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Short communication

Determinants of workload-related clinician stress levels in general hospital consultation liaison psychiatry services during the COVID-19 pandemic in England and Ireland. Short report☆

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ABSTRACT

Objective: To explore workload-related stress levels experienced by consultation liaison psychiatry (CLP) staff in England and Ireland, and factors relevant to such a burden, during the COVID-19 pandemic.

Methods: Data were obtained for England and Ireland from a European survey among CLP services in general hospitals spread via CLP networks (11th June - 3rd October 2021). The heads of respective CLP services in general hospitals responded on behalf of each service, on 100 CLP hospital staff in total. Dependent variable: workload-related stress levels in CLP services due to COVID-19 (0–10 point scale). Independent variables: hospital size, CLP service size, degree of hospital involvement in COVID-19-related care, and the number of support options available to hospital staff. Spearman's rho correlation analyses were performed.

Results: There was a significant association between the hospital's involvement in COVID-19-related care and workload-related stress levels as reported by CLP staff: $r(22) = 0.41$, $p = 0.045$, $R^2 = 0.17$. There were no significant associations between workload-related stress levels and other variables including staff support ($p = 0.74$).

Conclusion: Our findings suggest that perceived workload-related stress levels of CLP staff during the COVID-19 pandemic can be an indicator of COVID-19 involvement of the hospitals. Staff support seemed not to alleviate work stress in the context of the pandemic. Healthcare policies should improve working conditions for CLP hospital staff that play an essential role from a population health perspective. Rigorous measures may be needed to ensure mental healthcare provision remains tenable and sustainable in the long term.

☆ This work was conducted in the Department of Health Sciences, University of York.

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1. Introduction

The COVID-19 pandemic had an immense impact on health services worldwide, leading healthcare providers to urgently respond to the needs of millions who fell ill within a brief timeframe [1]. The United Kingdom (UK) and Ireland ranked seventh and eighth globally, with reported COVID-19 cases at 362,981 and 347,100 per million, respectively [1]. Both nations are among the top three worldwide regarding days spent in lockdowns, with Ireland at 227 days and the UK at 213 days. Initiation of lockdowns in both countries took place in March 2020, with the first case 29 February 2020 in Ireland, compared to 31 January 2020 in the UK. This delay, coupled with insufficient community-level protective measures during the first wave, may account for the higher total COVID-19 death rate in the UK (3358 COVID-19 related deaths per million) versus Ireland (1831 COVID-19 related deaths per million) as of July 2023.

In terms of general hospital care provision, the countries seemed to have had similar resources. There were 2.5 hospital beds per 1000 people in the UK in 2019 [2] after a persistent decline over 20 years [3], and 3 per 1000 people in Ireland, as shown in Fig. 1. The UK's count of acute care beds relative to its population lags behind that of many comparable health systems [4].

In the UK, since 1987/1988, the largest percentage reductions in bed numbers have occurred in psychiatric beds, dropping to 33.1 acute mental health beds (including beds for the elderly) per 100,000 population in England [6], because of long-term policies to move these patients out of hospitals and to provide more community-based care [4,7]. This may have led to more patients presenting to the Emergency Department (ED), diverting acute cases from community to CLP services that provided direct patient care in EDs and acute wards.

In England, a pre-pandemic survey (2018) reported that CLP services were provided in 168 of 179 acute hospitals with an emergency department. 141 hospitals (79%) had a 7-day service responding to acute referrals from the emergency department and wards, 78 (44%) with 24 h access to the CLP service. One-third of hospitals (57, 32%) provided non-acute liaison work including outpatient clinics and links to specialist hospital services. 156 hospitals (87%) had a multidisciplinary service including a psychiatrist and mental health nurses [8].

During the pandemic of COVID-19, a disease that could affect several organs beyond the respiratory tract and cause acute neuropsychiatric complications, and given redeployment of clinicians to acute services, consultation-liaison psychiatry (CLP) services of general hospitals have been the first and main call of contact for psychiatric service provision. Indeed, CLP services were heavily involved in European pandemic healthcare provision, as indicated by a recent European survey [9].

