Predictors of trauma reactions in TV news camera operators

MacDonald, J. B.; Backholm, Klas; Saliba, A. J.; Hodgins, G.

Published in:
Traumatology

DOI:
10.1037/trm0000332

Published: 01/01/2022

Predictors of Trauma Reactions in TV News Camera Operators

Jasmine B. MacDonald[a,b,1], Klas Backholm[c], Anthony J. Saliba[b], and Gene Hodgins[b]

[a]Discipline of Psychology, RMIT University, 124 La Trobe St, Melbourne, VIC, 3000, Australia

[b]School of Psychology, Charles Sturt University, Boorooma St, Wagga Wagga, NSW, 2678, Australia.

[c]Political Science with Media and Communication, Åbo Akademi University, P.O. Box 311, FI-65101, Vasa, Finland.

Author Note

Other author emails: klas.backholm@abo.fi, asaliba@csu.edu.au, and ghodgins@csu.edu.au

This study was conducted under the provision of an Australian Postgraduate Award to the first author. However, the Australian Government were not involved in the topic selection for the research or in any other phase of the research or decision to submit for publication.

The findings reported in this manuscript have not been reported elsewhere, but the sample used is taken from a larger data set of general journalists that has been used in the first author's Ph.D. thesis and in a conference presentation.

[1] Correspondence concerning this article should be addressed to: Dr Jasmine B. MacDonald, Discipline of Psychology, RMIT University, 124 La Trobe St, Melbourne, VIC, 3000, Australia. Email: jasmine.macdonald@rmit.edu.au Phone: +61 3 9925 1925

Predictors of Trauma Reactions in TV News Camera Operators

Abstract

Previous research with general journalist samples has shown that journalists, in comparison to the general population, are at increased risk for trauma exposure and related psychological distress. Studies have seldom investigated more specific subgroups within the occupation. This study investigated current levels of work-related and personal exposure to potentially traumatic events and trauma reaction symptoms (posttraumatic stress, depression, anxiety, and stress) in TV news camera operators (N = 117). It also investigated whether trauma exposure and neuroticism were related to increased levels of trauma reaction symptoms. An international sample of camera operators participated in an online survey. Regression analyses were conducted to investigate study topics. Camera operators reported high rates of work-related and personal trauma exposure. The sample experienced greater levels of PTSD symptoms than expected in the general population, while fewer differences were found regarding depression, anxiety, and stress symptoms. More personal trauma exposure and neuroticism significantly predicted distress symptoms of all four kinds, while work-related exposure did not. Study limitations include the limited sample size and issues related to using surveys for measuring exposure to potentially traumatic events. The findings confirm what we know about the relationship between repeated exposure to aversive events and psychological distress. It contributes to the field by expanding this knowledge to include TV news camera operators, a unique role group within the journalism industry. It is also among the first to verify the positive association between neuroticism and trauma reactions in a journalist sample.

Key words: Trauma exposure; Trauma reactions; TV news; Journalism; Camera operators

Predictors of Trauma Reactions in TV News Camera Operators

Journalists are exposed to a wide variety of work-related potentially traumatic events (PTEs), sometimes also referred to as potentially traumatic assignments (PTAs). Journalists have work-related PTE exposure prevalence rates as high as 95.0% (MacDonald et al., 2017); general population studies tend to report lower prevalence rates of approximately 57–90% (Benjet et al., 2016; Kilpatrick et al., 2013; Mills et al., 2011; Rosenman, 2002). This exposure can result in a range of trauma reaction symptoms. Prevalence rates of posttraumatic stress disorder (PTSD) amongst journalist samples in general have ranged from 4.3% to 43.2% (Backholm & Björkqvist, 2012a; Dworznik, 2011; Feinstein & Owen, 2002; Hatanaka et al., 2010; Idås et al., 2019; Lee et al., 2017, Newman et al., 2003; Pyevich et al., 2003; Weidmann et al., 2008). However, figures vary depending on the scales, timeframes, and clinical cut-offs applied.

Corresponding figures for other psychological symptoms that may be associated with trauma exposure are less commonly reported. Increased levels of trauma exposure are associated with elevated levels of depressive symptoms amongst journalist samples (Backholm & Björkqvist, 2010; 2012b; MacDonald et al., in press), and an associated comorbid elevation of PTSD and depressive symptoms has also been reported (Feinstein, 2012; Feinstein et al., 2016; MacDonald et al., in press). Journalist samples have been found to experience elevated levels of burnout; factors associated with increased burnout symptoms include female gender, younger age, fewer years of journalism experience, and working for a newspaper with a small circulation size (MacDonald et al., 2016a). Dworznik (2018) found that increased personal PTE exposure and reduced perceived support from supervisors and peer cohesion were associated with elevated symptoms of compassion fatigue in TV news journalists. Other personal and workplace factors that serve to reduce the well-being of journalists include exposure to gruesome details during the assignment, coverage of drug-trafficking and organized crime,

dilemmas about how to carry out specific work tasks, and a personal history of previous mental disorders (Aoki et al., 2013; Morales et al., 2014; Smith et al., 2015).

