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How have journalists been affected psychologically by their coverage of the COVID-19 pandemic? A descriptive study of two international news organisations

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ABSTRACT

Objectives The COVID-19 pandemic has presented unprecedented healthcare challenges. Journalists covering the pandemic at close quarters are working in ways akin to first responders, but nothing to date is known of the psychological distress this is potentially causing them. This study aims to determine whether journalists reporting on the COVID-19 crisis have been affected emotionally, and if so to assess the severity of their distress. It also investigates potential demographic and work-related predictors and whether news organisations had provided counselling to their journalists.

Participants A total of 111 journalists working for two international news organisations were approached of which 73 (66%) participated in the study.

Primary and secondary outcome measures Symptoms of anxiety (Generalised Anxiety Disorder Scale-7 (GAD-7)), depression (Patient Health Questionnaire (PHQ-9)), posttraumatic stress disorder (PTSD; PTSD Checklist for DSM-5 (PCL-5)), overall psychological distress (12-item General Health Questionnaire (GHQ-12)), and treatment.

Results The percentages of journalists exceeding threshold scores for clinically significant anxiety, depression, PTSD and psychological distress were: GAD-7, 26%; PHQ-9, 20.5%; PCL-5, 9.6%; GHQ-12, 82.2%. Journalists assigned to cover the pandemic (n=54 (74%)) were significantly more anxious ($p<0.05$). Journalists who received counselling (n=38 (52%)) following the onset of the pandemic reported significantly fewer symptoms of anxiety ($p<0.01$), depression ($p<0.01$) and overall psychological distress ($p<0.01$).

Conclusions Journalists covering the COVID-19 pandemic are experiencing levels of anxiety and depression similar to those seen in first responders. Psychological therapy provided in a timely manner can significantly alleviate emotional distress.

Strengths and limitations of this study

- ► First study to investigate the psychological effects on journalists reporting on COVID-19.
- ► Multivariate regression modelling.
- ► Clear outcome measures.
- ► No diagnoses with structural interviews.

INTRODUCTION

Since its first emergence in 2019 in Wuhan, China, COVID-19 has posed a significant threat to public health[1] with almost 39 million cases reported globally and 1,101,083 confirmed global deaths as of 16 October, 2020.[2] The pandemic has caused widespread emotional distress, with studies indicating moderate to severe levels of anxiety- or stress-related symptoms in the general population in response.[3–5] Elevated rates for posttraumatic stress disorder (PTSD) in members of the Chinese workforce,[6] heightened fear of infection and COVID-19-related worries in online samples,[7–9] and increased anxiety in Chinese college students[10] have also been reported.

Findings from research on the psychological distress of first responders and healthcare workers who have to deal with the consequences of the pandemic, directly suggest they are particularly vulnerable to COVID-19-related psychological distress.[11–14] Journalists have increasingly been recognised as first responders to hazardous events[15] and often have to work in close proximity to the threat they are reporting on. However, no data are available on the potential psychological distress that covering the COVID-19 epidemic might cause them. It was with this in mind that the current study was undertaken.

The aim of our descriptive study was twofold. First, we sought to determine whether journalists reporting on the COVID-19 crisis have been affected emotionally and if so, to assess the severity of their distress. We also looked for potential demographic and work-related predictors, given that our previous research

with journalists has revealed the importance of these factors as determinants of their mental health.[16 17] Finally, we looked at whether news organisations had provided counselling to their journalists. We hypothesised that journalists assigned to COVID-19 coverage directly would endorse more symptoms of emotional distress, anxiety, depression and posttraumatic stress than those who did not and that elevated rates of psychopathology would be alleviated by therapy received since the outbreak of the pandemic.