Similar reductions of hospital beds have occurred in Ireland, with 22.05 beds per 100,000 general population remaining acute public mental health beds in 2018 [10]. In Ireland, CLP services are mainly provided in tertiary hospitals, that is, academic hospitals accepting national referrals, and are rarely resourced to the level recommended by the national service policy document, "A Vision for Change" [11]. Most services struggled to provide emergency care, and the increased demand due to the pandemic significantly strained them [12–14]. Irish consultant psychiatrists reported challenges in assessing patients remotely, and increased reliance on telepsychiatry in community settings led to more patients presenting to the Emergency Department (ED), diverting acute cases from community to CLP services that provided direct patient care in EDs and acute wards. Locally variable infectious disease control policies added complexity to transfers between general and psychiatric hospitals, leading to prolonged patient stays in EDs and police stations [15]. These factors likely shaped the experience of employees in the Irish CLP services.

The COVID-19 pandemic's impact on clinician stress due to COVID-19-related perceived workload has been extensively studied for acute, general, and primary healthcare providers [16–21]. However, the stress levels related to the workload experienced by CLP healthcare staff, and factors relevant to such a burden, have not been explored. This study seeks to fill this gap. Given pandemic-related differences in service provision between the UK devolved countries Northern Ireland, Scotland, Wales on the one hand, and England on the other, this study will focus on examining the situation in England and Ireland only.

2. Methods

Data were obtained for England and Ireland (this study) from a European survey (the main study) among CLP services in general hospitals that was conducted between 11th June and 3rd October 2021, the second year of the pandemic. In these two countries participating services

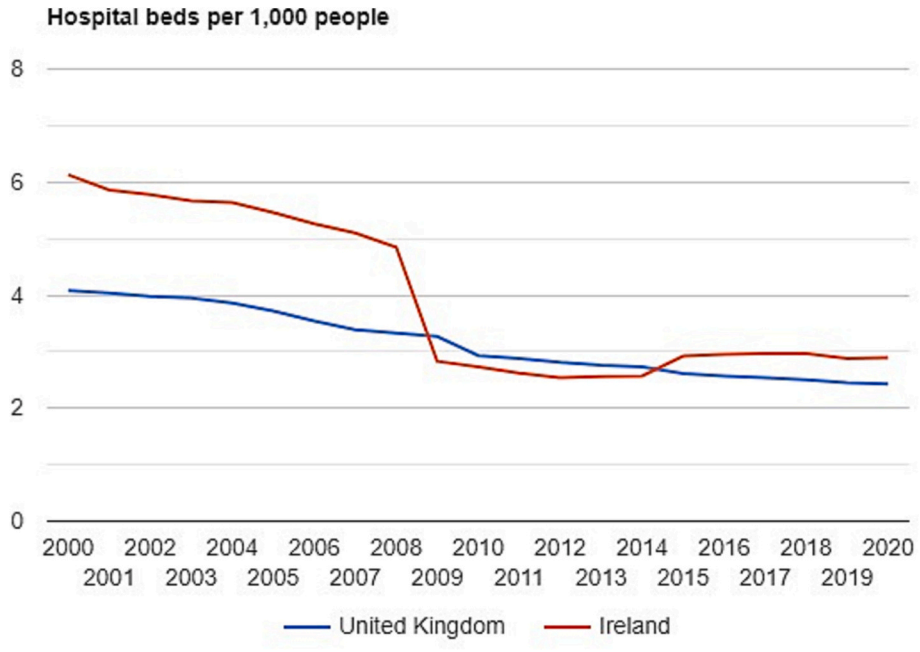

Fig. 1. Organization for Economic Co-operation and Development data. Hospital beds per 1000 people in the UK and Ireland [5] in the years 2000–2020.

