Burnout among Portuguese Sign Language Interpreters following the third pandemic wave of COVID-19: A cross-sectional mixed methods study

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ABSTRACT

During the COVID-19 pandemic, Portuguese sign language interpreters (SLIs) had to adapt quickly to the new context. One of the biggest challenges was developing their activity online. This study, grounded in the theoretical frameworks of burnout (Maslach & Leiter, 2016) and perceived stress (Lazarus & Folkman, 1984), aimed to identify the factors influencing SLIs' vulnerability to burnout and to explore their perceptions of the impact of the COVID-19 outbreak, as well as potential mitigation strategies. A cross-sectional, quantitative and qualitative online study examined burnout, stress perception, satisfaction with life and COVID-19 impact. A total of 110 SLIs completed the questionnaire. Personal (59%), work- (46%) and patient-related (24%) burnout was observed. Three significant models explained personal- (R^2 = 54%), work- (R^2 = 46%) and client-related burnout (R^2 = 22%). The results showed that only perceived stress levels significantly predict personal, work- and client-related burnout in SLIs. From the participants' perspective, the COVID-19 context triggered difficulties in the excessive working hours, work-life imbalance, reduced energy and quality of life, and lack of resources and digital literacy. As suggestions to minimize this impact, the SLI indicate the need to re-think educational adjustments during emergency remote learning, provide SLIs with psychological and tangible support and reinforce communication mechanisms among educational members.

Keywords: Burnout; Stress; Sign language interpreters; Pandemic COVID-19; Remote learning.

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1. Introdution

Sign Language Interpreters (SLIs) are responsible for receiving messages through visual or auditory modes and rendering them into semantically equivalent utterances in the target language (Schwenke et al., 2014). Internationally, interpreter associations advocate for inclusive communication and improved working conditions for SLIs, particularly in educational and healthcare settings.

The employment of interpreters has experienced a noticeable increase, thus necessitating the establishment of benchmarks for their work, training, and ethical conduct (Bontempo, 2015; Drugan, 2017). Portugal currently boasts a contingent of 615 authorized Sign Language Interpreters (SLIs) (DGEEC, 2021) operating in a wide spectrum of domains, including but not limited to education, social work, healthcare, legal services, religion, television, science, art and culture, business, audio-visual, and community organizations.

While global studies have addressed interpreter burnout and stress in remote settings (Courtney & Phelan, 2019; Adigun, 2019), there is a lack of research examining the pandemic's medium- to long-term impact on Portuguese SLIs. This study addresses that gap by analysing their lived experiences during the third wave of COVID-19. It contributes to a better understanding of how extreme working conditions affect interpreter well-being and proposes targeted strategies to ensure sustainable professional practice and equitable educational access for deaf students.

1.1. The effects of the COVID-19 in Sign Language Interpreters daily work

The COVID-19 pandemic has had a significant impact on everyday life, affecting various aspects such as family, social and professional (Flores & Gago, 2020; Gayatri & Puspitasari, 2022; Guzzo et al., 2022). In Portugal, within a short period of time, the country witnessed an exponential increase in COVID-19 cases, leading to a significant change in the way professional tasks were being performed (Serrão et al., 2021). The pandemic has resulted in a fundamental shift in how individuals conduct their professional activities. Remote work has become a norm, with employees utilizing various digital technologies to communicate and collaborate with their colleagues (Lal et al., 2023; McPhail et al., 2023).

During a time of high risk, uncertainty, and fear, governments held daily press conferences to inform their communities about measures to limit the spread of the virus. These measures included protection, confinement, and social isolation (Ryan et al., 2023). One of the common goals in different countries was to ensure that all audiences, including the deaf community, were reached and informed. Pressure from deaf associations and Portuguese sign language interpreters (SLIs) allowed the deaf community equity of access to health and social information, shared at the press conferences broadcast live on television. This phenomenon has enhanced the visibility and indispensable resource of SLI (Stine, 2021) in the promotion of equity and equality, especially regarding to the Portuguese context.

The measures implemented to restrict circulation, which included the closure of commercial, social, and educational facilities, necessitated a rapid adjustment in the working practices of professionals across all sectors. Of particular concern was the educational community, including SLI, which had to rapidly adapt to unprecedented circumstances and develop an Emergency Remote Learning program to provide continued education services under these challenging conditions (De Meulder et al., 2021; Serrão et al., 2021). In fact, the pandemic forced a rapid acceleration on a global scale and sign language was no exception. This "this digital disruption has accelerated a shift towards remote sign language interpreting" (De Meulder et al., 2021, p.12). However, despite unavoidable advantages of interpreting via online platforms, such as overcoming geographical distances, several challenges also emerged. One of the primary challenges is the lack of experience and training in a virtual context, as well as the lack of digital literacy among SLIs (De Meulder et al., 2021).

