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THE EFFECT OF THE PENDENCY OF CLAIMS FOR COMPENSATION UPON BEHAVIOR INDICATIVE OF PAIN†

Cornelius J. Peck,* Wilbert E. Fordyce,** and Richard G. Black***

Recent theories endeavoring to explain manifestations of pain in humans have increasingly recognized the effect of sociological and psychological processes on pain.¹ This article reports findings made in a research project² based on the hypothesis that the pendency of a claim for compensation has the effect of causing greater, more intense, and more persistent pain than would otherwise be experienced if persons had not sought compensation. The study assumed that pain can most accurately be measured by observing behavior indicative of pain and focused on data reflecting such behavior. The lawyer-author of this article thought the study might demonstrate that current compensation practices are a significant cause of pain behavior, and anticipated that such a finding could lead to revision of claims procedures or even changes in methods of compensation. The project revealed, however, no significant effects of either litigation or representation by attorneys upon the pain behavior of persons having workmen's compensation claims with the Department of Labor and Industries of the State of Washington.

Obviously, the absence of significant effects is not proof that there were no effects upon the pain experienced by the injured persons who made a claim going beyond that of an initial claim for workmen's

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1. See Part I *infra*.

2. The study, conducted by the authors, was financed by the National Science Foundation through a grant to the University of Washington.

compensation. Moreover, the fact that all the persons studied had made a claim for some compensation from the Department of Labor and Industries limits the significance of the findings for predicting pain behavior of persons having no claims pending. The impact of the study may not be to induce changes in law and legal procedures, but instead to cause reappraisal by physicians of rather firmly held convictions that lawyers and litigation are factors which greatly complicate the pain problems of their patients.

I. THE BASIS FOR THE HYPOTHESIS THAT PENDENCY OF A CLAIM CAUSES PAIN

The folklore of both physicians and defense lawyers has long been that patients or claimants are not finally relieved of their pain until litigation concerning their injuries has terminated. By these legends, an award of compensation—sometimes referred to as “the green poultice”—has a potent beneficial effect. Even the unsuccessful termination of litigation is reputed to bring about improvements. In addition to these undocumented assumptions, however, there is a theoretical basis for the hypothesis that the pendency of claims and litigation may aggravate a plaintiff's pain.

The physiological processes which produce the sensation of pain have a number of differing theoretical explanations, and in recent years new and challenging theories have been suggested.³ Among the earliest of modern medicine's explanations of pain was the theory that the sensation was caused by the stimulation of specialized pain receptors. According to this “specificity theory,” those receptors were stimulated by action which either destroyed or irritated tissue.⁴ Dissatis-

3. A summary of these developments may be found in Peck, *Compensation for Pain: A Reappraisal in Light of New Medical Evidence*, 72 MICH. L. REV. 1355 (1974). For a more complete summary with explanatory diagrams and models, see R. MELZACK, *THE PUZZLE OF PAIN* 125-52 (1973).

4. See R. MELZACK, *supra* note 3, at 126-39; H. MERSKEY & F. SPEAR, *PAIN: PSYCHOLOGICAL AND PSYCHIATRIC ASPECTS* 27 (1967); R. STERNBACH, *PAIN: A PSYCHOPHYSIOLOGICAL ANALYSIS* 39-40 (1968); Casey, *The Neurophysiologic Basis of Pain*, 53 POSTGRAD. MED., May 1973, at 58; Melzack & Wall, *Psychophysiology of Pain*, 8 INT'L ANESTH. CLINICS 3, 4-6 (1970). Consistent with the specific receptor theory is the fact that some nerve fibers have a particularly large diameter and are sheathed with a fatty substance known as *myelin*; other nerves have a smaller diameter and lack an insulating cover. The larger myelinated nerve fibers conduct impulses at a much faster rate than the smaller nerves. This may account for the two types of pain many persons report following an injury, the first being a bright, prick-

faction with the specificity theory, based upon its failure to explain certain observed pain experiences, led to development of a “pattern theory” of pain.⁵ According to the pattern theory, the quality of pain is determined by the spatial and temporal patterns of nerve impulses over nerve routes that serve general sensory functions and are not specific transmission routes for pain sensations. The pattern theory thus assumes the existence of a central nervous system process that evaluates the pattern of nerve impulses received from a peripheral source.

