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Violent Ideation in Medical Patients in Four Insurance Systems

by

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Abstract

Most of the literature on violent patients has focused on patients in psychiatric facilities. Little is known about violent patients in the general medical setting, although it would seem that violent and dysfunctional behavior may predispose patients towards injury. These effects were explored using census-matched community and physical rehabilitation patient samples, from whom background information and BHI profiles were obtained. The results found that the patient group reported significantly more violent ideation (VI) than did the community group. VI was also significantly associated with involvement in worker's compensation or personal injury insurance systems, work conditioning programs, the BHI Hostility scale, and a number of other psychosocial factors.

The rate of violence in the United States is markedly higher than in most other industrialized nations. The homicide rate in the United States is violence in the medical setting is not uncommon. In one study, patient aggression was found to affect 25% of general practitioners (Hobbs, 1991). Another study found that 9% of medical students reported being physically assaulted by their patients (Ellwood & Rey, 1996). It has also been found that most patients' assaults were triggered by staff-patient interaction (Cheung, Schweitzer, Tuckwell, & Crowley, 1997).

This study was intended to gain information about the frequency of reported violent ideation (VI) in physically injured medical patients, and identify associated psychological and systemic variables. It was hypothesized that VI would increase with length of time in treatment, with the highest proportion of patients with VI being in tertiary care settings, while the lowest proportion would be found in primary care. This was predicted as common rehabilitation protocols tend to refer psychologically dysfunctional patients on to secondary and tertiary treatment centers (Mayer, et al, 1994). Additionally, psychologically dysfunctional patients are in general more prone to delayed recovery, more prone to becoming disabled, and are thus likely to represent an increasing proportion of the patient population as length of time in treatment continues (Gatchel, Polatin, & Mayer, 1995).

A number of studies have found that job dissatisfaction and other psychosocial factors are risk factors for filing a worker's compensation injury report (Bigos, et al., 1991; Bongers, deWinter, Kompier, & Hildebrandt, 1993; Helliwell, Mumford, Smeathers, & Wright, 1992; Sauter & Swanson, 1996; Ursin, Endresen, & Ursin, 1988). Based on this, it was also predicted that VI would be highest in worker's compensation. It was also predicted that patients would be higher in VI than nonpatients, as patients were more likely to be distressed, and persons with preexisting aggressive tendencies may be more likely to sustain injuries.

Method

Subjects

Patient and community samples were gathered from a total of 2,262 subjects in 36 U.S. States at over 90 sites during the BHI validation studies. The final normative patient sample was comprised of 527 patients who were currently in treatment for a physical injury. The community sample was comprised of 725 community subjects. The demographics of both groups approximated the U.S. Census for race, education, age, and gender. All of the subjects were adults ranging in age from 18 to 65.

Procedure

Subjects were selected at random as the BHI patient normative sample.

A similar procedure was used with the subjects of the community sample, who were recruited through advertisements, and who were also reimbursed for their time. The community normative sample was comprised of 725 community subjects,
who were selected at random from a pool of 1485 community subjects.

Subjects were administered the BHI-R, and additional data was also gathered. The BHI-R was administered anonymously. Subjects signed an informed consent form stating that the information would be used for research purposes only, and that no results or feedback from this test would be given. They were also informed that the information would not influence the course of their clinical care. Subjects were classified as having violent ideation (VI) if they positively endorsed an item stating, “I think about killing the people who have caused me problems.”

Instrumentation

The Battery for Health Improvement (BHI) is a 202-item inventory designed for the psychological assessment of medical patients. It is included within a larger 600-item research version (BHI-R), which was administered to the subjects in this study. The BHI has 14 scales which assess factors related to delayed recovery from a medical condition such as somatization, dissatisfaction with physicians, and psychological and physical symptom magnification. It also has a number of critical items pertaining to dangerousness to self and others, and a history of physical or sexual assault.

