

Witnessing images of extreme violence: a psychological study of journalists in the newsroom

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Summary

Objective: User Generated Content – photos and videos submitted to newsrooms by the public – has become a prominent source of information for news organisations. Journalists working with uncensored material can frequently witness disturbing images for prolonged periods. How this might affect their psychological health is not known and it is the focus of this study.

Design: Descriptive, exploratory.

Setting: The newsrooms of three international news organisations.

Participants: One hundred and sixteen journalists working with User Generated Content material.

Main outcome measures: Psychometric data included the re-experiencing, avoidance and autonomic arousal indices of posttraumatic stress disorder (Impact of Event Scale-revised), depression (Beck Depression Inventory-II; BDI-II), a measure of psychological distress (GHQ-28), the latter comprising four subscales measuring somatisation, anxiety, social dysfunction and depression, and mean weekly alcohol consumption divided according to gender.

Results: Regression analyses revealed that frequent (i.e. daily) exposure to violent images independently predicted higher scores on all indices of the Impact of Event Scale-revised, the BDI-II and the somatic and anxiety subscales of the GHQ-28. Exposure per shift only predicted scores on the intrusion subscale of the Impact of Event Scale-revised.

Conclusions: The present study, the first of its kind, suggests that frequency rather than duration of exposure to images of graphic violence is more emotionally distressing to journalists working with User Generated Content material. Given that good journalism depends on healthy journalists, news organisations will need to look anew at what can be done to offset the risks inherent in viewing User Generated Content material. Our findings, in need of replication, suggest that reducing the frequency of exposure may be one way to go.

Keywords

journalists, posttraumatic stress, depression, violent images

Introduction

The question as to whether viewers who watch television coverage of violent events are at increased risk

of developing symptoms of emotional distress has assumed greater salience in the age of the 24-hour news cycle. Following the terrorist attacks of 11 September 2001, the putative influence of the media on viewers' emotional health was the subject of a number of studies. Those that found an elevated rate of posttraumatic stress disorder (PTSD) symptoms generally reported a link with the amount of time spent watching television.^{1–4} Children were found to be potentially more vulnerable in this regard.^{5,6} High trait anxiety⁷ and personal knowledge of those killed or injured⁸ also emerged as risk factors. A prevailing view held media coverage of the attacks responsible for rates of PTSD that in some samplings approached 17.0%.⁹ However, not all researchers were in agreement with this conclusion.¹⁰

The relevance of these arguments, vigorously debated post 9/11, has resurfaced recently in relation to a new form of journalism, namely User Generated Content (UGC). This acronym refers to video material and photographs submitted to newsrooms by the public. The content of this 'live' material, which often contains images of extreme violence, is sought after by news organisations. Specific news units have been created to edit and 'sanitise' these images for screening in news and documentary programmes.

Little is known about the emotional health of those journalists who work with UGC. An earlier study of 81 journalists whose job potentially involved exposure to video footage of violent events did not find elevated rates of PTSD symptoms,¹¹ but these findings predate the technological advances that have given rise to the current UGC phenomenon. Now the man on the street with nothing more than a cell phone can transmit, in real time, images of great ferocity and violence, much of which is deemed too shocking to be shown to audiences. The unremitting flow of this material coupled with the longevity of certain conflicts means that some journalists have frequent and prolonged exposure to deeply disturbing images. The potential effects on their emotional

health have yet to be explored, hence the focus of the present study.

Methods

Sample selection

Three international news organisations provided a list of names and email addresses of 144 English-speaking journalists working with UGC. Of these 116 (80.6%) journalists agreed to participate in the study. A website was established for data collection in keeping with a methodology used successfully in previous journalist studies.^{12,13} Journalists were provided with a password and their own identifying number to enter the site. Once they had entered the site they were given a complete description of the study and the consent form to read. All subjects were provided with the email address of the investigators to address any questions relating to the study. Agreement to participate was signalled by clicking the relevant consent button after which the subjects were automatically directed to the first of four questionnaires.