Trauma research across journalist samples has tended to focus on comparisons such as whether participants cover international conflict or domestic news, or whether or not they have covered a specific PTE, such as the Sewol ferry accident (Lee et al., 2017) or Jokela School shooting (Backholm & Björkqvist, 2012a). The quantitative literature concerning trauma reactions in journalists has rarely considered potential differences in trauma exposure and reactions according to role; instead the focus has predominantly been to recruit general journalist samples, and to often highlight the psychological impact for reporters. Role differences in psychological symptoms have been identified in the areas of burnout (editors, reporters, and non-management role journalists appear to be at greater risk than other journalistic roles; MacDonald et al., 2016a) and substance use (journalists covering war are at greater risk than others; MacDonald et al., 2016b). Additionally, Morales et al. (2014) reported higher rates of psychological distress symptoms among camera operators and photographers than for other journalists. The few quantitative studies that have looked at role differences in psychological distress suggest a need to better understand trauma exposure and reactions amongst diverse roles. To our knowledge, no quantitative study has focused primarily on the trauma exposure and reactions of TV news camera operators.

Qualitative research has offered meaningful contextual insights into the potential differences that TV news reporters and camera operators might experience with respect to trauma exposure and reactions. The findings reported by MacDonald et al. (2020, pp. 18–19) suggest that further investigation of trauma exposure and reactions amongst TV news camera operators is warranted given that they "are more likely than reporters to go into the field alone, to get closer to traumatic stimuli, and to be exposed to traumatic stimuli for longer. … Camera operators are also more likely than reporters to find themselves personally injected into

traumatic scenes." Of further concern is the perceived hierarchical organizational structure described by participants, whereby camera operators are generally considered to be lower in status than reporters and tend to be physically separated from reporters and management when in the office. Finally, MacDonald et al. (2020) reported that at times of physical risk in the field, camera-operators are more socially visible than reporters as a result of their camera and other equipment, potentially making them a target and less able to blend into a crowd.

MacDonald and Fox (2018) found that whilst TV news workers emphasise that working in a crew increases physical and psychological safety, as well as the quality of the work produced, there are increasing industry trends of (1) using single-person crews, in which camera operators are often required to go into the field to cover PTEs alone, and (2) casualization of jobs, resulting in fewer experienced staff within newsrooms to mentor and shield less experienced workers in times of trauma coverage. There is merit in attempting to quantify camera operators' potential elevated risk of developing trauma-related symptoms given these nuances in trauma exposure and in newsroom and crew dynamics; such data would be useful in comparison to findings reported in this area for general journalist samples.

One aim of the current study is to describe current levels of trauma exposure and reactions in an international sample of news camera operators. A second aim is to investigate the role of previous exposure to PTEs for trauma reaction symptoms. Two research questions (RQs) will be addressed in relation to these topics:

RQ1: What kinds of work-related and personal PTEs are TV news camera operators exposed to?

RQ2: How is previous exposure to work-related and personal PTEs related to current trauma reactions in the form of posttraumatic stress, depression, anxiety, and stress symptoms in TV news camera operators?

Trauma research in general has provided strong evidence that personality factors may be important for understanding individual vulnerability for trauma reaction symptoms. When using the well-established "Big Five" personality dimensions framework (John & Srivastava, 1999), neuroticism has been linked to higher risk of developing PTSD symptoms, as well as many other forms of anxiety-, substance- and mood-related psychopathology in varying samples (Breslau & Schoultz, 2013; Jakšić et al., 2012; Ormel et al., 2013). Neuroticism reflects traits such as moodiness, depressiveness and irritation, being tense and lacking in confidence, and has been suggested to increase the risk for PTSD by emphasizing the role of traumatic memories in the individual (Ogle et al., 2017). To our knowledge to date, studies have not verified this link in samples with journalists in general or camera operators in particular. A further aim of the current study is thus to investigate whether neuroticism is related to increased levels of trauma reaction symptoms. A third RQ related to the topic is formulated as follows:

RQ3: How is neuroticism related to current trauma reactions in the form of posttraumatic stress, depression, anxiety, and stress symptoms in TV news camera operators?

Method

Participants

The sample comprised 117 TV news camera operators; 85 were working in Australia and the other 32 participants came from Belize, Canada, Cyprus, East Timor, Greece, Grenada, Lebanon, Malaysia, New Zealand, Romania, Turkey, United Kingdom, and United States of America. No differences were found between the Australian and non-Australian groups in relation to any of the trauma exposure or reaction variables. Participants had a wide range of experience levels in the TV news industry, ranging from two months to 54 years. The mean industry experience was 17.6 years (*SE* = 1.1). In relation to personal demographics,

participants ranged in age from 19–70 years, and the mean age for the overall sample was 42 years (*SE* = 1.1). The sample consisted of 107 male (91.5%) and 10 female (8.5%) participants. Preliminary analyses indicated no significant differences by gender on any of the central trauma reaction measures, and as the proportion of females in the sample was small, no further analyses regarding gender comparisons were conducted. In relation to marital status, participants were more likely to be married (53.0%) compared to the other categories (single = 15.4%, in a relationship = 16.2%, de facto = 9.4%, separated = 3.4%, and divorced = 2.6%).

Materials

The Journalist Trauma Exposure Scale (JTES; Pyevich, 2001) is a 23-item self-report scale concerning journalists' work-related exposure to PTEs. It requires participants to indicate their (1) range of exposure—whether or not they have been exposed to 14 different kinds of PTEs as part of a work assignment, (2) frequency of exposure—how many times they have been exposed to those kinds of events, and (3) intensity of exposure—whether or not participants have been exposed to any of nine suggested intensity of exposure items (Pyevich et al., 2003). Participants in the present study were asked to respond to each item with their entire career experiences in mind. In the present study, range and intensity of exposure subscales were used. A reliability assessment is not presented for PTE scales as the sum scales of these reflect exposure to various types of events rather than a unified underlying construct.

