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Abstract

Background: About 10% of healthcare workers experience PTSD; the rate is higher among workers exposed to aggression. **Objective:** We extended this research by examining PTSD and exposure to violence and other disturbing patient behaviors, among nursing and other staff on inpatient psychiatric units (forensic and non-forensic) **Method:** Surveys were completed online or in person by 219 respondents (30% response rate). Participants indicated which disturbing behaviors they had been exposed to and ranked the worst three behaviors in each of three categories: most unpleasant to work with, most disruptive to patient care, and most upsetting. Most (n=192) also completed the PTSD Checklist (PCL). **Results:** All but two participants reported exposure to at least one disturbing behavior and ranked violence, feces smearing, and screaming constantly as the worst experiences overall. On the PCL, 25% scored above the cut off for probable PTSD. Nursing staff had the highest scores, with no difference between nursing staff on forensic vs. non-forensic units. PCL score showed a small positive correlation with the number of disturbing behaviors experienced. **Conclusion:** PTSD symptoms are common among psychiatric hospital workers, not only nursing staff. Future research using clinical assessment, longitudinal designs, and measurement of non-violent disturbing behaviors is recommended.

Psychiatric Hospital Workers' Exposure to Disturbing Patient Behaviors and its Relation to PTSD

Post-Traumatic Stress Disorder (PTSD) is a serious mental disorder that can result in debilitating symptoms that involve re-experiencing and reliving a traumatic event; avoiding activities, people, or thoughts related to the event; and hyper-arousal that can cause further problems such as anger, inability to sleep, and difficulty concentrating (e.g., American Psychiatric Association, 2013). Diagnostic criteria for PTSD include direct or vicarious experience of a stressful event related to actual or threatened death, serious injury or sexual violation, and at least one month's duration of symptoms. PTSD in the workplace can have substantial personal and economic costs, as illustrated by one study of worker insurance claims based on PTSD, in which 34% of claimants were still not back to any level of employment four years after the traumatic event (MacDonald, Colotla, Flamer, & Karlinsky, 2003). Although current PTSD interventions for workers (e.g., <http://www.firstrespondersfirst.ca/>) might make McDonald and colleagues' study less relevant today, such developments are relatively recent, and knowledge of the factors related to workplace PTSD among nurses is based on a somewhat sparse literature.

Past research indicates that approximately 10% of health services employees have experienced PTSD symptoms; the prevalence goes up to 61% for those exposed to violence in the workplace (e.g., Jacobowitz, 2013). In Ontario, Canada, the health care sector has the second highest rate of long term injury worker insurance claims, and 10% of such claims among health care employees in 2014 were related to workplace violence (Ontario Ministry of Labour, 2016). It has been reported that PTSD and other mental health problems can lead to nurses experiencing compassion fatigue (e.g.,

Lauvrud, Nonstad, & Palmstierna, 2009), reduced productivity (e.g., Gates et al., 2011), burnout (e.g., Czaja, Moss, & Mealer, 2012) and increased risk of patient falls, medication errors, and overall lower quality of care (e.g., Karanikola, 2015). Both direct experience and observation of violence has been related to adverse effects on staff (e.g., Isenhardt & Hostettler, 2016) and to PTSD among nurses in a variety of hospital and community health care settings (e.g., Gates, Gillespie, & Succop, 2011; Gómez-Gutiérrez, Bernaldo-de-Quirós, Piccini, & Cerdeira, 2016; Lee, Daffern, Ogloff, & Martin, 2015; Richter & Berger, 2006; Walsh & Clarke, 2003).