In pedagogical context, additional challenges have arisen, such as difficulties in accessing the internet, absence of fundamental technological resources such as computers and lack of concentration among students themselves (Santos & Barbosa, 2021). In the specific reality of the deaf person in a school setting, several factors contribute to added difficulties in their learning process. For instance, a teacher who turned off the camera during an online class or a peer who spoke without appearing on camera, causing the deaf

student to lose eye contact with the speaker's lips. Similarly, when sharing slides, students were prevented from visualizing the teacher explanation, what could have distorted the content of his/her speech (Santos & Barbosa, 2021).

Although there is limited research on the impact of COVID-19 on SLI, De Meulder et al. (2021) conducted an international study to identify the changes perceived by SLI professionals and the impact of those changes on their practice during the first wave of the pandemic. The study included 2,634 SLI professionals from 63 different countries, including Portugal. The study found that digital literacy, training, and experience in remote working were crucial factors in adapting to the new circumstances. However, the study also revealed that SLI professionals encountered challenges such as maintaining a work-life balance, which could lead to them leaving their jobs. The psychological demands of remote sign language interpreting were pointed to be greater than those of in-person interpretation. Outcomes show that 13% (n = 504) of SLI sought mental health support since the onset of the crisis to cope with changing professional demands (De Meulder et al., 2021). The reasons given by SLI for the psychological overload and stress from remote working are many, however, technical issues stand out (Myers et al., 2022). Interpreting in 2D rather than 3D; managing conversations with less clarity and harder teamwork are some of the main challenges posed to SLI (De Meulder et al., 2021). These circumstances placed on the SLI a greater professional overload due to the higher number of interpreting services/hours required, coupled with the management of various constraints such as "the handling of equipment and technological tools, lack of technical support (audiovisual), lack of a physical structure for their performance" (Ferreira et al., 2021, p.2). On top of all this, remote interpreting has been described by SLI as a challenging and unsatisfactory experience. According to De Meulder et al. (2021), the technology employed for remote interpreting can be strenuous, impersonal and tiring, leading to increased stress and exhaustion. The increase in hours of screen time, conversation control, cooperation with co-interpreters, (...) and the social isolation aspect" (De Meulder et al., 2021, p.38) are just a few factors that, all together, lead to a higher perception of stress and professional burnout.

The aforementioned demands have led to an elevated risk of stress and burnout among these professionals.

1.2. Burnout in Sign Language Interpreters

Burnout consists of a prolonged response to chronic physical and emotional stressors culminating in exhaustion and feelings of ineffectiveness (Maslach et al., 2001; Maslach & Leiter, 2016). According to Kristensen et al. (2005), burnout is defined as the physical and psychological exhaustion experienced by an individual, which has different dimensions, including personal, work-related, and client-related factors.

The role of an interpreter is one that requires a high level of proficiency, and as such, it is often associated with a range of occupational health complications. Adigun (2019) notes that interpreters frequently encounter high levels of stress, which can lead to several physical and mental health issues. In particular, Schwenke et al. (2014) suggest that interpreters are at risk of experiencing psychological stress, fatigue, and burnout. As a result, this profession often entails personal discomfort, anguish, and reduced working hours (Hubscher-Davidson, 2020). Interpreting work involves physical and mental interactions that can generate biomechanical tension and eventually lead to injuries. These injuries can range from constant and repetitive muscle strains to carpal tunnel syndrome (Bevan, 2018; Rotaru-Zavaleanu et al., 2024).

In general, prolonged working hours, attributed primarily to the shortage of professionals (Schwenke, 2012), maintaining a static body posture (Freeman & Rogers, 2010), professional isolation, insufficient training and support (MacDonald, 2015), and lack of supervision (Witter-Merithew, 2012), are among the variables that can generate occupational stress and burnout in this profession. Bhui et al. (2016) have identified several organizational factors can generate occupational stress, such as physical stress; individual and institutional stress, extra institutional stress, stress inherent to the work, related to the functions of the institution, to work relationships or to career development and progression, stress related to the interaction between work and home. These factors serve as useful aids in identifying the underlying causes of stress. As such, their identification and mitigation is critical to promoting employee well-being. Research has demonstrated a correlation between stress and chronic illness, injury and burnout among interpreters who work interpreting from and to sign language (Bower, 2013; Qin et al., 2008). Schwenke (2012) evaluated the relationship between maladaptive perfectionism, stress and burnout in a sample of 117 (78.6% female) American SLIs,

finding that stress played mediating role in this relationship. Courtney and Phelan (2019) conducted a study with the aim of measuring the self-perceived occupational stress and job satisfaction levels of 474 interpreters. Findings suggest that despite the stress, the poor remuneration and uncertainty about the future, the interpreters generally demonstrate that they are highly satisfied with their work, with flexibility and autonomy being key factors that contribute to their satisfaction. The pandemic seems to have exacerbated the social isolation of these professionals (Schnack, 2020). However, prior to the pandemic, lone working had already been identified, as Bower (2013) evaluation of interpreters highlighted their desire for more opportunities to work in teams and engage in social interaction with others to reduce stress levels.