The Traumatic Life Events Questionnaire (TLEQ) is a measure of prior personal exposure to trauma (Kubany et al., 2000). Participants indicate how frequently they have been exposed to 22 different PTE types on a seven-point Likert scale (ranging from 'never' to 'five times or more'), and whether or not the exposure caused them to experience intense fear, helplessness, or horror (Norris & Hamblen, 2004; Orsillo, 2001). Participants in the present study were asked to respond to each item with all their life experiences in mind.

Neuroticism was measured with the eight-item neuroticism subscale from the Big Five Inventory (BFI; John & Srivastava, 1999). The BFI neuroticism scale internal reliability score of .84 is comparable to that of the Trait Descriptive Adjectives (TDA) and NEO Five Factor Inventory (NEO-FFI) neuroticism scales (.85 respectively; John & Srivastava, 1999), but has the added benefit of containing fewer items. Participants respond to various first-person statements on a five-point Likert scale, indicating whether they 1 = disagree strongly, 2 = disagree a little, 3 = neither agree nor disagree, 4 = agree a little, or 5 = agree strongly to the statement. In the present study, the Cronbach's alpha for the subscale was .86.

The PTSD Checklist – Civilian Version (PCL–C) for DSM-IV is a 17-item self-report scale that assesses the presence and intensity of various trauma-related posttraumatic stress symptoms (PTSS; Weathers et al., 1993). Participants indicate how much they have been bothered by each symptom over the last month and respond on a five-point Likert scale: 1 = not at all, 2 = a little bit, 3 = moderately, 4 = quite a bit, and 5 = extremely (Weathers et al., 1993). Cronbach's alpha for the total PCL–C sum score was .94 in the present study. The National Center for Posttraumatic Stress Disorder (2014) recommends adopting a cut-off for potential PTSD diagnosis of 30–35 when using the PCL–C for screening for symptoms in civilian primary care settings, within which the prevalence rate of PTSD is below 15%. Therefore, a cut-off of 30 is used in the present study to indicate the proportion of the sample that may be experiencing diagnosable PTSD. Previous research has concluded that among those individuals that reach a cut-off of 30 on the PCL–C, approximately 74–80% are ultimately diagnosed with PTSD (Andrykowski et al., 1998; Lang et al., 2003).

The Depression Anxiety Stress Scales (DASS–42) is a 42-item self-report measure of depression, anxiety, and stress symptoms, with 14 items in each subscale (Lovibond & Lovibond, 2004). Participants respond to various statements on a four-point Likert scale: 0 = did not apply to me at all, 1 = applied to me to some degree, or some of the time, 2 = applied

to me to a considerable degree, or a good part of time, and 3 = applied to me very much, or most of the time (Lovibond & Lovibond, 2004). Cronbach's alpha coefficients in the present study were: .97 for depression, .92 for anxiety, and .91 for stress. Suggested cut-off scores for severe/extremely severe symptoms are ≥ 21 for depression, ≥ 15 for anxiety, and ≥ 26 for stress (Lovibond & Lovibond, 2004).

Procedure

Charles Sturt University's Human Research Ethics Committee provided ethics approval for this study (Protocol number: 205/104).

An online quantitative questionnaire was used to collect data from camera operators and other news workers in various countries around the world, in June–October in 2015. Both staffers (individuals employed full-time through a news organisation) and freelancers, from both public and commercial broadcasters, were targeted. To recruit participants, contact was made with (1) journalistic organisations, (2) commercial and government-funded news networks, (3) journalism and TV production departments of various universities and training facilities, and (4) social networking sites. The participant data analysed in the study, 117 TV news camera operators, were extracted from the total questionnaire sample. Those excluded from analysis (12.7% of participants) did not work with camera operating tasks.

The questionnaire included measures assessing demographics, work-related and personal PTEs, neuroticism, and trauma reaction symptoms (PTSD, depression, anxiety, and stress). The questionnaire took 15–25 minutes to complete.

Results

In Table 1, the three most common types of work-related PTEs during camera operators' careers are listed, as indicated in the JTES range of exposure subscale; they were exposure to injured/dead children, fire, and motor vehicle accidents. The prevalence rate of exposure across the sample was 100%; each participant indicated they had been exposed at least one of the 14

listed PTEs. The range of endorsed items from the list of 14 PTEs was 1–13, with a mean of 9.1 PTEs (*SE* = 0.3).

[Insert Table 1 here]

In relation to the intensity of work-related exposure, each of the nine JTES items were endorsed by at least 14.5% of participants. Most common items were: been at the scene of a traumatic assignment, been verbally threatened on assignment, and covered the same assignment multiple times in the same week (Table 1). Participants endorsed a mean of 5.6 items (*SE* = 0.2). Personal trauma exposure was measured using the TLEQ. Table 1 displays the three most common subtypes of personal PTEs, with frequencies and associated percentages of the overall sample that had been exposed; the most commonly experienced events were motor vehicle accident, sudden death of a close friend or loved one, and natural disasters. The prevalence rate of personal exposure for the overall sample was 94.0%; seven participants indicated they had not been exposed to any of the 22 items. The range of endorsed items was 0–16, with participants endorsing a mean of 3.9 PTEs (*SE* = 0.3).