The risk of exposure to violence from patients is heightened in psychiatric services (e.g., Gunaydin & Kutlu, 2012; Hallett, Huber, & Dickens, 2014). Although most persons with mental disorder are not violent, some psychiatric patients are prone to repeated violence, and occasionally a psychiatric ward may be the site of a severe attack on staff causing physical injury. Interviews with 12 registered nurses working in an acute care psychiatric unit in Ontario, Canada, revealed physically violent events ranging from “being chased and cornered, being hit, punched or grabbed, kicked, spit at, strangled, as well as using a weapon or the environment, such as breaking a window, to elicit violence” (Stevenson, Jack, O'Mara, & LeGris, 2015). The risk of violence is higher in clinical units with predominantly male or involuntary patients, or patients diagnosed with schizophrenia or substance use disorders (e.g., Iozzino, Ferrari, Large, Nielssen, & de Girolamo, 2015), characteristics that may be more common in forensic settings that serve predominantly male, mentally disordered offenders. One study that compared nurses working in forensic and non-forensic settings reported negligible difference in their rates of PTSD (17% and 18%, respectively; Lee et al.,

2015). Lee and colleagues observed higher rates of stress among their non-forensic nurses, concerning job redundancy and hospital restructures, which might limit to applicability of their findings to hospitals without these organizational differences.

Although most relevant research has focused on nursing staff, and on their exposure to patients' assaultive behavior, PTSD has also been observed among nurses working in low-violence, high stress environments such as intensive care units and emergency departments where sudden deaths of young patients, and the inability to help chronically ill patients, are reported to be especially stressful experiences (e.g., Adriaenssens, de Gucht, & Maes, 2012; Czaja et al., 2012; Mealer, Jones, & Moss, 2012). Psychiatric nurses also deal with stressors related to caring for patients who sometimes exhibit severely disturbing behavior in addition to violence, such as constant screaming, self-injury, and eating or drinking dangerous non-consumable items. Another example is fecal smearing, an uncommon but particularly challenging behavior to assess and treat (e.g., Case & Konstantareas, 2011). Seclusion, often used as an intervention for patients with severely disturbing behavior (e.g., Keski-Valkama, 2010), does not necessarily eliminate these behaviors. The extent to which psychiatric nurses are exposed not only acute violence but also more chronic, less severe events that might also affect their experience of PTSD is not well known.

Housekeeping, food service, and other non-clinical staff working on psychiatric inpatient units are also exposed to such behaviors, and little is understood about whether or how the experience affects them. In an older study of PTSD among mental health clinicians, Richter and Berger (2006) somewhat unusually included physicians, social workers and housekeeping personnel, although nurses comprised 70% of the

sample. The study included 46 participants who had been assaulted in the workplace, 17% of whom met the cut-off for PTSD on a self-report questionnaire soon after the assault, and 9% of whom still did six months later. Richter and Berger's (2006) work indicates these other professionals should not be overlooked in research that seeks to understand PTSD among psychiatric hospital workers.

The Present Study

This study was a staff self-report survey conducted at one 300-bed psychiatric hospital in Ontario, Canada, to examine the proportion of staff exposed to severely disturbing behavior by patients on inpatient units. Our goal was to determine which patient behaviors were most commonly experienced and which were most strongly associated with self-reported PTSD symptoms. In addition, we aimed to identify worker groups with most exposure. The hospital provided inpatient psychiatric services for the health region and inpatient forensic services for the entire province. Outpatient and community rehabilitation services staff were not included in the present study. Non-forensic units included acute assessment, adult psychiatric, psychogeriatric, dual diagnosis, and substance abuse programs for male and female patients. Forensic units provided care for patients men charged with criminal offenses and under court order for assessment of fitness to stand trial, assessment of mental disorder at the time of the offense, or treatment. Three two-ward forensic units housed all male patients in locked areas within a secure building, and one single-ward forensic units housed male and female patients in a locked area in the main building. Given the predominantly male,

non-voluntary population on forensic units, and the 24-hour direct care provided by nursing staff, we expected:

Hypothesis 1. Nursing staff will be exposed to severely disturbed patient behavior more than all remaining staff;

Hypothesis 2. Among nursing staff, those working on forensic units will be exposed to disturbed patient behavior more than those working on non-forensic units.

We also aimed to better understand how staff experienced these behaviors by identifying which were perceived as the most unpleasant to work with, the most disruptive to patient care, and the most upsetting to staff. Furthermore, we screened for symptoms of post-traumatic stress disorder in order to survey trauma symptomatology among staff and its relation to exposure to disturbed patient behavior. We expected:

Hypothesis 3. Among all participants, experience of disturbing behaviours will be associated with higher scores on a post-traumatic stress screening tool.