METHODS

Participants

A group of 111 journalists, engaged in current affairs reportage, primarily based in Europe and North America and whose contact details were provided by two international news agencies were approached via email (see invitation letter in online supplemental material 1 available at http://dx.doi.org/10.1136/bmjopen-2020-045675) to participate in the study. Of these, 73 (66%) completed the study, 2 (2%) opted out, and 36 (32%) did not respond. Data collection was performed with Qualtrics,[18] a secure online data collection tool licensed by the host institution. All data were collected between 28 April and 20 July 2020. Journalists were provided with a password and a unique link to enter the site, which allowed them to complete the study across multiple sessions. After logging in for the first time, journalists were presented with a detailed introduction to the study and a consent form. Clicking the consent button at the bottom of the form signalled their agreement to participate and automatically redirected participants to the first of seven questionnaires. All data were anonymised before performing the statistical analysis.

Patient and public involvement

No patients were involved in this study.

Demographic and COVID-19-related data

1. The general demographic data collected included age, gender, marital status, years worked as a journalist and level of education.
2. COVID-19-related data included asking journalists if they had covered health beats prior to the outbreak, if their employment had become more stressful due to COVID-19, if they had been tested for COVID-19, if they had colleagues who had died from the virus, if they had reported on COVID-19 directly, and if they had been offered counselling by their news organisation since the outbreak.

Psychiatric data

Four psychometric scales were used to collect the behavioural data.

1. Overall levels of psychological distress were assessed with the 12-item General Health Questionnaire (GHQ-12).[19] Each item is scored 0-0-1-1 for responses that range from a 'better/healthier than normal' to a 'much worse/more than usual' option. A score of ≧ 2 is indicative of psychiatric 'caseness', a marker for overall emotional distress. Cronbach's α for the GHQ-12 was 0.84.
2. The Generalised Anxiety Disorder Scale-7 (GAD-7)[20] quantifies symptoms of generalised anxiety disorder. Responses are scored on a 4-point Likert scale (0 = 'Not at all' to 3 = 'Nearly every day') with a maximum total of 21. A score of ≧ 10 is indicative of clinically significant anxiety. Cronbach's α was 0.91.
3. Symptoms of depression were assessed with the Patient Health Questionnaire (PHQ-9).[21] A 4-point-Likert scale (0 = 'Not at all' to 3 = 'Nearly every day') is used to score responses. A score of ≧ 10 out of 27 is generally considered to be suggestive of the presence of major depression. Cronbach's α for the PHQ-9 was 0.86.
4. The PTSD Checklist for DSM-5 (PCL-5)[22 23] was used to quantify the presence and severity of PTSD symptoms. Responses on the 20-item measure are scored on a 5-point Likert scale ranging from 0 = 'Not at all' to 4 = 'Extremely'. A cut-off score of ≧ 33 indicates a provisional PTSD diagnosis.[20] Cronbach's α for the PCL-5 was 0.95.

Journalists were asked whether they had ever sought mental health therapy prior to the pandemic. Journalists were also asked to complete two simple analogue scales to assess perceived degrees of stress (0=no stress; 10=severe stress) and support (0=no support; 10=full support). Lastly, alcohol consumption was assessed in terms of units per week. A unit of alcohol was defined as a regular-size bottle of beer, a glass of wine, or a shot of spirits. Fourteen units of alcohol per week for men and nine units for women were considered the upper limits of acceptable weekly intake.[24]

Statistical analysis

All statistical analyses were performed in R version 3.6.3.[25] Shapiro-Wilk tests revealed that assumptions of normality were violated for years of experience as a journalist ($W=0.95$, $p<0.01$) and perceived levels of support ($W=0.95$, $p<0.01$). Examinations of relationships involving these variables were therefore undertaken with Spearman's rank correlation coefficient. Group effects on variables that did not violate assumptions of normality were performed with t-tests.

Shapiro-Wilk tests of normality were significant for all psychiatric measures (GHQ-12: $W=0.94$, $p<0.01$; GAD-7: $W=0.91$, $p<0.001$; PHQ-9: $W=0.93$, $p<0.001$; PCL-9: $W=0.83$, $p<0.001$). As such, predictors of overall emotional distress, anxiety, depression, and PTSD were sought with generalised linear models of the Poisson family type utilising log link.