The implications of fatigue and exhaustion among SLIs are significant. McCartney (2006) notes that such factors can lead to reduced life satisfaction, insensitivity and reduced interest towards clients, decreased productivity and poor quality of service provided to the deaf community. In the face of these occupational stressors, the challenges generated by the pandemic situation further compound the risk of burnout among sign language interpreters.

1.3. Purpose of the present study

To our knowledge, no study to date has focused on assessing SLI's burnout levels in addition to perceived stress, during the third wave COVID-19 outbreak, nor the associated contributing factors. To address the lack of research on burnout among SLI, this study was guided by the following questions: (1) To which extent do SLIs show signs of burnout, stress and life satisfaction? (2) How are burnout, stress and life satisfaction correlated? (3) Which variables predict SLI levels of burnout? (4) What challenges do SLIs identify in the COVID-19 outbreak? What measures do they identify to mitigate the impact of COVID-19 outbreak?

2. Method

2.1. Sample

A total of 110 SLIs (93.6% females) filled in the questionnaire. In Portugal, the universe of SLI is 615 (DGEEC, 2021), with 575 (93.5%) being women This reality of feminisation of the SLI profession is well known to be female-dominated (Napier & Leeson 2016) and several surveys show that this trend is fairly stable (Peaker, 2020).

As far as training in the area of SLI, most of the respondents said they had studied in Higher Education Institutes in the Porto district, with 61% having a degree and 30.9% a master's degree. With regard to years of experience in the area, almost half (45.5%) have more than 10 years, with the remaining participants indicating having between 0-5 years (34.5%) or 5 to 10 years of professional experience (20%).

During the COVID pandemic, most of the participants were working remotely (60.0%, n = 66), followed by participants who worked in a combined regime (face-to-face and remote work, 32.7%, n=36). Approximately 10% of participants had a salary reduction.

The characteristics of the participants are summarized in Table 1.

Table 1. Characteristics of participants (*n*=110)

Characteristics	
Age (years), *M* (*SD*)	32.5 (26.75; 37.00)
Female	103 (93.6%)
Marital status	
Single	60 (54.5%)
Married	45 (40.9%)
Widowed/Divorced	5 (4.5%)
Children	41 (37.3%)
Children ≤ 12 years	37 (33.6%)
Academic	
Secondary	1 (0.9%)
Degree	67 (60.9%)
Postgraduate studies	7 (6.36%)
Master's degree	34 (30.9%)
PhD	1 (0.9%)
District of Graduation	
Coimbra	15 (13.6%)
Porto	76 (69.1%)
Setúbal	19 (17.3%)
Years of professional practice	
0-5 years	38 (34.5%)
6-10 years	22 (20%)
>10 years	50 (45.5%)
Experience background	
Educational	95 (86.4%)
Social (public services)	2 (1.8%)
Health	3 (2.7%)
Judge	1 (0.9%)
Television	7 (6.4%)
Associative	2 (1.8%)
Interpreter in a secondary activity	48 (43.6%)
Type of contract	
Fixed-term	23 (20.9%)
Open-ended contract	51 (46.4%)
Part-time contract	1 (0.9%)
Temporary employment contract	5 (4.5%)
Service provision agreement	23 (20.9%)
Other	7 (6.4%)
Weekly working hours	
35h	88 (80.0%)
40h	3 (2.7%)
<35h	19 (17.3%)

2.2. Instrument

Sociodemographic and vocational contextual variables were collected using a self-administered online questionnaire disseminated via professional networks and interpreter associations. Participation was voluntary and anonymous. While this recruitment method allowed broad national reach, it may have introduced self-selection bias, favouring individuals more engaged or motivated to report their experiences. The degree of burnout was assessed using the Copenhagen Burnout Inventory (CBI; Kristensen et al., 2005; translated and adapted for the Portuguese by Fonte, 2011). The CBI consists of 19 items, distributed over three scales: personal burnout, composed of six items, assesses the degree of physical and psychological exhaustion and exhaustion experienced by the person; work-related burnout, composed of seven items, analyses the degree of physical and psychological fatigue and exhaustion perceived by the person in relation to his/her work; and client-related burnout, composed of six items, assesses the degree of physical and psychological fatigue and exhaustion perceived by the person in relation to the work performed with patients/clients. A high level of Burnout (personal, work- and client-related) is deemed to correspond to values equal to or greater than fifty points. The Cronbach's alpha values measured in this study were .907 (personal burnout), .882 (work-related burnout) and .888 (client-related burnout).