are all run mainly on a CLP model, responding to acute referrals from the emergency department and hospital wards, and some have developed areas of more integrated care, involving combined psychiatrist and psychiatric nurse provision of care. The survey had been spread via CLP networks by emailing the heads of all respective CLP services in general hospitals for participation by one main respondent on behalf of each service. The method and results of this survey have been reported in detail elsewhere [10,22]. Data from CLP services in England and Ireland that reported on perceived workload-related clinician stress levels were selected. The number of healthcare workers reported about was 100: 30 physicians, 29 nurses, 16 psychologists, 6 social workers and 19 other staff.

2.1. Variables

This question assessed the dependent variable clinician stress related to perceived workload due to COVID-19: *How would you rate the maximum burden of the COVID-19 pandemic on your own psychosocial team, on a scale of 0–10 (0 = not at all stressed to 10 = extremely stressed)?*

Independent variables were 1) the size of the hospital (number of beds), 2) the size of the CLP service (number of staff), 3) the degree of involvement of the hospital in COVID-19-related care (on a numerical scale of 0–5) and 4) the number of support options available to hospital staff that also workers of the CLP service could use (on a numerical scale of 0–8), such as a telephone hotline for staff, relaxation training and the like.

2.2. Analysis

We performed Spearman's rho correlation analyses to estimate associations of clinician stress related to perceived workload with the four independent variables.

2.3. Ethics

Participation in the online survey was voluntary. Prior to participating in the survey, each of the participants provided informed consent. Participants had the option to withdraw from the survey at any time and without giving a reason. For the main study, written approvals, declarations, or statements were obtained from the responsible ethics committee in Basel (Ethics Committee of Northwest and Central Switzerland, EKNZ, Req-2020-00861, update May 20th, 2021), the site of the principal investigator (RS), where the data were stored and processed, and from each of the participating countries. For the main study, the Basel EKNZ stated that 'The research project doesn't fall under the scope of the Human Research Act, because your project is not defined as research concerning human diseases or structure and function of the human body. An authorization from the ethics committee is therefore not required.' For this study, for Ireland, the study was exempt from Ethical Committee review, as confirmed by the Ethics Committee of University College Dublin (Reference: LS-E-21-78-Doherty). For the United Kingdom, in accordance with British laws and codes of ethics, we obtained confirmation that the study did not require the consent of the ethics committee. (Reference: Personal communication Lee, 28th May 2021). The study was registered on ClinicalTrials.gov (NCT04753242).

3. Results

Twenty-one of 170 CLP services in England (12.4%) and 3 of 15 services in Ireland (20.0%) responded, and 22 (19 in England, three in Ireland) reported perceived workload-related stress levels. The mean workload-related stress reported was 8.1 (Standard Deviation, SD = 0.3) in England and 7.7 (SD = 0.6) in Ireland. The median was 8 in both countries. All hospitals in both countries were public hospitals. All sites provided information on the variables, however 7 sites reported that no staff support was provided at all. Further details are shown in Table 1.

Table 1
Description of values for perceived workload related stress and possible associated factors during the pandemic in England and Ireland.

	N	Mean	Standard Deviation	Median	Range
Number of hospital beds per service	24	722.2	355.2	687.5	180–1700
Number of CLP staff per service	24	18.6	7.9	17.5	7–35
Involvement of the hospital in COVID-19 care *	24	4.3	1.2	5.0	1–5
Number of support options available (0–8)**	24	3.8	3.1	4.0	0–8
Perceived workload related stress in CLP (0–10)***	24	8.0	1.3	8.0	5–10

CLP = Consultation Liaison Psychiatry.
* Likert scale: 0 = not at all, 5 = very strong.
** No support for staff was available for 7 services.
*** Likert scale: 0 = not at all stressed, 10 = extremely stressed.