RESULTS

Demographic data

The demographic and COVID-19-related data appear in table 1. On average, journalists who reported on COVID-19 directly were significantly younger ($W=708$, $p<0.05$). Age was found to significantly correlate with years of work

Table 1 Demographic data

	n	%	Mean	SD
Age	73	100	41.29	9.76
Gender				
Male	31	42		
Female	42	58		
Marital status				
Single	10	14		
In relationship	20	27		
Married	40	55		
Separated	1	1		
Divorced	2	3		
Years' experience	73	100	17.97	9.33
Education				
High school	1	1		
College	9	12		
University	63	86		
Past psychiatric history				
No	31	42		
Yes	42	58		
Perceived work stress	73	100	6.51	1.72
Perceived organisational support	73	100	6.33	2.26
Alcohol				
Yes	62	85		
No	11	15		
Weekly units of alcohol	62	85	8.85	9.16
Male	27	44	10.26	7.36
Female	35	56	7.77	10.30
COVID-19-related				
Job more stressful				
Longer hours	42	58		
Covering for unwell colleagues	4	5		
Covering for laid off colleagues	0	0		
More demand for stories	43	59		
Other	19	26		
None	11	15		
Tested for COVID-19				
Yes, positive	1	1		
Yes, negative	5	7		
Yes, do not want to disclose	0	0		
Yes, TBD	3	4		
No	64	88		
Colleagues died from COVID-19				
Yes	2	3		
No	71	97		
Reported directly on COVID-19				
Yes	54	74		
No	19	26		
Offered therapy/counselling since outbreak				
Yes	38	52		
No	35	48		

Note: n=73 when not indicated; TBD, to be determined; A unit of alcohol is defined as a regular-size bottle of beer, a glass of wine, or a shot of spirits. Fourteen units of alcohol per week for men and 9 units for women were considered the upper limits of acceptable weekly intake.[24]

experience as a journalist (r=0.94, p<0.001) and reporting on COVID-19 directly (r=−0.30, p<0.001). There were no significant differences between journalists who had, or had not, received therapy when it came to age (M=40.29, SD=9.79 vs M=42.21, SD=9.78, t(70)=−0.84, p=0.404). No associations were found between having received therapy since the outbreak and gender ($\chi^2_{(1,N=73)}$=0.167, p=0.683), past psychiatric history ($\chi^2_{(1,N=73)}$=0.004, p=0.948) or having reported on COVID-19 directly ($\chi^2_{(1,N=73)}$=0.003, p=0.953).

Psychiatric data

The psychometric data, including correlations, between the GHQ-12, GAD-7, PHQ-9 and PCL-5 appear in table 2. The percentage of journalists whose scores exceeded thresholds on the GHQ-12, GAD-7, PHQ-9, and PCL-5 was 60 (82.2%), 19 (26%), 15 (20.5%), and 7 (9.6%), respectively.

Relationship between demographic and psychiatric data

Psychiatric differences in, and correlations with, the demographic data are shown in table 3. Most notably, female journalists endorsed more symptoms on the GAD-7 and the PCL-5 than their male counterparts, and journalists with a past psychiatric history reported higher scores on the PHQ-9 and PCL-5. Journalists who reported on COVID-19 directly reported higher scores on the GAD-7. Journalists who had received counselling offered by their news organisation following the onset of the pandemic endorsed fewer symptoms on the GHQ-12, GAD-7, and the PHQ-9 (see figure 1), and reported significantly higher levels of perceived organisational support (W=228, p<0.001) and significantly lower levels of perceived work stress (W=860, p<0.05). In addition, in terms of threshold scores, they were less likely to score beyond the threshold for caseness on the GHQ-12 (W=623.5, p<0.01) and the GAD-7 (W=5.5, p<0.05). Journalists who reported on COVID-19 directly reported higher scores on the GAD-7 and the PHQ-9 than those who did not.