The CBI was selected over other measures, such as the Maslach Burnout Inventory (MBI), due to its non-proprietary status, strong psychometric properties, and its suitability for diverse professional contexts, including public service and education, which aligns with the interpreting profession.

The degree of stress was assessed with the Perceived Stress Scale (ESP; Cohen et al., 1983; translated and validated by Trigo et al., 2010). This scale consists of 10 questions that assess how often a general life context occurred during the last month, not specifying a particular situation. Questions are scored on a 5-point scale (0=Never; 4=Very often). Higher scores reflect higher levels of stress. The internal consistency measured in this study was .912.

To assess life satisfaction, the Satisfaction With Life Scale was used (SWLS; Diener et al., 1985; re-validated by Simões, 1992). This scale aims to assess the cognitive aspect of subjective well-being, i.e., the judgmental component of subjective well-being. It's a 5-item scale. Each item is a statement to which the respondent must assign a level of agreement, through a Likert-type scale of 5 points (1 meaning 'strongly disagree' and 5 meaning 'strongly agree'). The Cronbach's alpha values measured in this study were .893.

Lastly, there were two open questions aimed at assessing challenges SLIs felt in their professional performance during the COVID-19 outbreak and identifying mitigation measures of the its impact.

2.3. Design

Data collection took place from 3rd April to 7th May, 2021. A questionnaire created using the Google® Forms platform was made available to participants via a link shared through direct e-mail and social networks (Facebook, Instagram, Linked In, and WhatsApp) following a snowball sampling approach.

Ethical procedures in accordance with the Declaration of Helsinki were accomplished via analysis and approval of the study by the Ethics Committee of the Centre for Research and Innovation in Education (inED; Ref PA15/CE/21). All respondents provided informed consent prior to accessing the questionnaires.

2.4. Data analysis

Associations between burnout scores and independent variables (demographic variables, working conditions, stress and life satisfaction) were studied using a linear regression approach. Multivariate linear regressions were performed following a statistical significance set to 0.05. Only significant variables found in intermediate analyses were included in the model. Assumptions of the linear model were checked with the graphical analysis of standardised residuals, evaluation of multicollinearity among independent variables and analysis of Cook's distance.

Open-ended questions were qualitatively analysed using thematic analysis to establish themes and sub-themes (Braun & Clarke, 2006). Responses of SLIs were coded separately by three researchers in order to identify recurring themes and, then compared and discussed until a final agreement. Agreed themes and sub-themes were checked against data by the three researchers.

3. Results

Table 2 displays scores measured in burnout, perceived stress and satisfaction with life scales. A large percentage of SLIs reported personal burnout (n = 65, 59.1%) and work-related burnout (n = 51, 46.4%). Approximately 24% (n = 26) of interpreters reported client-related burnout. Regarding perceived stress, the respondents scored an average of 18.15 with a standard deviation of 7.73 and a range of 3.00-33.00. A high degree of stress was reported by 11.8% of SLI, while the majority of SLI had a moderate (58.2%) or low level (30.0%) of stress.

With regard to satisfaction with life, the median score of the participants sampled was 18.13 (SD=4.13), with a range of 7-25.

Table 2. *Burnout, stress and life satisfaction of sign language interpreters*

	Total (*n* = 110)
Personal burnout (*M*, *SD*)	52.01 (18.08)
High Personal burnout (≥ 50), *n* (%)	65 (59.1%)
Work-related burnout (*M*, *SD*)	45.16 (18.48)
High Work-related burnout (≥ 50), *n* (%)	51 (46.4%)
Client-related burnout (*M*, *SD*)	33.11 (21.27)
High Client-related burnout (≥ 50), *n* (%)	26 (23.6%)
Perceived Scale Stress (*M*, *SD*)	18.15 (7.73)
Low Stress (0-13), *n* (%)	33 (30.0%)
Moderate Stress (14-26), *n* (%)	64 (58.2%)
High Stress (27-40), *n* (%)	13 (11.8%)
Satisfaction with life (*M*, *SD*)	18.13 (4.13)

The correlations between burnout, perceived stress, and satisfaction with life measures were all statistically significant. Overall, there was a medium to large positive correlation among different burnout dimensions (Table 3). A significant correlation was found between personal burnout and work- and client-related burnout (r = .675, p < 0.001; r = .411, *p* < 0.001, respectively). There was a large correlation between work-related burnout and client-related burnout (r = .582, *p* < 0.001). Different dimensions of burnout were positively correlated with perceived stress and negatively association with subjective well-being (satisfaction with life). In addition, there was a negative correlation between life satisfaction and perceived stress.