Trauma reaction symptoms were assessed across four symptom variables: PTSD, depression, anxiety, and stress. The overall sample mean for PTSD symptoms was 30.3 (*SE* = 1.2), which is above the clinical cut-off of 30 (National Center for Posttraumatic Stress Disorder, 2014). When applying the cut-off across the sample, 40.2% of participants (*n* = 47) could be considered at risk of PTSD. The overall sample mean scores on each of the three DASS subscales (depression: *M* = 6.9, *SE* = 0.8; anxiety: *M* = 4.0, *SE* = 0.5; stress: *M* = 9.3, *SE* = 0.7) fell within the normal range of the severity ratings (Lovibond & Lovibond, 2004). The subsamples scoring within the severe/extremely severe symptoms threshold for each of the DASS subscales were depression: *n* = 14, 12.0%, anxiety: *n* = 10, 8.5%, and stress: *n* = 4, 3.4%.

A series of linear regression analyses were conducted to investigate the potential predictive ability of exposure to PTEs on the four trauma reaction symptom variables. Results showed the same pattern across symptom variables, i.e., PTSD, depression, anxiety, and stress (Table 2). More previous personal exposure to trauma, measured with TLEQ, predicted more symptoms of all four types, indicating that camera operators who had experienced several PTEs in their personal life experienced more trauma reaction symptoms at the time of the study. Personal exposure to trauma accounted for the following variation in the trauma reaction symptoms: PTSD = 8.1%, depression = 9.0%, anxiety = 11.6%, and stress = 4.4%.

When it comes to work-related PTE exposure throughout the career, neither range of work-related exposure nor level of exposure intensity during assignments were related to symptom severity. In other words, the range of different kinds of PTEs participants had been exposed to while working, and the extremeness of participants' experiences during exposure, did not predict trauma symptom severity in this study.

[Insert Table 2 here]

Participants indicated a mean score of 19.8 (*SE* = 0.65) on the BFI Neuroticism subscale. There are no standard clinical cut-offs applied to this subscale. For descriptive purposes within the present study, the possible range of scores (8–40) was divided into thirds to tentatively indicate differences within the sample with respect to levels of neuroticism (low, moderate, high). The sample mean score indicates moderate levels of neuroticism; 44.4% of the sample could be considered to be experiencing low levels of neuroticism (*n* = 52, score of 8–18), 46.2% moderate (*n* = 54, 19–29), and 9.4% high (*n* = 11, 30–40). Regression analyses showed that higher neuroticism scores were related to greater trauma reaction symptoms of all four types. Camera operators with a tendency for instance moodiness, irritation, or worrying thus reported more severe symptoms of PTSD, depression, anxiety, and stress. Neuroticism accounted for

the following variances in the trauma reaction symptoms: PTSD = 25.5%, depression = 24.8%, anxiety = 17.0%, and stress = 31.7%.

Discussion

The present study is one of the first to explicitly assess the trauma exposure and reactions of camera operators. There may be fundamental differences related to work tasks between camera operators and other news workers, such as reporters, that correspond to differences in trauma exposure and reactions (MacDonald & Fox, 2018; MacDonald et al., 2020). The aims of the present study were to: (1) describe current levels of trauma exposure and reactions in an international sample of news camera operators, (2) investigate the role of previous exposure to PTEs for trauma reaction symptoms, and (3) investigate whether neuroticism is related to increased levels of trauma reaction symptoms.

The first research question was: *What kinds of work-related and personal potentially traumatic events (PTEs) are TV news camera operators exposed to?* Beginning with work-related exposure, each of the items was endorsed by at least 14.5% of the participants, indicating a wide range of trauma exposure experiences across the sample. The prevalence of exposure to work-related PTEs was 100%, exceeding the rates of exposure reported in general journalist samples (95%; MacDonald et al., 2017). The most frequently endorsed PTEs were exposure to injured/dead children, fire, and motor vehicle accidents. These kinds of events were amongst the most frequently experienced in other studies using the JTES (Backholm & Björkqvist, 2012b; Browne et al., 2012; Pyevich et al., 2003). Additionally, Backholm and Björkqvist reported that these kinds of PTEs, with the exception of fire, were found to be some of the most stressful for the participants they sampled. The most commonly endorsed intensity of exposure items in the present study were: been at the scene of a traumatic assignment, been verbally threatened on assignment, and covered the same assignment multiple times in the same week. These findings are congruent with those reported by Pyevich et al. (2003).

A cautious conclusion drawn from these findings is that similar to journalists in general, camera operators may experience increased rates of trauma exposure as a result of their work, and may be somewhat more exposed to PTEs than other journalists. Direct comparisons across studies are challenging, however, because differing time periods for exposure have been applied. Applying a career-long timeframe, as in the present study, may be more useful when considering the cumulative nature of trauma exposure and reactions. Using a 12-month timeframe might mean more accurate recall of experiences, and potentially standardise cross-sectional comparisons of participants by reducing the impact of time within the industry (Dworznik, 2008). There may also be issues of ecological validity when categorizing TV news workers based on role. Unpublished qualitative data collected by the first author suggests that in some areas (such as in small news organisations) the journalism industry might be moving away from role specialisation.