Table 2 Psychiatric data

	n	%	Summary statistics						Spearman correlations			
			Mean	SD	Median	Minimum	Maximum	Range	GHQ-12	GAD-7	PHQ-9	PCL-5
GHQ-12	73	100	4.88	3.34	4	0	11	11	1			
GAD-7	73	100	6.67	5.45	6	0	21	21	0.66***	1		
PHQ-9	73	100	5.89	4.72	5	0	20	20	0.71***	0.80***	1	
PCL-5	73	100	14.70	15.42	12	0	72	72	0.53***	0.64***	0.71***	1

***p<0.001.
GAD-7, Generalised Anxiety Disorder Scale-7; GHQ-12, 12-item General Health Questionnaire; PCL-5, PTSD Checklist for DSM-5; PHQ-9, Patient Health Questionnaire.

Predictors of psychiatric difficulties

The number of predictor variables was constrained by sample size. With this in mind, the choice was determined by those independent variables which were found to correlate significantly with symptoms on the psychometric measures, show significant differences within demographic groups, or which historically are known from the psychiatric literature to influence indices of emotional distress. The final predictor variables entered in our generalised linear model were: age, gender, past psychiatric history, therapy provided since the pandemic, and having reported on the pandemic directly. Correlations between these variables were assessed prior to running the analysis to ensure no two variables had a correlation coefficient exceeding r=0.6 (see table 4).

The results of the regression analysis appear in table 5. Age significantly predicted symptoms of PTSD and being female was a significant predictor for elevated scores on all four psychiatric measures. Past psychiatric history was a significant predictor for generalised anxiety disorder, major depression, and PTSD symptoms. Having been offered counselling since the outbreak significantly predicted lower scores on the GHQ-12, the GAD-7, and the PHQ-9. We dichotomised the GAD-7 and PHQ-9 scores into normal and pathologically elevated, and followed this with a post-hoc analysis with Chi-squared (Fisher's exact test), which revealed that journalists who had received mental health therapy were also less likely to fall in the pathological range for the GAD-7 ($p<0.001$) and PHQ-9 ($p<0.05$). Having reported on COVID-19 directly significantly predicted higher GAD-7 and PHQ-9 symptoms.

DISCUSSION

Results of the regression analysis revealed high rates of psychological distress in journalists working during the COVID-19 pandemic, which were alleviated, in part, by counselling offered by news organisations since the outbreak. Between group comparisons and correlation analyses furthermore revealed that higher rates of general emotional distress, generalised anxiety disorder, and major depression were significantly associated with being female and reporting on the pandemic directly.

Before discussing these results in greater detail, further comment is needed on the sample selection. The participation of two major, international news organisations and the high response rate suggest that the group we studied is broadly reflective of the Western media covering the epidemic. Given that the pandemic dominated the news cycles at the time of data collection, only journalists who reported on current affairs were approached. Studies of email-driven research have shown that acceptance rates of 40% are considered acceptable, 50% good, and 60% and above very good.[26] With this yardstick in mind, our participation rate of 66%, which overlaps with that obtained in our previous studies with Western journalists,[27–29] further supports the representative value of our sample.