Method

Sample and Procedure

The study received administrative and research ethics approval from the authors' institution. The survey was posted online and email invitations were sent through internal email using professional group address lists including forensic and non-forensic nursing staff, ward clerks, pharmacists, and members of an professional practice council, for a total of 649 inpatient unit-based staff. Nursing staff included registered nurses, registered practical nurses, and patient care assistants. Allied health professionals included: occupational therapists, psychologists, psychometrists, recreation therapists, rehabilitation support specialists, social workers, and spiritual care

providers. Paper copies were also distributed at meetings attended by nursing, allied health, and medical staff as well as during evening shifts to enable participation for those unable or disinclined to respond to the online survey invitation. In addition, paper copies were distributed at staff meetings for non-clinical staff who provided housekeeping and food services on clinical units, at which 70 people were present. Therefore, the total potential sample was 719. We received 223 responses. Four were returned indicating non-consent and another one indicated consent but was otherwise incomplete, leaving a total sample of 219, representing a response rate of 30%. Most surveys were completed by paper (159, 73%) and the rest online (64, 29%). Contact information for the first author (a psychologist) was provided “if any part of the survey is upsetting, or you would like to talk about the survey;” two participants made contact to provide feedback on the survey.

Measures

The 6-page survey began with information about the study’s purpose, content, anonymity, and voluntariness of participation, to which participants indicated consent by checking a box on the first page. Participants indicated their profession and work area from a list of: nursing, forensic; nursing, non-forensic; allied health, forensic; allied health, non-forensic; food services; housekeeping; other; prefer not to say. We segregated clinical staff into those providing services on forensic and non-forensic units because these were considered distinct clinical areas in the hospital along with a perception that forensic patients exhibit more challenging behaviors.

Participants checked the disturbing behaviors by patients that they had experienced during their work from a list of 14 behaviors (shown in Table 1). This list

was created for this study and based on the authors' clinical experience and familiarity with clinical records data. A space for describing other behaviors was provided. To help maintain anonymity, no information about when or on which inpatient unit the behaviors were experienced was requested. Participants were asked to "think separately about what are the most unpleasant of these behaviors to work with, the most disruptive to patient care, and the most upsetting to you" and then check the "worst 3" in each category.

PTSD symptoms were measured using the PTSD Checklist (PCL; e.g., Wilkins, Lang, & Norman, 2011), the most widely used self-report scale (McDonald & Calhoun, 2010). We chose this scale because of its previous use with nursing staff, its brevity, and its validity as a self-report measure which allowed for participant anonymity. The PCL has 17 items that ask participants to rate their emotional, cognitive, and physical reactions to a stressful experience. Example items are: "repeated, disturbing memories, thoughts or images of a stressful experience from the past," "feeling very upset when something reminded you of a stressful experience from the past," "trouble falling or staying asleep," and "feeling jumpy or easily startled." In the present study, participants were asked to rate symptoms of PTSD on a scale indicating the degree to which they had been bothered by each symptom in the last month on a five point scale labelled 1 = not at all, 2 = a little bit, 3 = moderately, 4 = quite a bit, and 5 = extremely. The original version of the PCL does not require the experience to meet the current PTSD diagnostic criteria, and we instructed participants to refer to "the extreme behaviours that you reported experiencing as most upsetting to you." In previous research the PCL showed concurrent validity with the Clinician Administered PTSD Scale (CAPS; $r = .93$) and a

score of 44 yielded optimal specificity and sensitivity for clinical diagnosis of PTSD (diagnostic efficiency = .92; Blanchard, Jones-Alexander, Buckley, & Forneris, 1996). The mean score in a sample of adult victims of severe accidents or sexual assault was 46 (Blanchard et al., 1996). On the present survey, we explained that it is possible to have some symptoms of PTSD without actually having the disorder. The PCL was completed by 192 participants, including seven who completed at least the first two items and at least some subsequent items but omitted others; in these cases, missing items were replaced with a "1."

