Always/very high degree: n = 3 (2%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


It is imperative that measures are not only put in place to avoid occupational stress and burnout but also that supports are available to those who feel stressed. This study points to an urgent need for further research exploring teacher’s wellbeing and stress levels. A further research priority highlighted is the need to develop and pilot effective and feasible interventions to optimise teachers’ wellbeing to support teacher mental health, staff retention and optimal teaching quality.

As Farber (2000) writes ‘In sharp contrast to our understanding of the causes of teacher burnout, what continues to be underrepresented in the literature are models of treatment’, this highlights the need to identify effective supports and implement them for teachers experiencing occupational stress. Mindfulness may aid in stress management and reduction. A study by Roer and colleagues revealed teachers who participated in mindfulness training reported significantly less occupational stress and burnout at post programme and three month follow up compared to a control group (Roer et al., 2013). Similarly, a study by Ireland and colleagues revealed participants who took part in a ten-week mindfulness training programme reported improvements to stress and burnout relative to a control group (Ireland et al., 2017). However, further research into the use of mindfulness training for teachers experiencing occupational stress is still needed to ensure its effectiveness for this group of professionals.

### 4.1. Strengths and limitations

The sampling method aimed to recruit teachers from a representative group of schools, but given the anonymous nature of the study, it was not possible to establish if this goal had been achieved. Furthermore, as respondents did not indicate whether they were in primary or secondary school level, it was not possible to examine BO by school set-

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**Table 3**
Changes in Physical and Mental Health During COVID-19.

<table>
<thead>
<tr>
<th>Question</th>
<th>Deteriorated: n = 101 (%)</th>
<th>No change: n = 111 (%)</th>
<th>Improved: n = 24 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Was there any change in your physical health in relation to during COVID-19? n = 236</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was there any change in your mental health in relation to during COVID-19? n = 236</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was there any change in the physical health of a family member linked to during COVID-19? n = 211</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was there any change in the mental health of a family member linked to during COVID-19? n = 218</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was there any change to your eating habits during COVID-19? n = 238</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was there any change to your alcohol intake during COVID-19? n = 232</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was there any change to your sleeping habits during COVID-19? n = 241</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was there any change to your exercise habits during COVID-19? n = 240</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How likely is it that any behavioural change you have made during COVID-19 will continue post pandemic? n = 241</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 4**
Copenhagen Burnout Inventory (CBI).

<table>
<thead>
<tr>
<th>CBI</th>
<th>M (SD)</th>
<th>Prevalence Cut-off (%)</th>
<th>Cronbach Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work-Related Burnout</td>
<td>61 (18.40)</td>
<td>No/Low (&lt;50)= 52 (21%) Moderate (50–74)= 134 (55%) High/Severe (&gt;75)= 59 (24%)</td>
<td>.879</td>
</tr>
<tr>
<td>Personal Burnout</td>
<td>65 (18.39)</td>
<td>No/Low (&lt;50)= 43 (18%) Moderate (50–74)= 117 (48%) High/Severe (&gt;75)= 85 (34%)</td>
<td>.891</td>
</tr>
<tr>
<td>Students-Related Burnout</td>
<td>35 (20.60)</td>
<td>No/Low (&lt;50)= 174 (75%) Moderate (50–74)= 47 (20%) High/Severe (&gt;75)= 12 (5%)</td>
<td>.872</td>
</tr>
<tr>
<td>Total Burnout</td>
<td>54 (15.39)</td>
<td>No/Low (&lt;50)= 96 (39%) Moderate (50–74)= 129 (53%) High/Severe (&gt;75)= 20 (8%)</td>
<td>.910</td>
</tr>
</tbody>
</table>
ting. We also did not ask if teachers had school aged children at home, a factor which is likely to be associated with stress levels based on data from previous pandemics correlating family members to stress levels. Finally, in comparison to the national teaching population males were underrepresented in this sample, this may have influenced BO differences by gender.

Despite these limitations, this is the first study examining COVID-19 related occupational stress and burnout in teachers in primary, special primary and post primary levels in Ireland. This study utilised a well-established and validated burnout measure as the primary outcome measure. The role, responsibility and working conditions of teachers is a public concern, given their unique position in educating the nation’s youth. Ensuring teachers voices are heard in terms of their wellbeing is paramount, to ensure an optimum working environment, job satisfaction and teacher retention. Future research should include more in-depth interviews with teachers as to what occupational supports would be considered helpful and exploration of whether stress reduction training could be included in teacher training college curriculum.

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Ethical approval

This study received ethical approval by University College Dublin ethics committee.

Declaration of interest statement

The authors have no conflicts of interest to disclose.

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