Table 3 Psychiatric scores according to demographic factors

		Dependent variable:			
	n	**GHQ-12**	**GAD-7**	**PHQ-9**	**PCL-5**
Age					
R^2	73	−0.18	−0.13	−0.07	−0.04
Gender					
R^2	73	0.23	0.29*	0.22	0.26*
Male	31	4.00 (3.06)	5.10 (5.02)	4.45 (3.43)	10.26 (11.77)
Female	42	5.52 (3.42)	7.83 (5.53)	6.95 (5.27)	17.98 (17.04)
W		477.5	433*	484	457*
Marital status					
R^2	73	−0.04	0.08	−0.03	0.02
Single	10	4.30 (3.20)	5.10 (3.63)	5.30 (4.24)	12.90 (8.69)
In a relationship	20	5.90 (2.99)	7.00 (5.87)	7.00 (4.99)	18.65 (21.95)
Married	40	4.20 (3.29)	6.70 (5.77)	5.03 (4.29)	12.53 (12.83)
Separated	1	11.00 (NA)	13.00 (NA)	17.00 (NA)	32.00 (NA)
Divorced	2	8.00 (4.24)	7.50 (2.12)	9.50 (6.36)	19.00 (0.00)
χ^2		8.33	2.59	5.99	3.45
Experience					
R^2	73	−0.12	−0.09	−0.08	−0.07
Education					
R^2	73	−0.04	0.06	0.09	−0.01
High school	1	11.00 (NA)	13.00 (NA)	17.00 (NA)	32.00 (NA)
College	9	4.67 (3.71)	4.67 (3.74)	3.78 (3.38)	11.33 (10.85)
University	63	4.81 (3.25)	6.86 (5.61)	6.02 (4.66)	14.90 (15.95)
χ^2		2.68	2.64	4.59	2.04
Past psychiatric history					
R^2	73	0.21	0.23	0.30*	0.24*
No	31	4.06 (2.98)	5.19 (4.51)	4.23 (3.81)	10.52 (11.32)
Yes	42	5.48 (3.49)	7.76 (5.87)	7.12 (4.98)	17.79 (17.35)
W		495	479	424*	471*
Perceived work stress					
R^2	73	0.27*	0.40***	0.27*	0.14
Perceived work support					
R^2	73	−0.30*	−0.34**	−0.27	−0.18
Counselling for COVID-19					
R^2	73	−0.31**	−0.37**	−0.34**	−0.17
No	35	5.94 (3.40)	8.54 (5.42)	7.43 (4.69)	16.80 (15.55)
Yes	38	3.89 (2.99)	4.95 (4.95)	4.47 (4.34)	12.76 (15.25)
W		898.5**	951.5**	927**	795
Reported directly on COVID-19					
R^2	73	0.21	0.28*	0.23*	0.13
No	19	3.68 (3.11)	4.63 (5.20)	4.16 (3.98)	12.63 (15.91)
Yes	54	5.30 (3.34)	7.39 (5.41)	6.50 (4.84)	15.43 (15.33)
W		369	326.5*	358	427.5

Mean and SD are given for Wilcoxon Rank Sum Tests.
*p<0.05; **p<0.01; ***p<0.001.
GAD-7, Generalised Anxiety Disorder Scale-7; GHQ-12, 12-Item General Health Questionnaire; PCL-5, PTSD Checklist for DSM-5; PHQ-9, Patient Health Questionnaire; R^2, correlation coefficient; W, Wilcoxon Rank Sum W.