Analytical Plan

We conducted descriptive analyses of participant characteristics and reported exposure to disturbing behaviors. We tested hypothesis 1, that nursing staff will be exposed to severely disturbed patient behavior more than remaining participants, by comparing the percentage of participants in each group reporting exposure to at least one behavior. We then compared means and 95% confidence intervals (CIs) of the number of behaviors reported by staff identifying as nursing versus non-nursing. Statistical differences can be inferred when one group mean falls outside the other group's confidence interval. In addition, we conducted independent samples *t*-tests of statistical significance. We tested hypothesis 2, that nursing staff working on forensic units will be exposed to more disturbed patient behavior than those working on non-forensic units, in the same manner. We tested hypothesis 3, that exposure to disturbing patient behavior will be associated with higher scores on a post-traumatic stress screening tool, using a Pearson correlation coefficient.

Results

The professional group with the largest representation was nursing, with 118 participants (54% of respondents), followed by allied health professionals (30, 14%), housekeeping (27, 12%), food services (23, 11%), and “other,” which could include administrative and managerial staff assigned to inpatient units (11, 5%). Three participants (1%) selected the “prefer not to answer” response and 7 (3%) did not answer this question. Half the total respondents (49%) indicated they worked on forensic units, including 72% of nursing and 71% of allied health staff.

Exposure to Disturbing behavior by Patients

All but two participants reported experiencing at least one of the listed patient behaviors, and each behavior was endorsed by nearly two thirds of participants (Table 1). The mean number of behaviors endorsed was 10.02 ($SD = 4.05$), 95% CI = [9.48, 10.56].

Hypothesis 1: Nursing vs. non-nursing staff. All (100%) nursing staff reported exposure to at least one disturbing behavior and all but one (99%) of remaining staff also reported exposure. Nursing staff reported experiencing significantly more behaviors than allied health professionals, $M = 11.68$ ($SD = 2.63$) 95% CI = [11.20, 12.16] vs. $M = 9.93$ ($SD = 4.25$) 95% CI = [8.35, 11.52], $d = .50$; t (unequal variances $df = 34.8$) = 2.10, $p = .039$. Clinical staff (nursing and allied health professionals) together reported exposure to more behaviors than remaining staff, $M = 11.32$ ($SD = 3.09$) 95% CI = [10.82, 11.83] vs. $M = 7.13$ ($SD = 4.35$) 95% CI = [6.04, 8.21], $d = 1.13$; t (unequal variances $df = 91.7$) = 7.00, $p < .001$.

Hypothesis 2: Forensic vs. non-forensic units. Among nursing staff, those working on a forensic compared with non-forensic unit were exposed to only a slightly

larger number of disturbing behaviors, $M = 11.87$ ($SD = 2.63$) 95% CI = [11.87, 12.44] vs. $M = 11.18$ ($SD = 2.60$) 95% CI = [10.26, 12.11], $d = .26$; this effect was not statistically significant, $t(116) = 1.28$, $p = .203$.

Understanding Staff Experience

Most participants ranked experiences according to how unpleasant, disruptive, and upsetting they were ($n = 194$ to 197 , 89%-90%). Participants were asked to rank the three worst experiences in each category, but 25-33 participants ranked more than three items. The overall “worst” experiences did not differ substantially when these multiple rankers were eliminated: the top five most unpleasant experiences were the same except the top two ranked items (violence to others and smearing feces) were reversed; the top four most disruptive behaviors were identical; and the top eight most upsetting behaviors to work with were identical. Table 2 shows results for those participants who only ranked the three worst experiences in each category. Smearing feces was clearly ranked as the most unpleasant to work with and violence to others was the most disruptive to patient care and the most upsetting.

The PCL was completed by 192 (88%) participants and yielded an internal consistency (Cronbach’s alpha) of .958. The mean PCL score was 34.40 ($SD = 15.44$), Median = 29.50, 95% CI = [32.20, 36.59]. Scores of at least 44, the diagnostic cut off, were reported by 47 participants (24%) and scores of 50 or higher, by 31 (16%). More nursing staff than other psychiatric workers met the criteria for PTSD based on a PCL score of 44; nursing staff 31% (95% CI = 22%, 39%) vs. non-nursing staff 11% (95% CI = 4%, 17%). For further analysis, we removed an outlier score of 85 and log transformed remaining scores.