There was no statistically significant difference in perceived workload-related stress levels between the two countries or across hospital settings. There were no significant associations between workload-related stress levels and the number of hospital beds ($p = 0.07$), the number of CLP staff ($p = 0.12$) and staff support ($p = 0.74$). However, there was a significant association between the hospital's involvement in COVID-19-related care and workload-related stress levels as reported by CLP staff, with 17% of the variance explained: $r(22) = 0.41$, $p = 0.045$, $R^2 = 0.17$.

4. Discussion

4.1. Summary of the findings

Our principal finding is that perceived workload-related stress levels in CLP staff in England and Ireland during the second year of the COVID-19 pandemic was significantly related to the maximum involvement of the hospital in COVID-related care. This was directly pandemic-related and reflects an epidemiological parameter of the virulence and spread of SARS-CoV-2 in the population in the catchment areas of the respective hospitals. Amid a global epidemic with a lethal virus known for neuropsychiatric complications, hospital staff were anticipated to handle a high influx of severely ill patients suffering from COVID-19 and the subsequent backlog from other illnesses. In addition, the limited protective measures for staff in the UK were a noteworthy concern [23]. The correlation of 0.41 signifies a moderate effect size, with 17% of the variance explained, which is substantial. Interestingly, we did not find factors related to service provision, such as hospital size and size of the CLP service, or the support available to staff, to be associated with perceived workload-related stress. This aligns with statements of hospital staff that they did not need resilience training but rather access to places to rest and protective materials to do their work.

4.2. Strengths and limitations

This is the first study exploring factors that may be relevant to workload-related stress perceived by staff in CLP services during the COVID-19 pandemic – an exploration of substantial relevance. However, the relatively small sample size is a limitation of the study. Response rates for email surveys, on average, range between 15 and 25%. The response rate for Ireland aligns with that. The lower English response rate may reflect high workload levels limiting the options for staff to contribute to the survey. Covering an incomplete proportion of all existing CLP services in England and Ireland may limit the

generalizability of our findings. Another limitation is the fact that we only could say something of perceived stress based on the results reported by one respondent on behalf of each CLP service, not on actual stress levels as that was not directly evaluated by more objective means.

4.3. Implications of the findings

The findings of this study suggest that perceived COVID-19-related stress as reported by CLP clinicians is an indicator of the level of COVID-19 involvement of the hospitals. This adds to the literature of subjective assessments by clinicians as quality indicators of health care systems, for example, as studied in Canada, the USA and Norway [24] and suggests this may apply to various healthcare systems ranging from managed care to the NHS.

Future research should verify these findings in a larger pandemic-related sample and investigate whether this association holds for all hospital staff and staff types.

Given that staff support is unrelated to perceived work stress in this study, the abundant literature relating to COVID-19 hospital staff workload focusing on managerial interventions to foster resilience of nurses [25–27] may not be as helpful as suggested before. Instead of focusing on staff support, addressing the potential for burnout and healthcare staff attrition due to challenging work conditions may need more attention [28–30]. Clinicians and their societies could lobby for that.

Greater emphasis should be placed on healthcare policies to improve working conditions for CLP hospital staff that play an essential role from a population health perspective. Rigorous measures may be needed to ensure mental healthcare provision remains tenable and sustainable in the long term.

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CRediT authorship contribution statement

Christina M. van der Feltz-Cornelis: Writing – review & editing, Writing – original draft, Supervision, Project administration, Methodology, Formal analysis, Conceptualization. **Jennifer Sweetman:** Writing – review & editing, Writing – original draft, Resources, Formal analysis. **William Lee:** Writing – review & editing, Methodology, Investigation, Conceptualization. **Anne M. Doherty:** Writing – review & editing, Validation, Investigation. **Peter Dineen:** Writing – review & editing, Validation. **Gunther Meinlschmidt:** Writing – review & editing, Supervision. **Frank Vitinius:** Writing – review & editing, Supervision. **Christian Fazekas:** Writing – review & editing, Supervision. **Christian G. Huber:** Writing – review & editing, Validation, Supervision. **Rainer Schaefert:** Writing – review & editing, Supervision, Software, Data curation. **Barbara Stein:** Writing – review & editing, Supervision, Software, Data curation.