A recent and much more radical departure from the specificity theory was made in the formulation of the “gate control theory” of pain proposed by Drs. Ronald Melzack and P. D. Wall.⁶ They propose that the densely packed nerve cells in the dorsal horn of the spinal column—known as the *substantia gelatinosa*—mediate, moderate, and filter the incoming signals from peripheral nerves. The signals are received from both the large diameter myelinated⁷ nerves, which normally produce the sensations of touch and pressure, and small diameter, unmyelinated nerves which previously were identified as the specific pain receptors. The signals received from the large diameter nerves dampen and reduce the effect of the signals from the smaller nerve fibers, but as the effect of the signals from the large nerve fibers diminishes, the “gate” is opened, and the signal from the small nerve fibers is thereby enhanced. Further stimulation of the large diameter nerve fibers may again reduce or dampen the effect of the impulses from the small nerve fibers.

The exact process that controls the operation of the “gate,” or filtering mechanism, remains uncertain, but it appears that it may be regulated by some central nervous system mechanism. Melzack and Wall state the proposition as follows:

It is now firmly established that stimulation of the brain activates descending efferent fibers which can influence afferent conduction at the earliest synaptic levels of the somesthetic system. . . . There is evidence to suggest that these central influences are mediated through the

ing pain and the second a dull, aching pain. See R. STERNBACH, *supra* at 30. *But see id.* at 30–31.

5. R. MELZACK, *supra* note 3, at 139–47; see R. STERNBACH, *supra* note 4, at 40–41; Melzack & Wall, *supra* note 4, at 7–10.

6. R. MELZACK, *supra* note 3, at 153–90; Melzack & Wall, *Gate Control Theory of Pain*, in PAIN 11 (A. Soulaïrac, J. Cahn, & J. Charpentier eds. 1968); Melzack & Wall, *Pain Mechanism: A New Theory*, 150 SCIENCE 971 (1965); Melzack & Wall, *supra* note 4, at 11–12.

7. Myelin serves as an insulating cover for a nerve.

gate control system. While some central activities, such as anxiety or excitement, may open or close the gate for all inputs at any site of the body, others obviously involve selective, localized gate activity. . . . The signals, then, must be identified, evaluated in terms of prior experience, localized, and inhibited before the action system responsible for pain perception and response is activated. We propose, therefore, that there exists in the nervous system a mechanism, which we call the *central control trigger*, that activates the particular, selective brain processes that exert control over the sensory input.⁸

Thus, as Melzack and Wall postulate, the higher levels of the central nervous system may control the sensory input of pain: "[I]t is important to recognize the role of cognitive or 'higher central nervous system' activities such as anxiety, attention, and suggestion in pain processes. The model suggests that psychological factors such as past experience, attention, and emotion influence pain response and perception by acting on the gate control system."⁹ Other researchers have challenged some aspects of the proposal of Melzack and Wall, and the theory will undoubtedly undergo further development.¹⁰

The significance of these theories concerning the physiological processes of pain is the support they give to our understanding of pain as developed by psychiatrists and psychologists. The exact control process is, for purposes of the present hypothesis, unimportant as long as there is a physiological mechanism by which the cognitive or higher central nervous system utilizes anxiety, attention, or suggestion in inhibiting or emphasizing the phenomena involved in the pain process. For example, Dr. Henry Beecher made a much-noted study and comparison of the pain behavior of soldiers hospitalized for evacuation from Anzio Beachhead during World War II and civilians who had undergone planned surgery in a hospital.¹¹ One would have expected that greater pain would be experienced by men whose flesh had been torn and bones broken by flying shrapnel than by persons upon whom carefully executed incisions had been made, but the comparison pro-

8. Melzack & Wall, *supra* note 4, at 22 (emphasis in original) (footnotes omitted).

9. *Id.* at 30.

10. Nathan & Rudge, *Testing the Gate-Control Theory of Pain in Man*, 37 J. NEUROL. NEUROSURG. & PSYCHIATRY 1366 (1974); see Christensen & Perl, *Spinal Neurons Specifically Excited by Noxious or Thermal Stimuli: Marginal Zone of the Dorsal Horn*, 33 J. NEUROPHYSIOLOGY 293 (1970); Mosso & Kruger, *Spinal Trigeminal Neurons Excited by Noxious and Thermal Stimuli*, 38 BRAIN RESEARCH 206 (1972).

11. Beecher, *Relationship of Significance of Wound to Pain Experienced*, 161 J.A.M.A. 1609 (1956).

duced contrary results.¹² Beecher attributed the difference in pain response to factors other than the degree of physical destruction. The wounds of the soldiers had provided a means for escape from a situation involving great anxiety and fear of death, whereas the operations only intensified the anxieties of the civilians for their futures.