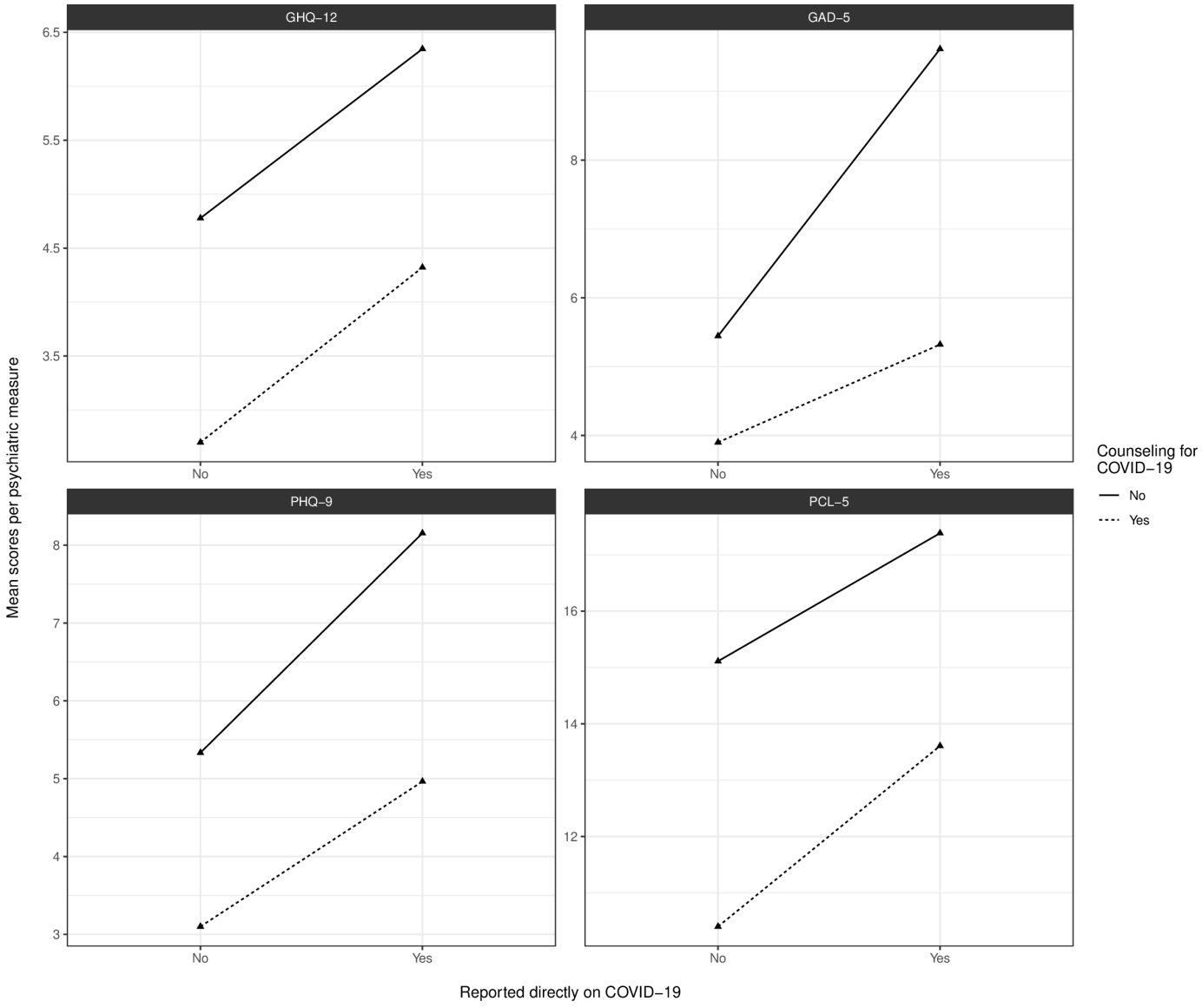

Figure 1 Mean scores per psychiatric measure grouped by directly reported on COVID-19 and counselling for COVID-19.

The COVID-19 pandemic is widely considered the most severe health crisis of the 21st century so far and its impact on all aspects of society cannot be understated. As such, our data must be viewed against the backdrop of elevated levels of psychological distress in the general population. Drawing comparisons between our study and the reported general population findings can, however, be challenging because of demographic mismatch and the potential for cultural bias, as much of the current literature comes from China where rates of anxiety and depression have ranged from 6.3% to 44.6% and 17.1% to 53.5%, respectively.[4 30] Data from the UK based on the GHQ-7 and PHQ-9 psychometric scales used in our study, revealed a rate of depression of 22.1%, similar to our sample and a point prevalence of 21.6% for anxiety, lower than our figure of 26%.[31] Not surprisingly, these figures increase in individuals with a history of mental health difficulties pre-pandemic. Anxiety, depression and stress-related symptoms were significantly higher in those with a premorbid vulnerability compared with those without, following the introduction of lockdown restrictions.[32] Our data replicated this finding, but with one important caveat; journalists remained out in the field working on COVID-related stories and as such, their lockdown restrictions were social, not occupational.