Turning to personal PTEs, the most common types experienced in this study were: motor vehicle accident, sudden death of a close friend or loved one, and natural disasters. These findings are comparable to some of the journalist personal exposure findings reported elsewhere in the literature (Backholm & Björkqvist, 2012b; Newman et al., 2003; Pyevich et al., 2003; Simpson & Boggs, 1999). The prevalence rate of personal exposure for the overall sample in the present study was 94%; exceeding prevalence rates in general population samples (57–90%; Benjet et al., 2016; Kilpatrick et al., 2013; Mills et al., 2011; Rosenman, 2002) and personal trauma exposure amongst journalists (38–90%; MacDonald et al., 2017). The findings indicate that camera operators in the present study experienced elevated levels of personal trauma exposure compared to the general population, and that this personal exposure is coupled with elevated work-related exposure. The limitation mentioned in relation to work-related exposure above is worth repeating; the use of trauma exposure scales to indicate the number of

PTE exposures introduces concerns associated with the limitations of participant memory recall. It is noted that all trauma researchers grapple with this limitation.

The second research question investigated potential links between PTEs and trauma reactions: *How is previous exposure to work-related and personal PTEs related to current trauma reactions in the form of posttraumatic stress, depression, anxiety, and stress in TV news camera operators?* The mean PTSD symptoms score (30.3) exceeded the clinical cut-off of 30 and is greater than has been reported in previous studies of firefighters and police (Ben et al., 2006; Hodgins et al., 2001). The possible range of scores for the measure of PTSD symptoms is 17–85, but the actual range of scores for this sample was 17–65. Using the cut-off of 30, 40.2% of the sample could be considered at risk of developing PTSD. As stated in the Method section, 74–80% of individuals that reach the cut-off of 30 are ultimately diagnosed with PTSD (Andrykowski et al., 1998; Lang et al., 2003). By applying these efficiency findings to the present study, 28–30% of camera operators (n = 18.5–20.0) might be experiencing diagnosable PTSD. A diagnostic interview is required to determine an appropriate diagnosis and therefore prevalence within a given population.

Previous studies with journalists also using the PCL have adopted more conservative cut-offs. For comparative purposes, the proportion of the present sample exceeding a score of 38 was 25.6% (n = 30), which is more than double the 12% reported by Backholm and Björkqvist (2012a). Studies adopting a cut-off of 44 have reported proportions of 4.3–9.2% (Backholm & Björkqvist, 2012b; Dworznik, 2011; Newman et al., 2003; Pyevich et al., 2003; Smith et al., 2018), whereas the proportion for this cut-off within the present study was 16.2% (n = 19). The present findings support previous research indicating that TV broadcast journalists, as a group, are at risk of developing PTSD. More pertinently, the findings add to the literature as they are some of the first to indicate that TV news camera operators in particular experience elevated levels of PTSD symptoms, equivalent to those experienced by other TV news workers, such as

reporters. The proportion of TV news camera operators who may be experiencing clinically significant PTSD symptoms is greater than has been reported in previous studies in general journalist samples. However, diagnostic interviewing would be an ideal addition to future research to provide some indication of the most appropriate cut-off for researching samples of TV news workers.

The present study is to the authors' knowledge the first application of the DASS (Depression, Anxiety, and Stress Scales) within research spanning the nexus of journalism and psychology. For the scales, the mean scores for the overall sample fell within the normal range. This trend in mean DASS scores compared to PCL–C scores is noteworthy because comorbidity is expected across trauma reactions, such that triggering the PTSD scale would make the sample more likely to trigger the DASS measures. It would thus appear that camera operators experience greater levels of PTSD symptoms than those reported in the general population, while there are fewer differences regarding depression, anxiety, and stress. However, the mean for depression is higher in the present sample than has been reported in Australian and UK normative data for the same measure (Crawford et al., 2009; 2011; Lovibond & Lovibond, 2004), and the anxiety and stress mean scores were higher than has been reported in Australian normative data (Crawford et al., 2011). Additionally, the sample had a greater proportion in the severe/extremely severe symptom categories for depression (12.0%, n = 14) and anxiety (8.5%, n = 10) than for stress (3.4%, n = 4).

Analyses investigating the potential predictive ability of work-related and personal PTEs on trauma reactions showed a similar pattern across reactions subtypes. Range of personal trauma exposure significantly predicted trauma reaction symptoms of all four kinds, while work-related exposure did not. The link between PTEs in personal life and more trauma reaction symptoms is congruent with several previous studies with journalist samples (Backholm & Björkqvist, 2010; Newman et al., 2003; Pyevich et al., 2003; Simpson & Boggs,

1999; Smith et al., 2018), and the current results confirm what we know about the negative effect repeated exposure to aversive events in personal life may have on varying forms of psychological symptoms. The present study contributes to the field by expanding this knowledge to include camera operators working within TV news, and by providing data about several forms of trauma reaction symptoms. It is also one of the few with journalist samples considering both personal and work-related PTE exposure.

