

Violent Ideation in Medical Patients in Four Insurance Systems

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INTRODUCTION

Most of the literature on angry or violent patients has focused on patients in psychiatric facilities. While aggressive behavior is anticipated in psychiatric facilities, general medical settings are often ill prepared to deal with such issues (ECRI, 1996). Violence in the medical setting is not uncommon. In one study, patient aggression was found to affect 25% of general practitioners (Hobbs, 1991). It has also been found that most patients' assaults were triggered by staff-patient interaction (Cheung, et al, 1997).

It was hypothesized that VI would increase with length of time in treatment. This was pre-

dicted as common rehabilitation protocols tend to refer psychologically dysfunctional patients on to secondary and tertiary treatment centers (Mayer, et al, 1994).

A number of studies have found that job dissatisfaction is a risk factor for filing a worker's compensation injury report. 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 would be more likely to report 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 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

The subjects of the patient group were recruited by their health care providers, and were reimbursed for participation. A total sample of 777 patients was obtained. From this sample, the 527 subjects were selected at random as the BHI patient normative sample.

A similar procedure was used with the sub-

jects of the community sample, who were recruited through advertisements, and who were also reimbursed for their time. The community 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 were classified as having violent ideation (VI) if they positively endorsed a 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.

TABLE 1

Analysis of Variance for BHI Scores for Patients With and Without Violent Ideation

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

* p < .05 ** p < .01 *** p < .001 **** p < .0001
n=527

TABLE 3

Frequency of Reported Violent Ideation in Primary, Secondary, and Tertiary Rehabilitation

| Treatment setting | Acute PT/OT | | Work Conditioning | | Chronic Pain | | Total | |
|-------------------|-------------|----------|-------------------|----------|--------------|----------|-------|----------|
| | Count | Column % | Count | Column % | Count | Column % | Count | Column % |
| VI Reported | 13 | 5.8 | 10 | 27.0 | 12 | 13.5 | 35 | 10.0 |
| VI Not Reported | 210 | 94.2 | 27 | 73.0 | 77 | 86.5 | 314 | 90.0 |
| Total | 223 | 100.0 | 37 | 100.0 | 89 | 100 | 349 | 100.0 |

df=2 $\chi^2=17.38$ p=.0002

TABLE 2

Percentage of Patients Reporting Violent Ideation in Four Insurance Systems

| Insurance System | Non VI | | VI | | Total | |
|--------------------------|--------|-------|-------|-------|-------|-------|
| | Count | Row % | Count | Row % | Count | Row % |
| Auto/Personal Injury | 52 | 88.1 | 7 | 11.8 | 5 | 100 |
| Medicare/Medicaid | 28 | 90.3 | 3 | 9.7 | 31 | 100 |
| Private Health Insurance | 176 | 97.2 | 5 | 2.8 | 181 | 100 |
| Worker's Compensation | 149 | 88.2 | 20 | 11.8 | 169 | 100 |
| Other/Unknown | 73 | 83.9 | 14 | 16.1 | 87 | 100 |
| Total | 478 | 90.7 | 49 | 9.2 | 527 | 100 |

df = 4 $\chi^2 = 17.975$ p = .0012

DISCUSSION

The BHI scale most closely associated with VI in this study was Hostility. 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.

Angry patients may be more likely to enter the medical system, and less likely to leave. 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. It is also possible that persons with VI are more likely to be injured or have more accidents. An alternate explanation is that elevated rates of VI in secondary and tertiary treatment could 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. Based on referral criteria, it had been hypothesized here that the incidence of patients with VI in chronic pain programs would exceed that in secondary level work conditioning 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 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. Elevations on the BHI Doctor Dissatisfaction and Job Dissatisfaction scale are associated with VI reports, and may tap into aspects of systemic stressors.

This study also found that worker's compensation and personal injury insurance systems are associated with a higher frequency of patient VI than was observed in patients with private health care insurance. These are insurance systems involve compensation, frequent litigation, and in many case have been more managed. With regard to private insurance systems, this study did not differentiate between various private health insurance systems, such as health maintenance organizations (HMOs) and preferred provider organizations (PPOs).

The level of anger and VI detected in this study indicates that extreme patient anger cannot be overlooked. 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.