Data collection

1. Basic demographic data including age, gender, marital status, level of education and years employed as a journalist (including years working on UGC material) were collected.
2. Questions pertaining to UGC-based work included the following: (a) how often do you view violent images (daily, weekly, monthly); (b) how many hours per shift do you view violent images (1, 2, 3, 4, 5, 6, and >6 h) and (c) do you find this work traumatic (rated on a simple analogue scale of 0–10, the higher numbers indicating greater emotional upset).
3. Data on psychiatric history were collected. This included whether journalists had been seen by a psychiatrist, the reason for the assessment (personal or conflict related) and the type of treatment received (medication, therapy or both).
4. Details of alcohol intake (weekly units) were recorded. A unit of alcohol was defined as either a regular size bottle of beer, glass of wine or shot of spirits. Fourteen units of alcohol per week for males and nine units for females were considered the upper limit of acceptable weekly intake.¹⁴
5. Three self-report questionnaires pertaining to PTSD, depression and psychological distress were included.

The Impact of Event Scale-revised (IES-R)¹⁵ contains 22 questions that closely follow the American Psychiatric Association's criteria for PTSD. Thus, the questionnaire contains three subscales looking at intrusive (re-experiencing), avoidance and hyperarousal phenomena. In keeping with previous studies of trauma responses in journalists, subjects were asked to indicate symptoms that had occurred during the past seven days only and related to the content of what they were viewing as part of their UGC work. Five possible responses to each question (not at all, a little bit, moderately, quite a bit and extremely) were scored 0, 1, 2, 3 and 4, respectively.

The Beck Depression Inventory-II (BDI-II)¹⁶ which contains 21 mood-related questions was used to assess depression. With a choice of four responses per question and scored in a Likert fashion (0, 1, 2, 3), a summed score of 11–19 indicates mild depression, while scores ≥ 20 reflect moderate to severe depression.

The 28-item General Health Questionnaire (GHQ-28)¹⁷ contains four subscales, each of seven questions, describing symptoms of somatic complaints, anxiety, social dysfunction and depression, respectively. A choice of four responses was provided for each question and scored as is customary, 0–0–1–1. The subscale scores are summed to give an overall index of psychological distress with scores ≥ 5 considered indicative of psychological 'caseness', a marker for psychological distress.

Statistical analysis

Means and standard deviations were obtained for demographic data as well as the three psychometric indices. Predictors of PTSD symptoms, depression, psychological distress and alcohol consumption were explored using linear regression models. A two-step approach was used. In step 1, relevant demographic variables were entered into the analysis. These included age, gender, level of education, marital status and the number of years working as a journalist. In step 2, the frequency of exposure and the duration of exposure per shift to violent images were entered. The sample size was considered statistically robust to support the seven putative predictor variables.

Consent

Approval for the study was obtained from the Ethics Committee at Sunnybrook Health Sciences Centre which is fully affiliated with the University of Toronto.

Results

Demographic data

Demographic data are shown in Table 1. In terms of exposure to UGC content, 47 (40.9%), 53 (46.1%) and 15 out of 115 (13.0%) journalists reported daily, weekly and monthly exposure to violent images, respectively. The mean time of exposure per shift was 3.12 (SD = 2.04) (range 1.0–6.0) hours. Thirty (25.9%) of the journalists had had prior contact with a psychiatrist.

Psychological data

The mean scores for the psychometric scales are shown in Table 1. The number of journalists whose GHQ-28 score exceeded the threshold for ‘caseness’ was 40 out of 109 (36.7%). The number of male journalists who drank to excess (>14 units of alcohol per week) was 10 (15.4%), while the corresponding figure for female journalists (>9 units per week) was eight (17.39%). The results of the simple analogue scales revealed a score of 4.7 (2.6) for the question ‘do you find the work traumatic’.