While the link between personal PTEs and trauma reactions has been relatively well established in journalist samples, results regarding work-related PTEs have been less clear. Some studies have found a positive relationship in either range or frequency of exposure and trauma reactions (Browne et al., 2012; Lee et al., 2017; Marais & Stuart, 2005; Newman et al., 2003; Weidmann et al., 2008), and other studies (including the present one) have not (Backholm & Björkqvist, 2010; Dworznik, 2008; Smith, 2008). This discrepancy may reflect that work-related exposure may not be that distressing to journalists and camera operators. An alternative explanation may be that the wording of the measures used for work-related PTEs, in this study using the JTES, fail to adequately distinguish between potential exposure to trauma and ordinary news work. This explanation was provided as feedback in a previous study by one of the authors (Backholm, 2016; Backholm & Björkqvist, 2010), in which participating journalists commented that working with for instance a fire can be interpreted in varying ways - for some participants it may mean working on the crisis scene and being potentially exposed to distressing details, while this experience for other journalists may reflect having worked at the office with rewriting information provided by rescue authorities to a journalistic text. Further validation of the JTES, and additional studies on work-related PTE exposure in journalists are clearly needed, preferably with more extensive sample sizes and longitudinal data collection strategies or qualitative research designs.

In the third research question, potential relationships between neuroticism and trauma reaction symptoms were investigated: *How is neuroticism related to current trauma reactions in the form of posttraumatic stress, depression, anxiety, and stress symptoms in TV news camera operators?* Analyses showed that neuroticism significantly predicted more severe symptoms of all four kinds. While the role neuroticism has in relation to trauma reactions is well-known from general population samples (Breslau & Schoultz, 2013; Jakšić et al., 2012), this study is one of the first to investigate personality dimensions in camera operator or other news journalist samples (see e.g. Backholm, 2016, for an overview).

Limitations in the current study related to specific parts of the research design have been discussed above. An additional potential limitation of the study relates to the sample recruited; 117 participants, the majority of which were from Australia. Due to the constant time constraints on individual news workers, access to the research population was limited, thus affecting the generalizability of the findings. A key subsidiary finding of the study worth taking into account for future research in the field is that participant recruitment for quantitative research with this population group may be challenging and time consuming.

This study has provided a number of valuable contributions that have added to a developing understanding of trauma exposure and reactions within the context of journalistic work. One such contribution has been the combined use of measures assessing symptoms of PTSD and depression, anxiety, and stress. Doing so has provided a broader understanding of the kinds of trauma reactions that are apparent within the sample. Extending upon this point, this research has been the first application of the DASS within research spanning the nexus of journalism and psychology; the benefits of which include: (1) its empirically validated clinical categories, (2) the accessibility to normative data and clinical studies that have used the DASS—increasing the ability to contextualise findings within the broader trauma research, (3) that it is freely accessible, and (4) the ability to administer the DASS is not contingent on

professional registration (e.g., registration as a psychologist). This study appears to be the first to verify the positive association between neuroticism and trauma reactions in a journalist sample.

Finally, this study is the first to primarily consider the trauma exposure and reactions of TV news camera operators as a unique role group within the journalism industry. Previous research concerning trauma exposure and reactions in journalist samples has tended to predominantly sample individuals working within a reporting capacity. Research in this area posits reporters as an at-risk population and worthy of increased industry support and further research. Hence, the present findings emphasize that camera operators are equally as deserving of acknowledgement in terms of the potential psychological risks and implications of their work, along with the accompanying support and research interest.

Acknowledgements

The authors would like to acknowledge and extend great appreciation to all of the camera operators who kindly agreed to participate in this study, as well as Eugenie Dale and Fazlunisa R. Sheik for research assistant support with this manuscript.

References

Andrykowski, M. A., Cordova, M. J., Studts, J. L., & Miller, T. W. (1998). Posttraumatic stress disorder after treatment for breast cancer: Prevalence of diagnosis and use of the PTSD Checklist Civilian Version (PCL-C) as a screening instrument. *Journal of Consulting and Clinical Psychology*, *66* (3), 586–590.

Aoki, Y., Malcolm, E., Yamaguchi, S., Thornicroft G., & Henderson, C. (2013). Mental illness among journalists: A systematic review. *International Journal of Social Psychiatry, 59,* 377–390. doi:10.1177/0020764012437676

Backholm, K. (2016). Distress among journalists working the incidents. In L. C. Wilson (Ed.), The Wiley handbook of the psychology of mass shootings (pp. 247–265). Wiley-Blackwell.

Backholm, K., & Björkqvist, K. (2010). The effects of exposure to crisis on well-being of journalists: A study of crisis-related factors predicting psychological health in a sample of Finnish journalists. *Media, War & Conflict, 3* (2), 138–151.

Backholm, K., & Björkqvist, K. (2012a). Journalists' emotional reactions after working with the Jokela School shooting incident. *Media, War & Conflict, 5* (2), 175–190.

Backholm, K., & Björkqvist, K. (2012b). The mediating effect of depression between exposure to potentially traumatic events and PTSD in news journalists. *European Journal of Psychotraumatology, 3*, 1–8.

Ben, K. S., Scotti, J. R., Chen, Y.-C., & Fortson, B. L. (2006). Prevalence of posttraumatic stress disorder symptoms in firefighters. *Work and Stress, 20* (1), 37–48.

Benjet, C., Bromet, E., Karam, E. G., Kessler, R. C., McLaughlin, K. A., Ruscio, A. M., Shahly, V., Stein, D. J., Petukhova, M., Hill, E., Alonso, J., Atwoli, L., Bunting, B., Bruffaerts, R., Caldas-de-Almeida, J. M., de Girolamo, G., Florescu, S., Gureje, O., Huang, Y., Lepine, J. P., … Koenen, K. C. (2016). The epidemiology of traumatic

event exposure worldwide: Results from the World Mental Health Survey Consortium. *Psychological medicine*, *46* (2), 327–343. https://doi.org/10.1017/S0033291715001981

Breslau, N., & Schultz, L. (2013). Neuroticism and post-traumatic stress disorder: A prospective investigation. *Psychological Medicine*, *43* (8), 1697–1702. https://doi.org/10.1017/S0033291712002632

Browne, T., Evangeli, M., & Greenberg, N. (2012). Trauma-related guilt and posttraumatic stress among journalists. *Journal of Traumatic Stress, 25* (2), 207–210.