Hypothesis 3: Exposure to Disturbed Patient Behavior and PTSD

Symptoms. PCL score was significantly correlated with endorsement of most experienced patient behaviors (Table 1). It was also significantly associated with the total number of patient experiences endorsed, $r(190) = .25, p = .001$, and with experiencing all three of the overall “worst” experiences to work with (violence to others, smearing feces, and screaming constantly), $r(190) = .19, p = .009$. In addition, nursing staff had higher PCL scores than non-nursing staff, $M = 37.88 (SD = 14.97)$ vs. $M = 29.06 (SD = 13.76)$, $F(1, 185) = 21.30, p < .001$, but among nursing staff, PCL scores were not associated with working on a forensic vs. non-forensic unit, $M = 37.81 (SD = 14.57)$ vs. $M = 38.07 (SD = 16.24)$, $F(1, 106) = 0.04, p = .849$. Because the experiences of non-nursing and non-clinical staff in psychiatric hospitals have received little previous attention, we illustrate the average PCL scores as a function of profession in Figure 1.

Discussion

This survey found support for the hypothesis that nursing staff would report experiencing significantly more behaviors than allied health professionals, and that both groups would report more exposure than non-clinical staff working on inpatient units. This difference could be attributable to different levels of direct engagement with patients between clinical and non-clinical staff, or may simply reflect greater opportunity for exposure, especially among nursing staff who provide patient care for their entire shift and at all hours.

Results were contrary to our expectation that nurses working on a forensic compared with non-forensic clinical unit would be exposed to more disturbing behaviors.

Although the mean exposure of non-forensic nursing staff fell below the 95% CI of exposure reported by forensic nursing staff, the lower participation from non-forensic staff may have limited the ability to detect an effect under inferential testing; post-hoc calculations indicate power for this analysis was .65.

This study examined one of the widest ranges of experiences reported in the literature on psychiatric hospital workers' exposure to disturbing behaviors. We found that violence was ranked as the most upsetting disturbing behavior to experience and the most disruptive to patient care. However, fecal smearing was ranked the most unpleasant to work with and other disturbing behaviors such as constant screaming received similar ratings and these behaviors were not significantly less prevalent than violence. Further research into behaviors other than assault appears to be warranted to further understand how these behaviors are experienced and their relation to psychiatric workers' mental health symptoms. It may be possible, for example, that continual exposure to disturbing behaviors that do not meet the PTSD Criterion A definition compounds any direct effects of patient aggression.

The survey revealed a surprisingly high rate of self-reported PTSD symptoms, especially among nursing staff. On the PCL, one in four participants scored at least 44, the cut-off with optimal diagnostic accuracy in research comparing this tool to PTSD diagnosis based on clinical assessment (Blanchard et al., 1996). The overall rate was higher than that reported among psychiatric nurses in a previous study of a similar sample in Australia using the same PCL cut-off score, and it was significantly higher for nursing staff (Lee et al., 2015). Like Lee and colleagues, we found no difference

between forensic and non-forensic nursing staff in self-reported PTSD, suggesting some generalizability of this result.

We also found evidence consistent with our expectation that PTSD symptoms would be positively correlated with exposure to disturbing behaviors by patients. Our finding that PTSD symptoms were related to several disturbing behaviors that would not be considered critical incidents, such as patients hoarding or drinking from the toilet, suggests that psychiatric hospital workers can experience distress in response to relatively routine events not addressed by trauma support services. Trauma services are typically offered in response to exposure to critical incidents rather than to support professionals exposed to chronic but less extreme events. Research indicates that early intervention is more effective in preventing mental health symptoms, ultimately benefitting employee productivity (e.g., Skogstad, 2013). A promising practice that may be of benefit to psychiatric hospital workers is resilience training, which can involve coaching, cognitive-behavioral training, or skill-building to increase practices such as mindfulness, optimism, stress management, problem-solving, self-efficacy, and emotional awareness and regulation (e.g., Robertson, Cooper, Sarkar, & Curran, 2015).