Table 3. Associations between burnout, perceived stress, and satisfaction with life scores represented by spearman's rho values

	CBI personal	CBI work-related	CBI client-related	PSS
CBI personal				
CBI work-related	.675***			
CBI client-related	.411***	.582***		
Perceived Scale Stress	.727***	.639***	.452***	
Satisfaction with life	-.460***	-.453***	-.290**	-.593***

Note. CBI: Copenhagen Burnout Inventory. PSS: Perceived Scale Stress. **p<0.01; ***p<0.001.

Results of personal burnout, work-related burnout, and client-related burnout subscales: multivariate analysis

Socio-demographic, professional and psychological variables were identified as potential predictors according to the multivariate linear regression (Supplementary Table 1, Appendix A). Multivariate linear regression was used to assess the ability of different variables to predict personal, work- and client-related burnout. Regarding demographic variables, only the variable of gender was entered in the final models, as the others (e.g., age, number of children, academic degree, number of monthly working hours) didn't show a significant association with the dependent variables (Supplementary Table 1, Appendix A). Most working conditions variables (e.g., weekly working hours, working status during COVID-19) showed no significant association with different dimensions of burnout. The only exception occurred with salary reduction for client-related burnout and, therefore, it was included in the model. Three significant multivariate models explained around 54%, 41% and 22% of the personal (R^2 = 0.54, $F_{(3, 106)}$ = 41.70, *p* < 0.001), work-related (R^2 = 0.41, $F_{(3, 106)}$ = 26.02, *p* < 0.001) and client-related (R^2 = 0.22, $F_{(4, 105)}$ = 7.52, *p* < 0.001) burnout variance, respectively (Table 4).

Table 4. Multivariate linear regression models to explain the three burnout dimensions: personal, work- and client-related

	CBI Personal		CBI Work-related		CBI Client-related	
	B	p	$β$	p	$β$	p
Gender	.108	0.111	.088	0.241	-.017	0.848
Salary reduction					.134	0.126
Perceived Scale Stress	.722	<0.001	.588	<0.001	.417	<0.001
Satisfaction with life	-.042	0.604	-.113	0.219	-.024	0.822
R^2	54.1%		40.8%		22.3%	

Note. The coding for gender was 0 = female, 1 = male.

The results showed that among the independent variables included in the model, only the perceived stress level significantly predicts burnout in SLIs. Higher levels of stress were significantly associated with personal, work-related and client-related burnout.

3.1. Impact of the COVID-19 outbreak

Table 5 depicts the themes and subthemes that emerged from the qualitative data analysis of the open-ended questions related to the impact of COVID-19. Four main themes emerged from SLI' responses.

Table 5. Summary overview of the coding procedure related to the impact of the COVID-19

Themes	Sub-themes
Workload and work pace	- Consecutive hours in front of a monitor - Increase in out-of-hours work - Lack of limits in working hours
Home, work and personal interface	- Difficulties in time management - Difficulties in work-life balance - Lack of time for personal life - Feeling of failure in the different areas of life
Quality of life	- Physical and emotional exhaustion - Lack of energy - Increase of social and family isolation
Environment and equipment	- Insufficient technological equipment - Difficulty in using digital platforms to translate

The SLI highlighted the increased of workload and work pace during this period. Due to the outbreak, SLI were not conducting face-to-face translation, once their target group were at home. Remote translation was identified as a demanding activity, given the number of hours in front of a monitor and the complexity of 2D translation. SLI reported an increase in out-of-hours work used to prepare classes translation and adapt vocabulary to the situation of distance learning. The participants also indicated they felt overworked and often needed to work after the regular schedule and go overnight and weekends. This overload led to situations of inability to switch off from work causing "frustration", "stress" and "anxiety".

Concurrently, the home, work and personal interface was widely mentioned by interpreters as one of the main impacts of the confinement caused by COVID-19. In particular, the interpreters mentioned the difficulties in time management and in reconciling professional, family and personal life. SLI in teleworking mentioned that they often had to intersperse their workday with childcare and household tasks and, thus, felt there was no division between professional, familiar and personal life. Particularly, SLIs with children had to find additional time in their day to support their own children in distance learning. Lack of time for personal life, including social and leisure events and activities exacerbated the impact of the COVID-19 outbreak.