Predictors of psychological symptoms

Frequency of exposure to UGC material emerged as an independent predictor of symptom severity on the BDI-II, all three subscales of the IES-R, alcohol consumption and the somatic and anxiety subscales of the GHQ-28. The duration of exposure per shift independently predicted intrusive PTSD symptomatology only. Neither duration of employment as a journalist nor duration employed on UGC material predicted any indices of psychological distress. Of the demographic variables, gender and level of education emerged as the most frequent independent predictor of psychopathology. Details of the linear regression analyses are found in Table 2.

Discussion

The main feature to emerge from this study was that frequency of exposure to UGC independently and consistently predicted multiple indices of psychopathology, be they related to anxiety, depression, PTSD or alcohol consumption. Duration of exposure on the other hand was found to be less closely linked to parameters of emotional health apart from independently predicting intrusive, unwanted recollections of traumatic events witnessed by proxy. The 80% response rate that we obtained from a large group of representative English-speaking journalists working with UGC material suggests these findings are

Table 1. Demographic and psychological data for journalists working with UGC material.

	UGC journalists (n = 116) M (SD)/ frequency (%)
Age	41.93 (9.13)
Gender (% male)	70 (60.3)
Marital status	
Single	49 (42.2)
Married	61 (52.6)
Divorced	6 (5.2)
Education (level)	
High school	6 (5.2)
Technical school	16 (13.8)
University	94 (81.0)
Prior contact with psychiatrist	30 (25.9)
Years worked as a journalist	16.14 (9.15)
Years worked on UGC content	2.45(3.53)
Frequency of viewing traumatic images	
Daily	47 (40.9)
Weekly	53 (46.1)
Monthly	15 (13.0)
Duration of viewing traumatic images (hours/shift)	3.12 (2.04)
Psychometric indices	
General Health Questionnaire (GHQ)	4.79 (5.81)
Somatic subscale	1.70 (2.23)
Anxiety subscale	1.59 (2.07)
Social dysfunction subscale	1.01 (1.72)
Depression subscale	0.50 (1.2)
Beck Depression Inventory Revised (BDI-II)	10.56 (8.39)

(continued)

Table 1. Continued.

	UGC journalists (n = 116) M (SD)/ frequency (%)
Impact of Events Scale Revised (IES-R)	15.86 (14.90)
Intrusion subscale	6.08 (6.29)
Arousal subscale	2.87 (4.09)
Avoidance subscale	6.91 (6.13)
Alcohol consumption*	
Male	8.14 (5.45)
Female	5.19 (4.89)

*Units per week.

representative of the broader sample approached here and by extension of English speaking journalists carrying out similar work elsewhere.

Earlier research confined to war journalists has revealed elevated rates of PTSD and major depression compared to journalists who limit themselves to domestic reportage free of personal threat and with little exposure to violence. Moreover, structured interviews undertaken with war journalists indicated lifetime prevalence rates of these disorders approaching those seen in combat veterans.¹² This finding has been attributed to the grave personal dangers confronted by war journalists who recalled experiencing on average 22 personal life threatening stressors over the course of their careers on the frontline of conflict.¹³ Exposure to violence, albeit indirect this time, in a group of UGC journalists emerged once more as an important determinant of psychopathology and indicates that frequent, repetitive viewing of traumatic images can come with adverse psychological consequences. Here it is germane to note that the news organisations involved in our study do not select journalists for UGC work based on the predicted content of the news. By this, we mean that there is no attempt to funnel the more experienced journalists in the direction of a news story where the chances of viewing extreme violence are high. Our findings broadly overlap with data reported by a number of studies investigating mental health in television viewers following the 11 September 2001 attacks, notwithstanding certain important differences between the two situations. To begin with, television audiences in the United States viewed images of the attacks against the backdrop of credible

terrorist threats and concerns over personal safety. Such a situation is likely to activate stress response systems which in turn generate symptoms of PTSD. In the absence of further attacks, these systems deactivate and symptoms for the most part abate apart from those affecting individuals with pre-existing vulnerabilities that include genetic factors, earlier exposure to traumatic events and a premorbid psychiatric history. Epidemiologic data collected post 9/11 has confirmed the generally transient nature of the distress.¹⁸ This contrasts with the situation confronted by journalists in safe locales processing UGC material. Viewing disturbing images here is not associated with personal threat. However, unlike the 9/11 attack which was a one off event, exposure is repetitive extending over months to years for there is no shortage of fresh atrocities from a troubled world to perpetually fill the screens.