Limitations and Implications for Research

Several limitations of the present research stem from it being restricted to a brief survey that could be conducted by staff on a short break or during time-limited staff meetings, and from our desire to maintain participant anonymity in order to kindle the trust necessary for participants to provide honest and frank responses. We did not measure the recency or frequency of disturbing behaviors or how the participant was exposed (e.g., victim, witness, or indirectly involved) which could affect the

unpleasantness of the experience and severity of any effects. We also did not ask questions about the length of work experience, training to deal with disturbing behaviors, personal history, or other factors that might affect the experience of disturbing behaviors or the likelihood of developing PTSD symptoms as a result. Our list of disturbing behaviors was insufficient for 40% of participants who reported “other” behaviors, and future studies could consider psychometric test construction methods to expand and improve the list. Further research regarding individual and workplace variables that might affect the relation between assault and psychological outcomes is also needed. For example, a recently reported survey of 323 inpatient psychiatric staff, two-thirds of whom had been physically assaulted, found that staff varied in their distress reactions to the experience of assault and this reactivity interacted with the frequency of assaults to predict symptoms of depression (Kelly, Fenwick, Brekke, & Novaco, 2016). Kelly and colleagues also reported that reactivity to conflict within clinical teams influenced the association of staff conflict and depression.

A strength of our measurement of PTSD was that we did not limit it to a single item, which yields lower prevalence estimates than a list-based assessment (e.g., Monson, Lonergan, Caron, & Brunet, 2016). However, we could not determine whether the exposure met the PTSD diagnostic criterion that requires the stressor to relate to actual or threatened death, serious injury or sexual violation, so we are unable to determine whether the extent of PTSD symptomatology accurately reflects the prevalence of PTSD among psychiatric hospital workers in this study. Also, participants reported on any symptoms experienced in the past month, without assessment of the duration of symptoms for over one month necessary for diagnosis. Furthermore, while

the PCL is a well validated and useful screening tool for research, it may overestimate rates of PTSD relative to clinical diagnosis (e.g., McDonald & Calhoun, 2010; Wilkins, Lang, & Norman, 2011). To rectify these limitations, we recommend future research using clinical assessment, repeated measures, and more detailed evaluation of how disturbing behaviors are experienced. Further self-report research should consider use of recent PCL revisions designed to measure the 20 DSM-5 symptoms, with the option of assessing Criterion A (Blevins, Weathers, Davis, Witte, & Domino, 2015).

The present sample comprised 30% of the total inpatient unit-based staff. This rate compares well with similar studies, such as that by Kelly and colleagues (2016) whose sample represented 66% of staff who viewed their online survey but only 18% of eligible staff. However, low response rates can indicate response bias; our sample, for example, overrepresented forensic nursing staff. Like many organizations, our hospital uses surveys extensively to evaluate services and engage with staff, which could lead to survey fatigue and reduced participation. We might also expect that individuals who are experiencing PTSD symptoms are less likely to be in the workplace (e.g., on medical leave) or are less likely to participate in the survey as employee survey non-response is related to low job satisfaction (e.g., Mueller, Voelke, & Hattrup, 2011); this could mean the prevalence of PTSD symptoms is underestimated in the present survey, and could also affect the estimated association of symptoms and experiences. Our study supplemented the online survey by taking paper surveys to staff on their clinical units, and this multi-method approach seemed to increase participation given the proportion who completed the paper survey rather than the online survey.

Clinical Implications

The present study adds to a small existing literature on psychiatric workers' experience of violence and other disturbing behaviors. In comparison, there is extensive existing research into the risk and management of violence in psychiatric settings (e.g., Harris, Rice, Quinsey, & Cormier, 2015). In addition, staff-to-patient ratio and proportion of regular and experienced staff have been identified as potential variables in inpatient violence prevention (e.g., Hallett et al., 2014). Lauvrud and colleagues (2009) studied 70 nursing staff in a Norwegian forensic psychiatric hospital and reported that none of their respondents met the cut off for PTSD on the PCL, a finding which they partly attributed to a high staff-to-patient ratio (five staff per patient). Given the present study's finding that PTSD symptoms were associated with exposure to violence and other disturbing behaviors, routine use of validated violence risk assessment tools, and implementation of empirically supported ward management procedures such as Safewards (e.g., Bowers et al., 2015) could be expected not only to reduce violence on psychiatric units but also to have a beneficial effect on nurses' mental health.