Crawford, J., Garthwaite, P. H., Lawrie, C. J., Henry, J. D., MacDonald, M. A., & Sutherland, J., et al. (2009). A convenient method of obtaining percentile norms and accompanying interval estimates for self-report mood scales (DASS, DASS-21, HADS, PANAS, and sAD). *British Journal of Clinical Psychology, 48* (Pt 2), 163–180.

Crawford, J., Cayley, C., Lovibond, P. F., Wilson, P. H., & Hartley, C. (2011). Percentile norms and accompanying interval estimates from an Australian general adult population sample for self-report mood scales (BAI, BDI, CRSD, CES-D, DASS, DASS-21, STAI-X, STAI-Y, SRDS, and SRAS). *Australian Psychologist, 46* (1), 3–14.

Dworznik, G. J. (2008). *The psychology of local news: Compassion fatigue and posttraumatic stress in broadcast reporters, photographers, and live truck engineers* (Publication No. kent1210513135) [Doctoral dissertation, Kent State University]. OhioLINK Electronic Theses & Dissertations Center.

Dworznik, G. (2011). Factors contributing to PTSD and compassion fatigue in television news workers. *International Journal of Business, Humanities and Technology, 1* (1), 22–32.

Dworznik, G. (2018). Personal and organizational predictors of compassion fatigue symptoms in local television journalists. *Journalism Practice, 12* (5), 640–656.

Feinstein, A. (2012). Mexican journalists: An investigation of their emotional health. *Journal of Traumatic Stress, 25* (4), 480–483. https://doi.org/ 10.1002/jts.21715

Feinstein, A., Feinstein S., Behari, M., & Pavisian, B. (2016). The psychological wellbeing of Iranian journalists: A descriptive study. *Journal of the Royal Society of Medicine Open, 7*(12), 1–5. https://doi.org/ 10.1177/2054270416675560

Feinstein, A., & Owen, J. (2002). Journalists, war, and post traumatic stress disorder. In Y. Danieli (Ed.), Sharing the front line and the back hills: Peacekeepers, humanitarian aid workers and the media in the midst of crisis (pp. 305–315). Baywood Publishing Company, Inc.

Hatanaka, M., Matsui, Y., Ando, K., Inoue, K., Fukuoka, Y., Koshiro, E., & Itamura, H. (2010). Traumatic stress in Japanese broadcast journalists. *Journal of Traumatic Stress, 23* (1), 173–177.

Hodgins, G. A., Creamer, M., & Bell, R. (2001). Risk factors for posttrauma reactions in police officers: A longitudinal study. *The Journal of Nervous and Mental Disease, 189* (8), 541–547.

Idås, T., Backholm, K., & Korhonen, J. (2019). Trauma in the newsroom: Social support, post-traumatic stress and post-traumatic growth among journalists working with terror. *European Journal of Psychotraumatology, 10* (1), 1–9. https://doi.org/10.1080/20008198.2019.1620085.

Jakšić, N., Brajković, L., Ivezić, E., Topić, R., & Jakovljević, M. (2012). The role of personality trait in posttraumatic stress disorder (PTSD). *Psychiatria Danubina, 24* (3), 256–266.

John, O. P., & Srivastava, S. (1999). The Big Five Trait Taxonomy: History, measurement, and theoretical perspective. In L. A. Pervin, & O. P. John, *Handbook of Personality: Theory and Research* (2nd ed., pp. 102-138). The Guilford Press.

Kilpatrick, D. G., Resnick, H. S., Milanak, M. E., Miller, M. W., Keyes, K. M., & Friedman, M. J. (2013). National estimates of exposure to traumatic events and PTSD prevalence using DSM-IV and DSM-5 criteria. *Journal of Traumatic Stress*, *26* (5), 537–547. https://doi.org/10.1002/jts.21848

Kubany, E. S., Haynes, S. N., Leisen, M. B., Owens, J. A., Kaplan, A. S., Watson, S. B., et al. (2000). Development and preliminary validation of a brief broadspectrum measure of trauma exposure: The Traumatic Life Events Questionnaire. *Psychological Assessment, 12* (2), 210–224.

Lang, A. J., Laffaye, C., Satz, L. E., Dresselhaus, T. R., & Steain, M. B. (2003). Sensitivity and specificity of the PTSD Checklist in detecting PTSD in female veterans in primary care. *Journal of Traumatic Stress, 16* (3), 257–264.

Lee, M., Ha, E. H., & Pae, J. K. (2017). The exposure to traumatic events and symptoms of posttraumatic stress disorder among Korean journalists. *Journalism, 19* (9–10), 1308–1325.

Lovibond, S. H., & Lovibond, P. F. (2004). Manual for the Depression Anxiety Stress Scales (2nd ed.). Psychology Foundation Monograph.

MacDonald, J. B., & Fox, R. (2018). Trauma amongst TV news crews: The protective function of crew solidarity. In M.-T. Leung, & L.-M. Tan (Eds.), *Applied Psychology Readings* (pp. 21–38). Springer.