It is a widely held hypothesis that anxiety increases the intensity of pain.¹³ That elimination of anxiety will do much to reduce the amount of pain experienced is persuasively demonstrated by the way in which the confidence, understanding, and freedom from fear developed in preparation for natural childbirth permits some women to endure sensations in childbirth which others find so intolerable as to require anesthetic.¹⁴ It is true that the anxieties which elevate the sensation of pain are usually anxieties about the physical events which are to occur, and thus are distinguishable from anxieties about whether one will be compensated. It would seem possible, however, that one with a claim for compensation, upon recognizing a physiological signal of pain, would be reminded of the uncertainty of the claim and hence of his or her future, with a resulting overall enhancement of the pain sensation. On the other hand, of significance in the analysis of the data produced in the research here reported, the possibility of recovery of compensation, while not as great an eliminator of anxieties as certainty of compensation, may reduce anxieties in a manner which diminishes the pain sensation.

Perhaps of greater significance with respect to pain processes and pendency of claims for compensation are the principles of operant conditioning and cognitive dissonance. "Operant" pain is learned pain, produced by systematic and repeated environmental consequences following the manifestation of pain.¹⁵ Such pain behavior is

12. Of the soldiers at Anzio Beachhead, only 25% said that they had pain requiring treatment, such as administration of a pain killer, within seven to twelve hours after being wounded, whereas 87% of the civilians wanted treatment for their pain within an average of 2.9 hours after their operations. *Id.* at 1610.

13. See J. BONICA, *THE MANAGEMENT OF PAIN* 156-57 (1953); R. STERNBACH, *supra* note 4, at 69-70; Clark & Mehl, *Thermal Pain: A Sensory Decision Theory Analysis*, 78 *J. ABNORMAL PSYCHOLOGY* 202, 208 (1971); Melzack & Chapman, *Psychologic Aspects of Pain*, 53 *POSTGRAD. MED.*, May 1973, at 69, 70-71; Smith, *Some Medicolegal Aspects of Pain, Suffering and Mental Anguish in American Law and Culture*, in *PAIN AND SUFFERING* 186, 195-96 (B. Crue ed. 1970).

14. J. BONICA, *supra* note 13, at 156-57; G. DICK-READ, *CHILDBIRTH WITHOUT FEAR* 46-48 (2d rev. ed. 1959); R. STERNBACH, *supra* note 4, at 25.

15. Fordyce, *An Operant Conditioning Method for Managing Chronic Pain*, 53 *POSTGRAD. MED.*, May 1973, at 123, 124.

most likely to be learned where the social consequences of the manifestation of pain have been rewarding or assist in escape from an aversive situation. Thus, the manifestations of pain may provide a means of avoiding unpleasant or physically exhausting work, socially embarrassing situations, or diverse demands ranging from requests for sexual favors to the attentions of a boring conversationalist. Pain behavior may produce the reward of attention from family and neighbors for one who is lonely, or the excitement of visiting learned doctors and possibly lawyers. The pain that has thus been learned may be repeated and rewarded even though its pathologic or organic stimulus lessens or disappears. Thus it might be expected that the attention and excitement of claims-processing procedures would reinforce pain behavior, particularly if the claimant's lawyer gave nonverbal or even verbal signs of approval and interest in the amount of pain suffered.

According to the principle of cognitive dissonance, persons tend to maintain consistent views, or cognitions, about themselves and their relationship to the world around them.¹⁶ The presence of dissonance—inconsistency—gives rise to pressures to restore cognitive equilibrium. A person whose view of himself conflicts with the view he wishes to present to others will experience cognitive dissonance. The desire to present an image of one in pain, which may arise for many reasons, may thus prompt a person subconsciously to nurture weak impulses from peripheral nerves into disabling or intolerable pain.¹⁷ The reinforcing value of contemplated compensation and the responses of others may serve to authenticate the presence of pain. It therefore seems possible that a person who has been informed that he may recover a substantial sum of money for serious pain and suffering may subconsciously undertake to display and endure such pain for the purpose of increasing the amount of compensation to be received.

II. THE STRUCTURE OF THE RESEARCH PERFORMED

A. *Workmen's Compensation in Washington*

The workmen's compensation laws of the State of Washington are

16. See L. FESTINGER, *A THEORY OF COGNITIVE DISSONANCE* (1957).

17. Cf. R. STERNBACH, *supra* note 4, at 64-66 (an individual's commitment to behavior which conflicts with a value of pain avoidance can reduce the amount of pain experienced).