Results

The mean BHI scores of patients with VI were compared to the mean scores of patients without VI using ANOVA tests. The mean scores were significantly different on all 14 BHI scales. Eleven of the BHI scales were significantly elevated at p<.0001 (Depression, Anxiety, Hostility, Borderline, Dependency, Chronic Maladjustment, Substance Abuse, Family Dysfunction, Doctor Dissatisfaction, Job Dissatisfaction and Somatic Complaints), while one was significantly depressed at p<.0001 (Perseverance). Two other BHI scales were significantly elevated at p<.05 (Pain Complaints and Muscular Bracing) (see Table 1). The frequencies of reported VI in the BHI patient sample was compared to the frequency of VI reported by community members. The community member’s rate of VI was lower at 6.3%. In contrast, the proportion of patients with VI was found to be almost 50% higher at 9.3%. This overall difference was not significant though (c² p = .0514).

The proportion of patients with VI did vary significantly (c² p<.005) depending on the insurance system the patient was in (see Table 2). The lowest proportion of patients with VI was found in the private health insurance system (which includes pay-for-service insurance, health maintenance organizations, preferred provider organizations and other modes of health care delivery). The proportion there was found to be 2.8%. Next highest were patients in the Medicare/Medicaid system, where a 9.7% rate was found. In contrast, in both patients with worker’s compensation or personal injury insurance, the rate of VI was 11.8%.

Patient VI was also associated with type of rehabilitation program. The proportion of patients reporting VI ranged from 6% in acute occupational/physical therapy, to 13% in chronic pain programs and 27% in work conditioning programs. A c² analysis found this to be significant as well (p < .0005) (see Table 3).

There were a number of other significant findings as well. It was found that patients who reported VI were more likely to be in litigation for the injury (c² p<.01), have a lower level of education (c² p<.05), be more likely to smoke tobacco (c² p<.0005), have a traumatic brain injury (c² p<.05), report more frequent divorces (c² p<.05), have a plan to kill themselves (c² p<.0001) and report surviving a childhood sexual assault (c² p<.005).

In contrast, patients reporting VI were not different with regard to gender, type of orthopedic injury, or number jobs held in the last five years from patients not making such reports.

Discussion

The higher rates of BHI reports of VI seen in secondary (work conditioning) and tertiary (chronic pain) treatment could be attributable to preexisting hostile traits. Angry or dysfunctional patients may be more likely to enter the medical system, and less likely to leave. In particular, there seems to be substantial evidence that persons who are unhappy with their work are more likely to file a report of an injury at work (NIOSH, 1997). It is also possible that persons with VI are more likely to be injured. For example, persons with VI may be more aggressive drivers and have more accidents. On the other hand, it may be that hostile patients may demand more treatment, or exhibit delayed recovery. This should be fertile area for further research.
Table 1. Analysis of Variance for BHI Scores for Patients With and Without Violent Ideation

<table>
<thead>
<tr>
<th>Scale</th>
<th>df</th>
<th>Mean Score VI Group</th>
<th>Mean Score Non-VI Group</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>1</td>
<td>59.4</td>
<td>49.0</td>
<td>52.7****</td>
</tr>
<tr>
<td>Anxiety</td>
<td>1</td>
<td>61.2</td>
<td>48.8</td>
<td>71.7****</td>
</tr>
<tr>
<td>Hostility</td>
<td>1</td>
<td>65.8</td>
<td>48.4</td>
<td>172.1****</td>
</tr>
<tr>
<td>Borderline</td>
<td>1</td>
<td>63.3</td>
<td>48.6</td>
<td>118.1****</td>
</tr>
<tr>
<td>Symptom Dependency</td>
<td>1</td>
<td>56.8</td>
<td>49.3</td>
<td>26.3****</td>
</tr>
<tr>
<td>Chronic Maladjustment</td>
<td>1</td>
<td>59.8</td>
<td>48.9</td>
<td>58.8****</td>
</tr>
<tr>
<td>Substance Abuse</td>
<td>1</td>
<td>56.4</td>
<td>49.4</td>
<td>23.3****</td>
</tr>
<tr>
<td>Perseverance</td>
<td>1</td>
<td>42.6</td>
<td>50.8</td>
<td>31.8****</td>
</tr>
<tr>
<td>Family Dysfunction</td>
<td>1</td>
<td>60.3</td>
<td>49.1</td>
<td>61.7****</td>
</tr>
<tr>
<td>Job Dissatisfaction</td>
<td>1</td>
<td>55.2</td>
<td>49.6</td>
<td>19.3****</td>
</tr>
<tr>
<td>Doctor Dissatisfaction</td>
<td>1</td>
<td>55.6</td>
<td>49.5</td>
<td>17.2****</td>
</tr>
<tr>
<td>Somatic Complaints</td>
<td>1</td>
<td>57.2</td>
<td>49.3</td>
<td>29.0****</td>
</tr>
<tr>
<td>Pain Complaints</td>
<td>1</td>
<td>53.1</td>
<td>49.4</td>
<td>6.09*</td>
</tr>
<tr>
<td>Muscular Bracing</td>
<td>1</td>
<td>54.9</td>
<td>49.4</td>
<td>13.4***</td>
</tr>
</tbody>
</table>