MacDonald, J. B., Fox, R., & Saliba, A. J. (2020). Contextualizing psychological outcomes for TV news journalists: Role differences in industry culture, organizational hierarchy

and trauma exposure. *Journal of Constructivist Psychology*, DOI: 10.1080/10720537.2020.1809579

MacDonald, J. B., Hodgins, G., & Saliba, A. J. (2017). Trauma exposure in journalists: A systematic literature review. *Fusion Journal*, Issue 11. Available online: http://www.fusion-journal.com/issue/011-dangerous-journalism/trauma-exposure-in-journalists-a-systematic-literature-review/

MacDonald, J. B., Hodgins, G., & Saliba, A. J., Metcalf, D. (In press). Journalists and depressive symptoms: A systematic literature review. *Trauma, Violence, and Abuse*.

MacDonald, J. B., Saliba, A. J., & Hodgins, G. (2016b). Journalists and substance use: A systematic literature review. *Substance Abuse, 37*, 402–411.

MacDonald, J.B., Saliba, A.J., Hodgins, G., & Ovington, L. (2016a). Burnout in journalists: A systematic literature review. *Burnout Research, 3*, 34–44.

Marais, A., & Stuart, A. D. (2005). The role of temperament in the development of posttraumatic stress disorder amongst journalists. *South African Journal of Psychology, 35*, 89–105.

Mills, K. L., McFarlane, A. C., Slade, T., Creamer, M., Silove, D., Teesson, M. & Bryant, R. (2011). Assessing the prevalence of trauma exposure in epidemiological surveys. *Australian and New Zealand Journal of Psychiatry, 45* (5), 407–415.

Morales, R. F., Pérez, V. R., & Martínez, L. M. R. (2014). El impacto psicológico de la guerra contra el narcotráfico en periodistas Mexicanos. *Revista Colombiana de Psicología*, *23* (1), 177–193. http://dx.doi.org/10.15446/rcp.v23n1.37640

National Center for Posttraumatic Stress Disorder. (2014). Using the PTSD Checklist for DSM-IV (PCL). Retrieved February 14, 2020, from National Center for Posttraumatic Stress Disorder: https://www.ptsd.va.gov/professional/assessment/documents/PCL_handoutDSM4.pdf

Newman, E., Simpson, R., & Handschuh, D. (2003). Trauma exposure and post-traumatic stress disorder among photojournalists. *Visual Communication Quarterly, 10* (1), 4–13.

Norris, F. H., & Hamblen, J. L. (2004). Standardized self-report measures of civilian trauma and PTSD. In J. P. Wilson, T. M. Keane, & T. Martin (Eds.), *Assessing psychological trauma and PTSD* (pp. 63–102). Guilford Press.

Ogle, C. M., Siegler, I. C., Beckham, J. C., & Rubin, D. C. (2017). Neuroticism increases PTSD symptom severity by amplifying the emotionality, rehearsal, and centrality of trauma memories. *Journal of Personality*, *85* (5), 702–715. https://doi.org/10.1111/jopy.12278

Ormel, J., Jeronimus, B. F., Kotov, R., Riese, H., Bos, E. H., Hankin, B., Rosmalen, J. G. M., & Oldehinkel, A. J. (2013). Neuroticism and common mental disorders: Meaning and utility of a complex relationship. *Clinical Psychology Review, 33*, 686–697.

Orsillo, S. M. (2001). Measures for acute stress disorder and posttraumatic stress disorder. In M. M. Antony, & S. M. Orsillo (Eds.), Practitioner's guide to empirically based measures of anxiety (pp. 255–307). KluwerAcademic/Plenum.

Pyevich, C. M. (2001). The relationship among cognitive schemata, job-related traumatic exposure, and PTSD in journalists, unpublished PhD thesis, University of Tulsa, Discipline of Clinical Psychology.

Pyevich, C. M., Newman, E., & Daleiden, E. (2003). The relationship among cognitive schemas, job-related traumatic exposure, and posttraumatic stress disorder in journalists. *Journal of Traumatic Stress, 16* (4), 325–328.

Rosenman, S. (2002). Trauma and posttraumatic stress disorder in Australia: Findings in the population sample of the Australian National Survey of Mental Health and Wellbeing. *Australian and New Zealand Journal of Psychiatry, 36* (4), 515–520.

Smith, R. (2008). Trauma and journalism: Exploring a model of risk and resilience. (Doctoral dissertation). Retrieved from ProQuest LLC. (3328102)

Smith, R., Newman, E., & Drevo, S. (2015). Covering trauma: Impact on journalists. Retrieved from http://dartcenter.org/content/covering-traumaimpact-on-journalists

Smith, R., Drevo, S., & Newman, E. (2018). Covering traumatic news stories: Factors associated with post-traumatic stress disorder among journalists. *Stress and Health, 34* (2), 218–226.

Weathers, F., Litz, B., Herman, D., Huska, J., & Keane, T. (1993). The PTSD Checklist: Reliability, validity, and diagnostic utility. Paper presented at the Annual Convention of the International Society for Traumatic Stress Studies. San Antonio, TX.

Weidmann, A., Fehm, L., & Fydrich, T. (2008). Covering the tsunami disaster: Subsequent post-traumatic and depressive symptoms and associated social factors. *Stress and Health, 24* (2), 129–135.