Declaration of Competing Interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests:

Over the last 3 years, CFC received funding for The European Platform to Promote Wellbeing and Health in the workplace (EMPOWER), a European project to reduce the impact of mental health problems at the workplace, from European Union's Horizon 2020 research and innovation program under grant agreement No 848180. She received grants from The Netherlands Organization for Health Research and Development, grant number 537001002 and 5370010021, from NIHR, grant number 132852 and COV-LT2–0043, and from the BMA, for unrelated projects. She received royalties from several publishers for books on the topic of psychiatry. She received an honorarium from Janssen for speaking at a symposium and support for giving a lecture at the Lloyds Foundation annual conference 2019.

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FV received funding from German Cancer Aid, Deutsche Kinderkrebsstiftung/ Deutsche Leukämie-Forschungs-Hilfe and Innovationsfonds for studies including coaching, communication and communication trainings. He received royalties for book chapters regarding communication. He is a member of EAPM and has founded the special interest group (sig) transplantation medicine of the EAPM. He is one of the spokesmen of this sig. He is spokesman of the Dt. Kollegium für Psychosomatische Medizin (DKPM) and the Dt. Gesellschaft für Psychosomatische Medizin und Ärztliche Psychotherapie (DGPM) for Consultation and Liaison Psychosomatics; of the Dt. Kollegium für Psychosomatische Medizin (DKPM) and the Dt. Gesellschaft für Psychosomatische Medizin und Ärztliche Psychotherapie (DGPM) for transplantation medicine, and of the working group for communication of the psychooncology work group (PSO) of German Cancer Society (DKG). He is compensated for acting as a trainer for postgraduate training of communication trainings.

CF received funding from the Austrian Science Fund for project KLI 1100. He is current president of the Austrian Society of Psychosomatics and Psychotherapeutic Medicine (ÖGPPM). He is compensated for acting as a trainer for communication in healthcare and for postgraduate training of psychosomatic medicine and as a supervisor.

RS received funding from the Stanley Thomas Johnson Stiftung & Gottfried und Julia Bangerter-Rhyner-Stiftung under project no. PC 05/18, from Gesundheitsförderung Schweiz under project no. 18.191/K50001, from the Swiss Heart Foundation under project no. FF21101, in the context of a Horizon Europe project from the Swiss State Secretariat for Education, Research and lnnovation (SERI) under contract number 22.00094, and from Wings Health in the context of a proof-of-concept study. He received royalties from the publishing houses Kohlhammer and Springer. He received an honorarium from Novartis for speaking at a symposium. He is member of the scientific advisory Board of the Swiss Academy of Psychosomatic and Psychosocial Medicine. He is spokesman of the Dt. Kollegium für Psychosomatische Medizin (DKPM) and the Dt. Gesellschaft für Psychosomatische Medizin und Ärztliche Psychotherapie (DGPM) for Consultation and Liaison Psychosomatics. He is founder and managing director of the “Psychosomatic and Psychosocial Services GmbH”, active in psychosomatic and psychosocial training and further education and member of the Board of Trustees of the Foundation for Psychosomatics and Social Medicine (Ascona Foundation). He is compensated for acting as a trainer for postgraduate training of psychosomatic medicine and as a supervisor.

The other authors have no conflicts of interest to declare.

Data availability

The data are owned by a third party, the steering group for this study, that does not publicly share data. However, interested parties will be able to obtain data upon request as follows. Researchers can submit a research plan, which describes the background and methods of a proposed research question, and a request for specific data of the database used for this study to answer the research question. After approval of the research plan by the principal investigator for this study and the steering group, a de-identified minimal dataset can be obtained. Information can be requested by contacting the principal investigator, email: christina.vanderfeltz-cornelis@york.ac.uk

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