SLI also referred to the reduction of quality of life for several reasons. Most of the interpreters mentioned they felt tired and emotionally exhausted as a result of changes in their professional and familiar routines caused by COVID-19 pandemic. Irritability stand out from interpreters' responses, stating that the increased demands in their professional life interfered with their availability, energy and mood for family needs. SLI associated the reduction of life satisfaction to a feeling of failure in different areas of life, especially in the support provided to their families. For some Participants who were working far away from home, the measures of social distance and mobility constraints hindered opportunities to visit the family, contributing for their isolation.

This era of online work – due to teleworking or target group confinement – demand an adaptation to a new interpreting environment and equipment. This required from SLI the domain of technological/digital skills and resources that many reported not being prepared for or equipped with. Furthermore, online communication imposes additional constraints in the translation act, requiring from SLIs the adaptation to this new way working.

3.2. Measures to mitigate the impact of COVID-19 outbreak

Four main themes of measures to minimize the impact of the COVID-19 outbreak emerged from SLI' responses (Table 6).

Table 6. Summary overview of the coding procedure related to measures to minimize the impact of the COVID-19 outbreak

Theme	Sub-theme
Educational adjustments in emergency remote teaching (students)	- Adjust classes schedule - Accessible online platforms - Prefer face-to-face teaching for students who are deaf
Educational adjustments in emergency remote teaching (interpreters)	- Changes in working schedule - Resources for distance learning
Support to interpreters	- Professional valuation of the interpreter - Respect of working schedule - Psychological support - Financial compensation for the teleworking costs - Safety measures for face-to-face activities
Communication mechanisms (set at the school level)	- Communication channels for sharing experiences - Proximal contact with workers

Educational adjustments in emergency remote teaching to meet students' needs were highlighted, namely the modification of classes schedule by reducing synchronous classes and including regular intervals. SLIs focused on the need to use an online platform accessible by students who are deaf, but overall, they defend that face-to-face teaching should be exceptionally adopted in crisis situations with this group of students.

In SLI' perspective, educational adjustments should also cover the conditions they have to conduct online translation to children, so academic success can be achieved. These conditions comprise the reduction of working hours and the balance between academic and non-academic activities to include time for preparation and rest from active translation. Furthermore, interpreters mentioned the need of resources to improve their performance and surpass barriers experienced during emergency remote teaching, such as being provided with technological equipment and training/information on the use of online platforms.

Many SLIs declare that the COVID-19 impact can be minimize by improving support to interpreters, namely the acknowledgment of the importance of the interpreter by employment contexts (staff in Direction and colleagues). Valuing their role include the respect for the working schedule, providing advance information

about the work that may be required or avoid meetings after work with the excuse of being online. Psychological support and financial compensation for the costs of teleworking were also referred as needed supports. Additionally, interpreters mentioned the need to improve safety measures during face-to-face activities, what encompasses frequent COVID testing and provision of transparent masks to facilitate visual contact with people who are deaf.

In situation of crisis, employers – mainly head teacher and school board – need to reinforce communication mechanisms. This includes take into account the perspectives of SLIs in relation to the needs and challenges they experience, reinforcing a trust relationship and promoting the psychological well-being of employees, what will allow to fulfil personal and organizational objectives with quality. Interpreters highlighted the need for creating/reinforcing communication channels for sharing experiences and reflecting on challenges associated to COVID-19 outbreak. In their opinion, these spaces should be used to provide information about legal aspects related to pandemic; share strategies to improve distance learning, but also as spaces for leisure moments.

A proximal contact with employers and being listen was also mentioned by interpreters as an important condition for the success of the target group, by for example playing an active part in the decision making about the better online platform to use with people who are deaf.

4. Discussion

According to our knowledge, this study is among the first to evaluate burnout experienced by Sign Language Interpreters (SLIs) in the aftermath of the third wave of the COVID-19 pandemic. Findings indicate that a considerable proportion of SLIs experienced burnout, with 59% reporting personal burnout, 46% reporting work-related burnout, and 24% reporting client-related burnout.

In comparison to international studies that focused on SLIs, these results suggest significantly higher burnout levels. For example, Schwenke's (2012) study reported that only 19% of SLIs experienced high levels of emotional exhaustion, 5.1% reported high levels of depersonalisation, and 15.4% reported high levels of personal accomplishment. However, it is important to note that caution must be exercised when making these comparisons, as our study employed a distinct instrument, namely the Maslach Burnout Inventory, to assess burnout. Nevertheless, this study underscores the relevance of addressing burnout in SLIs, highlighting the need for interventions that address not only personal burnout but also work and client-related burnout.