While frequent exposure to extreme violence on the screen may predispose and precipitate emotional distress through a process of sensitisation, the opposite too may occur, namely individuals can habituate to the content of what they view. This numbing effect which has been experimentally induced by exposing healthy individuals to violent video games^{19,20} is associated with a distinctive pattern of cerebral activation demonstrated on functional neuroimaging.²¹ In particular, an emotion-attention network has been posited which modulates lengthy viewing of violence by reducing parietal input to inferior orbitofrontal regions thereby blunting any emotional response to the disturbing content of what is viewed. This may help explain why the results from our study indicated that frequency rather than duration of exposure per shift, or duration employed on UGC material emerged as the more robust predictor of depression, anxiety, PTSD type symptoms and heavy alcohol intake. A similar reason may explain the lack of association between indices of emotional distress and duration of employment as a journalist, with the added caveat that the total time spent working as a journalist nearly always included time away from witnessing graphic images of violence thereby potentially diluting the UGC experience.

The present study, being primarily descriptive in nature, lacks the methodology to tease out the relative competing influences of sensitisation and desensitisation/numbing on symptom development. It is, however, important to note that while numbing is associated with few PTSD-type re-experiencing or intrusion symptoms, the response can, if excessive, be maladaptive too and regarded as evidence of an avoidance phenomenon in processing a traumatic experience. Irrespective of how this interplay of factors shapes the type and frequency of

Table 2. Predictors of psychopathology: Linear regression analyses.

Psychological health indices	Significant independent predictors	β (95% CI)	p
GHQ total score ($n = 109$)*	Level of education	0.221 (0.214 to 4.506)	0.031
	Gender	0.279 (0.353 to 2.182)	0.007
Somatic subscale	Frequency of viewing traumatic images	-0.203 (-1.342 to -0.006)	0.048
	Level of education	0.230 (0.103 to 1.644)	0.027
Anxiety subscale	Frequency of viewing traumatic images	-0.214 (-1.300 to -0.022)	0.043
	Gender	0.287 (1.689 to 8.126)	0.003
BDI-II total score ($n = 115$)*	Frequency of viewing traumatic images	-0.209 (-4.968 to -0.208)	0.033
	Gender	0.246 (1.959 to 13.024)	0.008
Impact of events scale total score ($n = 111$)*	Marital status	0.201 (-0.062 to 10.237)	0.050
	Level of education	0.280 (2.802 to 12.608)	0.002
	Frequency of viewing traumatic images	-0.308 (-10.696 to -2.797)	0.001
	Gender	0.201 (0.250 to 4.928)	0.030
Intrusion subscale	Level of education	0.286 (1.253 to 5.399)	0.002
	Frequency of viewing traumatic images	-0.292 (-4.373 to -1.033)	0.002
	Duration of exposure to traumatic images	0.216 (0.127 to 1.212)	0.016
Arousal subscale	Gender	0.226 (0.282 to 3.525)	0.022
	Level of education	0.236 (0.353 to 3.227)	0.015
	Frequency of viewing traumatic images	-0.202 (-2.378 to -0.63)	0.039
Avoidance subscale	Gender	0.239 (0.672 to 5.325)	0.012
	Level of education	0.229 (0.527 to 4.651)	0.014
	Frequency of viewing traumatic images	-0.313 (-4.485 to -1.163)	0.001
Alcohol consumption ($n = 109$)*	Gender	-0.345 (-5.974 to -1.584)	0.001
	Frequency of viewing traumatic images	-0.204 (-3.233 to -0.025)	0.047

*Indicates the number of subjects from the entire study sample ($n = 116$) who completed each psychological health questionnaire.

symptomatology, what journalists working with UGC, 9/11 and video game data have in common is the finding that PTSD-type symptoms are generated by the viewing of traumatic images. In the case of the UGC journalists specifically, frequency rather than duration of exposure per shift appears to be the critical variable.