There is little evidence to inform practice regarding preventing or managing disturbing behaviors that could occur even during times when patients are confined to their rooms. Staff suggestions collected during the present survey included contingent use of PRN medication or behavior therapy, but many staff endorsed continued seclusion or restraint and over 1 in 10 reported that nothing was helpful. There is a need for developing and testing non-pharmacological interventions for seclusion-related

disturbing behaviors that are practicable and effective in psychiatric inpatient units staffed by inter-professional clinical teams.

Legislation was recently introduced in Ontario, Canada, allowing for certain first responder professionals to be entitled to worker insurance benefits if they are diagnosed with PTSD by a psychiatrist or psychologist (Legislative Assembly of Ontario, 2016). The first responders covered by the bill are: Firefighters and fire investigators, police officers, emergency response teams, paramedics, emergency medical attendants, ambulance service managers, dispatchers, correctional institutional workers, and “workers in a place of secure custody or place of secure temporary detention” (p. 4). Nurses and other psychiatric hospital workers are not explicitly included in this group. The present study provides preliminary evidence that psychiatric hospital workers also experience PTSD that is related to disturbed and in some cases chronic behaviors that are experienced in the workplace. Further research to elucidate this relationship, especially in comparison to that exhibited among the first responders cited in this legislation, is needed.

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Table 1.

Patient Behaviors Experienced (and 95% Confidence Intervals) by Psychiatric Hospital Staff (N=219) and Their Correlation with PTSD Checklist (PCL) Score (N=191)

Behavior	n	%	95% CI of Percentage	Correlation with PCL	p-value for Correlation
Screaming constantly	186	86	[81, 91]	.17	.017
Hoarding	184	84	[79, 89]	.24	.001
Violence to others	178	82	[77, 88]	.17	.018
Damaging the room	174	81	[75, 86]	.12	.115
Physically resisting care	170	79	[73, 84]	.19	.010
Self-injury	170	79	[73, 84]	.20	.005
Smearing feces	170	79	[73, 84]	.15	.045
Eating harmful non-food items	151	70	[64, 76]	.24	.001
Wandering	149	69	[63, 75]	.17	.018
Drinking from the toilet	148	69	[62, 75]	.23	.001
Sexual behavior in public	142	66	[59, 72]	.14	.060
Flooding the room	140	65	[58, 71]	.24	.001
Elopement	137	63	[57, 70]	.18	.014
Other	87	40	[34, 47]	.01	.908

Note: Behaviors specified by participants under “other” were: suicidal behavior, verbal abuse, threats, property offenses, smearing bodily fluids, poor hygiene, and duplicates of listed items. One of the 192 participants who completed the PCL did not report on disturbing behavior.

Table 2.

Most Unpleasant, Disruptive, and Upsetting Patient Behaviors Reported by Psychiatric Hospital Staff Based on their Ranking of the Worst Three in Each Category

Behavior	Most Unpleasant (n=164)		Most Disruptive (n=164)		Most Upsetting (n=169)		Overall	
	n	%	n	%	n	%	Total n	Rank
Violence to Others	81	49	89	54	115	68	285	1
Smearing Feces	122	74	38	23	63	37	223	2
Screaming constantly	70	43	82	50	62	37	214	3
Physically resisting care	39	24	75	46	46	27	160	4
Self-injury	38	23	41	25	78	46	157	5
Room damage	18	11	31	19	22	13	71	6
Sexual behavior in public	26	16	17	10	28	17	71	7
Elopement	6	4	35	21	14	8	55	8
Eating harmful non- foods	15	9	13	8	18	11	46	9
Drinking from the toilet	22	13	5	3	13	8	40	10
Flooding the room	14	9	17	10	3	2	34	11
Hoarding	14	9	10	6	5	3	29	12
Wandering	2	1	5	3	3	2	10	13

Figure 1. Post-Traumatic Stress Disorder Checklist (PCL) score by profession. Data points are raw total scores with one outlier removed and lines represent 95% confidence intervals. Group N's range from 23 (Food Services) to 118 (Nursing).