It is worth noting that the burnout dimension in which a higher percentage of participants reported experiencing burnout refers to the personal dimension, as SLIs attribute their exhaustion and fatigue to non-work domains such as personal lives. Although the literature has overlooked the personal demands (Chen & Fellenz, 2020), previous studies have identified variables that contribute to personal demands, such as taking care of parents, experiencing financial problems, having demanding duties in personal life, facing challenges in relationships, and feeling lonely (e.g., Chen & Fellenz, 2020; Upadyaya & Salmela-Aro, 2020; Wang et al., 2021). The COVID-19 pandemic has placed a significant personal demand on individuals as they navigate the constantly changing recommendations, restrictions, and actions aimed at preventing contagion. Qualitative findings of this study indicate that during the third wave of COVID-19, SLIs were faced with a range of challenges, including increased workload and work pace, difficulties in balancing work and family responsibilities, and social isolation. These findings align with established theories, such as the Conservation of Resources Model (COR, Grandey & Cropanzano, 1999), which suggests that personal demands and resources are transferable between domains, such as family-work and work-family.

As previously stated, 46% of the participants in this study showed a high level of work-related physical and emotional exhaustion. The qualitative findings provide deeper insights into these results. The interpreters referred to the pandemic as a significant factor contributing to the increased job demands, leading to stress and burnout. In the context of education, online translation, preparatory activities, and discussions with colleagues about doubts required extra effort and time, making it difficult for them to balance their personal and professional lives. Prior research has shown that work demands (Dean & Pollard, 2001), lack of control (Schwenke, 2012), and other professional conditions can lead to burnout among SLIs. COVID-19 may have exacerbated these factors, as the pandemic has intensified time pressure and workload (Liu et al., 2021).

This finding highlights the importance of equipping interpreters, who are key educational actors, with the skills and knowledge required for distance learning methods and technologies. They must also learn a new way of organizing their work to adapt to the new reality. The latter aspect may explain why most sign language interpreters reported working longer hours, often fitting work around personal activities, leading to a negative impact on their mood and self-efficacy in different areas of life.

The data suggests that personal, work-related, and client-related burnout scores were significantly and positively related to perceived stress, which is consistent with previous studies (Bower, 2013; Qin et al., 2008; Schwenke et al., 2014). Our findings also indicate that perceived stress plays a crucial role in all dimensions of burnout. Stress is the psychological strain that results from exposure to demanding events, and prolonged exposure to stress can lead to exhaustion and feelings of ineffectiveness (Kristensen et al., 2005; Maslach & Leiter, 2016). It's worth noting that none of the demographic factors such as age, gender, civil status, or contextual factors like face-to-face work or teleworking were found to be significant predictors of emotional and physical exhaustion. However, it's a well-known fact that crises affect genders differently, and COVID-19 is no exception (Meulder et al., 2021). However, our study did not find a significant relationship between gender, marital status, or having children and emotional and physical exhaustion. Based on our findings, it's possible that other factors like self-efficacy (e.g., Xanthopoulou et al., 2007), psychological resilience (e.g., Serrão et al., 2021), and organizational factors may be responsible for the high prevalence of personal and work-related burnout.

To prevent future situations and reduce the impact on professional practice, SLIs pointed to the need to modifying the class schedule, by reducing synchronous classes and including regular intervals. In particular, the SLIs recommend prioritizing face-to-face teaching, which should be exceptionally adopted in situations involving deaf students.

To minimize the hard impact of teleworking, the SLIs propose some conditions. This includes reducing working hours and allowing time for preparation. They also suggest giving SLIs some rest from active translation, to help them recharge and maintain their effectiveness.

The effective implementation of distance learning requires the provision of essential resources such as technological equipment and training on the use of online platforms, as highlighted by SLI. In addition, interpreters have emphasized the need to establish communication channels for sharing experiences and reflecting on challenges caused by the COVID-19 outbreak, which can help to safeguard their psychological well-being. They assert that valuing their role, respecting their working schedules, providing advance information about their work, and avoiding meetings after work are critical factors that require due consideration. Upon examining these suggestions, we can draw parallels between the challenges faced by SLI's and teachers during remote emergency teaching. While teachers are now better-equipped to handle new teaching scenarios using technology, thus being able to provide a more comprehensive and individualized response to high-priority remote teaching (Flores et al., 2021), SLI's may need to resort to "emergency remote interpreting". This experience is likely to make SLI's more mindful of their online interpreting practices and enable them to better cope with similar challenges in the future.