Looking beyond the PTSD data, the study is also noteworthy for a number of other findings.

First, frequency of exposure predicted somatic symptoms on the GHQ-28. Somatisation in response to exposure to trauma has a long history²² with descriptions dating back to the American Civil War, where the condition 'irritable heart', also called Da Costa's Syndrome, came to be seen as a manifestation of emotional upset.²³ Second, depression on the BDI-II was also linked to exposure frequency and by extension PTSD type symptoms, a finding that

replicates the co-morbidity that has previously been observed between disorders such as PTSD and major depression.²⁴ Here, however, it is important to note that an average BDI-II score of less than 11 falls in the mild range.¹⁶ Third, the comorbidity noted above extended to alcohol consumption too, with a close association observed between this variable, symptoms of PTSD and depression and frequency of exposure to UGC material. Just as the depression data fell in the mild range, so did the weekly alcohol consumption. Fourth, female gender also emerged as an independent predictor of multiple indices of psychopathology, a result that is supported by the broader psychiatric literature.²⁵

The present study is not without certain limitations. To begin with, we lack data on the presence of baseline psychopathology, i.e. the emotional health of journalists prior to their exposure to the UGC material. To a degree this was offset by the variable 'contact with a psychiatrist' prior to UGC exposure. Of note is that this did not predict scores on any of the psychometric measures employed. This observation does not overlap with the 9/11 data where prior contact with the mental healthcare system emerged as a risk factor for the development of PTSD symptoms following the attacks.¹⁸ However, the presence of psychopathology does not necessarily translate into the provision of psychiatric treatment so our failure to replicate this result may reflect our lack of data on this point. Additional limitations include the absence of structured interviews without which diagnoses of PTSD and depression could not be made, the inability to standardise and quantify the exposure to violent imagery across the entire journalist sample and the absence of a control group, for example journalists in the same organisation not exposed to UGC material. In relation to the latter, we shied away from including such a group in our study when it became apparent that finding a 'clean' sample would not have been possible. By this we mean that even those journalists not designated to work with UGC material are nonetheless exposed to violent images from time to time, such is the ubiquitous nature of violence in daily news coverage. In light of our study's central finding as to the importance of frequency of exposure to violent imagery as a predictor of emotional distress, data from a non-UGC control group may well have been informative as a yardstick by which to place our findings in a broader journalistic setting.

Conclusion

The present study provides evidence suggesting that frequent exposure in the newsroom to images,

often live, of great violence can prove emotionally unsettling for a subset of journalists. When data first emerged a decade back suggesting frontline war journalists were at increased risk for disorders like PTSD and major depression,¹² news organisations took note, a corporate culture began changing and confidential counselling was offered to those in need.²⁶ As both the newsroom and journalism evolve in response to a rapidly changing world, new healthcare challenges will present themselves, as the UGC data suggest. Given that good journalism depends on healthy journalists news organisations will need to look anew at what can be done to offset the risks inherent in viewing UGC material. Our data, in need of replication, suggest that reducing the frequency of exposure may be one way to go.

Declarations

Competing Interests: None declared

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Ethical approval: Approval for the study was obtained from the Ethics Committee at Sunnybrook Health Sciences Centre which is fully affiliated with the University of Toronto

Contributorship: AF is responsible for study concept and design, acquisition and interpretation of data, drafting, revision and approval of final manuscript. BA is responsible for data analysis and interpretation, drafting, revision and approval of the manuscript. EW is responsible for data acquisition and analysis, drafting and approval of the manuscript

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