*p< .05 **p<.01 ***p <.001 ****p<.0001

n = 527

Table 2. Percentage of Patients Reporting Violent Ideation in Four Insurance Systems

<table>
<thead>
<tr>
<th>Insurance System</th>
<th>No</th>
<th>Yes</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Count</td>
<td>Row %</td>
<td>Count</td>
</tr>
<tr>
<td>Auto / Personal Injury</td>
<td>52</td>
<td>88.1</td>
<td>7</td>
</tr>
<tr>
<td>Medicare / Medicaid</td>
<td>28</td>
<td>90.3</td>
<td>3</td>
</tr>
<tr>
<td>Private Health Insurance</td>
<td>176</td>
<td>97.2</td>
<td>5</td>
</tr>
<tr>
<td>Worker=s Compensation</td>
<td>149</td>
<td>88.1</td>
<td>20</td>
</tr>
<tr>
<td>Other / Unknown</td>
<td>73</td>
<td>83.9</td>
<td>14</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>478</td>
<td>90.7</td>
<td>49</td>
</tr>
</tbody>
</table>

*df = 4  c^2 = 17.975  c^2 p value = .0012*
The BHI scale most closely associated with VI in this study was the Hostility scale. The mean difference on the Hostility scale between the VI and non VI groups was over 17 T-score points. This appears to be a clinically significant difference. A strong relationship between VI and Hostility was anticipated, though.

It seems likely that patient hostile traits may increase the risk of VI developing in the future, although this remains to be empirically tested. An alternate explanation is that elevated rates of VI in secondary and tertiary treatment could also be attributable to reactive or state anger. Persons who have been injured could exhibit higher levels of VI as part of an angry reaction to the pain or frustrations they have faced.

Patient stress and frustration may be heavily influenced by systemic variables. Of particular significance here is that the rate of VI in patients in work conditioning programs was more than twice as high as those in chronic pain programs. In most protocols, work conditioning programs are regarded as secondary treatment, and persons who do not succeed there or who are judged to be too medically or behaviorally unqualified may be referred on to tertiary level chronic pain programs (Mayer et al., 1994). Based on this referral criteria, it had been hypothesized here that the incidence of patients with psychological dysfunctions in chronic pain programs would exceed that in secondary level work conditioning programs. It was further hypothesized that this would include a higher rate of VI in chronic pain programs. The reverse was true.

If patient selection effects did not produce the observed higher frequency of VI in work hardening programs, then the possibility that systemic variables were involved must be carefully considered. Work conditioning programs, by their nature, may make greater behavioral and emotional demands than other types of rehabilitation programs. Even though the number of subjects was not large, the fact that 27% of this sample of patients in work hardening programs were reporting VI is a sobering statistic. The work hardening patients reported VI at twice the rate seen in patients with chronic pain, and 4.5 times the rate VI of patients in acute physical therapy.

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warranted, and that an intervention should be considered.

The presence of patient VI has clear ramifications for those working in the clinical setting. Primary prevention here should involve not only the identification of hostile patients at risk for VI and aggression. It should also involve identifying programs or systems where a higher incidence of VI is likely to be observed. Once at-risk patients or programs are identified, interventions can be attempted.

When VI is present in the clinical setting, it would be important to assess the patient for the presence of hostile tendencies. Hostility and VI may predispose a client toward aggression. As noted previously, though, staff-patient interaction and systemic variables may serve as the precipitating cause of aggressive behavior. As more is known about VI and aggressiveness in medical settings, there will be an increased opportunity to develop effective interventions. This may include managing the concerns of a hostile person with an injury, as well as designing health care delivery systems that do not unnecessarily antagonize patients.

References


New York: Citadel Press.