5. Limitations

This study aimed to contribute to the knowledge on challenges and wellbeing of SLIs in a particular moment of our lives. In fact, there are some limitations that we are aware of, and therefore, these results should be read with caution. Firstly, the limited sample in this study maybe be read in terms of the context in which the study occurred. The sample of 110 SLIs represents 18% of the SLIs registered in DGEEC (2021) (N=615). Secondly, data collection occurred online, therefore there is a possibility of error associated. Aside from those limitations, the results of this study provide important perspectives for SLIs working in an emergency situation.

Although the study offers relevant insights into the challenges faced by SLIs during the third wave of the COVID-19 pandemic, it is important to consider the temporal distance between the data collection and the present. Information was gathered between April and May 2021 — a time marked by acute adaptation pressures. Nearly four years later, the impact of those challenges may have evolved, or persisted, in different ways. A longitudinal approach would have enabled the identification of lasting effects, transformations in

coping mechanisms, and the current relevance of the reported needs. Future research should therefore explore whether the psychological and professional consequences identified in this study remain latent in the lives of these professionals.

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Appendix A

Supplementary Table 1. Burnout and demographic and work conditions variables

	N	CBI personal			CBI work-related			CBI client-related		
		M (SD)	t/F	*d/ η$_p$²*	*M (SD)*	t/F	*d/ η$_p$²*	*M (SD)*	t/F	*d/ η$_p$²*
Sex										
Female	103	52.91 (17.94)			46.19 (18.21)			34.30 (21.39)		
Male	7	38.69 (15.54)	2.043*	.393	30.10 (16.73)	2.271*	.437	15.48 (7.50)	2.310*	.445
Age										
Marital status										
Single/divorced	65	52.63 (18.42)			45.38 (18.79)			33.14 (20.46)		
Married	45	51.11 (17.73)	0.431	.087	44.84 (18.22)	0.151	.029	33.06 (22.64)	0.021	.004
Children										
No	69	50.54 (18.70)			46.27 (18.36)			34.72 (20.24)		
Yes	41	54.47 (16.91)	-1.103	.212	43.29 (18.75)	0.817	.033	30.39 (22.90)	1.034	.199
Number of children (*r*)	41		-.106			-.165			-.125	
Academic										
Degree	67	51.24 (18.58)			45.04 (16.87)			31.84 (19.85)		
Master's degree	34	52.45 (18.30)	-.310	.062	43.80 (21.58)	.317	.063	31.25 (23.97)	.132	.027
Years of experience										
0-4	31	51.48 (17.69)			43.32 (19.20)			34.01 (20.61)		
5-10	29	50.43 (19.81)			46.43 (18.39)			32.18 (20.10)		
11-15	34	53.31 (16.97)			47.58 (16.93)			35.66 (23.06)		
>15	16	53.13 (19.45)	0.158	.004	45.16 (21.03)	0.570	.016	27.60 (21.56)	0.550	.015
District of Graduation										
Porto	76	51.97 (18.39)			45.91 (17.81)			34.87 (21.59)		
Coimbra	15	49.17 (21.37)			43.10 (19.11)			36.39 (19.64)		
Setúbal	19	54.39 (14.20)	0.346	.006	43.80 (21.29)	0.205	.004	23.46 (19.45)	2.454	.044
Type of contract										
Fixed-term	30	53.19 (18.27)			44.29 (19.91)			29.86 (23.06)		
Open-ended contract	55	52.27 (17.56)			44.35 (18.74)			31.74 (20.62)		
Service provision agreement	25	50.00 (20.31)	0.222	.802	48.00 (16.43)	0.377	.687	40.00 (19.73)	1.801	.170
Weekly working hours										
35h-40h	92	52.58 (17.68)			46.04 (18.54)			32.52 (21.45)		
<35h	18	49.07 (20.29)	0.751	.145	40.67 (17.97)	1.128	.246	36.11 (20.66)	-0.654	.126
Working status during COVID-19										
Face-to-face	66	51.39 (18.22)			44.91 (17.72)			32.89 (21.74)		
Remote work	36	54.75 (18.32)			46.73 (20.21)			36.57 (21.18)		
Combined	8	44.79 (15.06)	1.091	.020	40.18 (17.78)	0.421	.008	19.27 (11.56)	2.222	.040
Salary reduction										
No	100	52.00 (17.44)			44.61 (18.11)			31.83 (20.29)		
Yes	10	52.08 (24.71)	-0.014	.003	50.71 (22.07)	-0.997	.192	45.83 (27.50)	-2.012*	.387

Note. *p<0.05.