Given that journalists are considered frontline workers, comparing their mental health to that of other frontline workers is informative. One systematic review and meta-analysis of 12 studies of healthcare workers revealed a 23.2% prevalence of depression and a 22.8% prevalence of anxiety, figures that overlap with our sample of journalists.[33] Another systematic review and meta-analysis, which included a bigger sample of 115 articles, found slightly higher rates of depression and anxiety, namely 26.3% and 29.0%, respectively.[34] The findings in our sample approximate these figures. Regarding the results from the PCL-5, it is possible that COVID-19 as a stressor for journalists fell short of the DSM-5 description of what a PTSD stressor

Table 4 Correlation matrix for demographic predictor variables used in generalised linear regression

	Age	Gender	Past psychiatric history	Therapy\counsel for COVID-19	Reported directly on COVID-19
Age	1				
Gender	−0.08	1			
Past psychiatric history	0.02	0.27*	1		
Therapy/counsel for COVID-19	0.09	−0.05	0.01	1	
Reported directly on COVID-19	−0.29*	0.06	0.19	−0.01	1
GHQ-12	−0.18	0.23	0.21	−0.31**	0.21
GAD-7	−0.13	0.29*	0.23	−0.37**	0.28*
PHQ-9	−0.07	0.22	0.30	−0.34**	0.23*
PCL-5	−0.04	0.26*	0.24	−0.17	0.13

Correlations are calculated with Spearman's rank correlation coefficient (R^2).
*p<0.05; **p<0.01.
GAD-7, Generalised Anxiety Disorder Scale-7; GHQ-12, 12-item General Health Questionnaire; PCL-5, PTSD Checklist for DSM-5; PHQ-9, Patient Health Questionnaire.

entails, namely exposure to actual or threatened death.[23] As such the threat to journalists from COVID-19 was perhaps not of a magnitude for it to emerge as a significant predictor for PTSD in our regression analysis. What is notable in our study, however, are the GHQ-12 findings, which should be interpreted as a marker of overall psychological distress. Over 80% of journalists in our sample were showing evidence of clinically significant emotional distress, a figure more than twice the 37.8% reported in healthcare workers.[34] Once again, caution should be adopted when interpreting direct comparisons like this because of methodological constraints, but potential reasons for the high levels of distress found in journalists are likely to be multifactorial.

To begin with, there is the stress of working close to sites of infection like hospitals and medical clinics and

Table 5 Generalised linear models for psychiatric measures

	Dependent variable:			
	GHQ-12	GAD-7	PHQ-9	PCL-5
	β (standard error) [97.5% confidence interval]			
Age	−0.006 (.006) [−0.0172,.0059]	−0.002 (.005) [−0.0121,.0078]	−0.002 (.005) [−0.0123,.0089]	−0.010** (.003) [−0.0170,−0.0037]
Gender female	0.233* (.115) [.0070,.4583]	0.323** (.100) [.1278,.5188]	0.316** (.107) [.1067,.5245]	0.422*** (.069) [.2856,.5579]
Past psychiatric history	.202 (.116) [−0.0251,.4289]	.273** (.100) [.0762,.4690]	.400*** (.109) [.1861,.6132]	.410*** (.069) [.274, .5463]
Therapy/counsel for COVID-19	−0.400*** (.108) [−0.6125,−0.1876]	−0.529*** (.094) [−0.7126,−0.3445]	−0.493*** (.100) [−0.6882,−0.2979]	−0.243*** (.062) [−0.3643,−0.1214]
Reported directly on COVID-19	.268 (.140) [−0.0055,.5415]	.370** (.123) [.1290,.6112]	.327* (.130) [.0732,.5813]	.040 (.076) [−0.1081,.1886]
Constant	1.528*** (.303) [.9346,2.1219]	1.563*** (.264) [1.0452,2.0810]	1.360*** (.281) [.8092,1.9110]	2.663*** (.173) [2.3233,3.0024]
Observations	73	73	73	73
Log likelihood	−189.105	−243.918	−223.769	−605.495
Akaike information criterion	390.211	499.835	459.539	1222.991

*p<0.05; **p<0.01; ***p<0.001.
GAD-7, Generalised Anxiety Disorder Scale-7; GHQ-12, 12-item General Health Questionnaire; PCL-5, PTSD Checklist for DSM-5; PHQ-9, Patient Health Questionnaire.

the emotional challenges of interviewing the bereaved and family members of those taken gravely ill. This point is supported by our data showing that being assigned to cover the pandemic was a statistically significant predictor of elevated scores on the GAD-7 and PHQ-9. This finding adds to a burgeoning literature documenting the psychological effects on journalist who cover risky, dangerous and distressing assignments.[35] In addition, with most news bureaus closed during lockdowns or working at reduced capacity, journalists have lacked the direct support of colleagues, which can prove protective from a psychological trauma perspective.[36] Further examples of how COVID-19 has increased work stress for journalists can be found in our demographic data. The majority of journalists felt that their job had become more stressful because of the pandemic, citing longer hours (58%) and an increased demand for stories (59%). Of note is that the majority of journalists (88%) had not been tested for the virus at the time of data collection. It is now known that uncertainty about a potential infection can exacerbate feelings of fear and unease already present.[7 9]

An encouraging finding in our study was the emergence of therapy as a protective factor across all four symptom clusters, namely anxiety, depression, PTSD and overall psychological distress. Over 50% of the sample was offered therapy following the onset of the pandemic, a singular improvement on the part of news who in the past have often looked away from the emotional challenges faced by their journalists working on traumatic assignments.[37] Furthermore, as can be seen in figure 1, the benefits of therapy extended not only to those journalists covering the pandemic, but to all those journalists who availed themselves of the offer. As noted above, the stress on journalists was not limited to COVID-related work, but encompassed more generic factors applicable to society at large, such as mandatory social isolation, having to work from home, the loss of leisure pursuits and so on.

In keeping with journalists being offered therapy during the pandemic, another interesting demographic association was found that reflects the sensitivity of news management to the psychological distress of their journalists. The inverse correlation between age and being assigned to work on COVID-19-related news indicates that younger journalists were preferentially selected to work on a potentially hazardous story. Given the often repeated and widely publicised message from public health officials that the outcome of infection with COVID-19 worsened appreciably with age,[38] our data suggest that news managers to a degree took this knowledge into account when assigning COVID-related stories. The fact that younger journalists were given more risky work also helps explain what at first glance is an anomaly in our psychiatric data, namely the inverse relationship between age and the presence of significant psychopathology, an observation at odds with the trauma literature in journalists.[39 40]

Our study is not without limitations. First, data collection relied solely on self-report questionnaires to elicit symptoms. The absence of structured interviews prevented us from obtaining diagnosis of psychiatric disorders according to DSM-5 criteria.[23] This is, however, offset to a degree by the robustness of the thresholds on the various psychometric scales as markers of clinical significance. Second, we do not know what kind of counselling journalists received. While the efficacy of in-person and internet-based cognitive behavioural therapy, for example, in treating generalised anxiety disorder, major depression, and PTSD is well established,[41–45] it may be that simpler supportive measures were also effective in helping journalists through a difficult period. Given that our study design is cross-sectional, we also do not know if any of the benefits will endure. Third, not all journalists who reported on COVID-19 directly did so in person in the field. Instead, a percentage of journalists would have likely worked on the story remotely. Given that both means of coverage were employed, we cannot tease out the relevant contribution of each to the outcome variables. Fourth, we have no data in relation to personal protective equipment access and COVID-19 safety trainings, two variables which in theory could have affected the journalists' emotions. Lastly, we note with interest that journalists assigned to cover the pandemic were younger. The reasons for this are unclear and deserve further exploration.

In summary, our study, the first of its kind, shows that many journalists have struggled emotionally during the pandemic. Journalists fulfil an important function in civil society, keeping a population informed of events that directly impact their day to day functioning. In order for them to continue doing so, they need to remain physically and psychologically healthy. It is therefore encouraging that two major news organisations with a long reach are aware of these challenges and addressing them in a timely fashion. Others that are not doing so need to follow this approach.

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