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administered by the Industrial Insurance Division of the Department of Labor and Industries.¹⁸ The laws cover all employments within the legislative jurisdiction of the state,¹⁹ with a few exceptions such as those for domestic servants and children under eighteen employed by their parents.²⁰ Although provision is made for certain qualifying employers to act as self-insurers,²¹ most of the claims for workmen's compensation are paid out of a state-administered fund.²² In addition to payment of death benefits,²³ compensation is provided for permanent and temporary disabilities.²⁴ Schedules have been established for the various degrees of disability, with payments for less serious partial disabilities made in lump sums and the larger partial and total disability payments made in monthly installments.²⁵ Upon application and in the discretion of the department, however, such monthly payments may be converted into a lump-sum payment.²⁶

If a worker suffers a temporary total disability following injury, the same schedule used for permanent total disability is followed so long as the disability continues.²⁷ As soon as recovery is so complete that the present earning power of the worker, at any kind of work, is restored to that existing at the time of injury, the payments cease, but if the earning power of a worker is only partially restored, payments are made in the proportion which the new earning power bears to the old.²⁸

An injured worker is entitled to receive "proper and necessary medical and surgical services at the hands of a physician of his own choice" as well as "necessary hospital care and services" during the period of his disability following injury, subject to termination when a

18. See generally WASH. REV. CODE tit. 51 (1976).

19. *Id.* § 51.12.010.

20. *Id.* § 51.12.020.

21. WASH. REV. CODE ch. 51.14 (1976).

22. WASH. REV. CODE chs. 51.16 & 51.44 (1976).

23. WASH. REV. CODE § 51.32.050 (1976).

24. *Id.* §§ 51.32.055-.095.

25. See *id.* §§ 51.32.060 (permanent total disability), .080 (permanent partial disability), .090 (temporary total disability). Neither payments for permanent total disabilities nor those for permanent partial disabilities are made until the condition of the worker has become fixed. *Id.* § 51.32.055(1).

26. *Id.* §§ 51.32.080(4), .130. The lump-sum payment for death or permanent total disability may not exceed \$8,500. *Id.* § 51.32.130.

27. *Id.* § 51.32.090(1).

28. *Id.* § 51.32.090(3). In practice the payments are made in the proportion that the difference between the new and the old earning power bears to the old earning power.

determination of permanent, partial, or total disability is made.²⁹ In cases of both partial and total permanent disability, the supervisor of industrial insurance may continue the necessary medical and surgical treatments if they are deemed necessary to a more complete recovery or protection of the worker's life.³⁰ All mechanical appliances necessary in the treatment of an injured worker, such as braces, belts, casts, and crutches, are provided without regard to the date of injury or date treatment was completed.³¹ Physicians attending injured workers are required to make reports to the department upon the condition and treatment of injured workers, and all medical information concerning a particular injury is to be available to the department.³²

The Washington statute abolished the common law cause of action a worker once had against his employer for accidental injuries,³³ as have most other workmen's compensation statutes. If a worker's injuries were caused by a person not employed by his employer, however, the Washington law does permit the injured worker to maintain an action against that third party.³⁴ In such cases the worker receives benefits under the act as though he had not made an election to pursue his third-party remedy, but the department is subrogated to the worker's rights to the extent of such payments. The department also has a lien on any recovery realized by the worker from a third party for the amount of benefits paid.³⁵

Because the regulations issued by the department require itemization of the charges for each and every service, medication, or thera-

29. WASH. REV. CODE § 51.36.010 (1976).

30. *Id.*

31. *Id.* § 51.36.020.

32. *Id.* § 51.36.060.

33. WASH. REV. CODE § 51.04.010 (1976). *But see* WASH. REV. CODE § 51.24.020 (1976), which permits suit against an employer for injury or death resulting from the deliberate intention of the employer.

34. Industrial Insurance Act of 1961, ch. 23, § 51.24.010, 1961 Wash. Laws 1294 (codified at WASH. REV. CODE § 51.24.010 (1976)) (repealed by Act of May 26, 1977, ch. 85, § 10, 1977 Wash. Laws 327). The text sets out the statutory scheme in force during the period of the study; certain changes have since been enacted. In particular, ch. 51.24 has been modified to encourage workers to prosecute third-party claims. *See* Act of May 26, 1977, ch. 85, 1977 Wash. Laws 327.

35. WASH. REV. CODE § 51.24.010 (1976) (repealed 1977). In practice, the department reviews claims filed with it to determine whether there is a possibility of a third-party claim, and, if it is determined that there may be such a claim, the worker is informed of that fact. The worker is then requested to complete and return to the department a form by which he may elect to seek recovery against the third person and acknowledge the lien of the department on the proceeds of the suit or, as an alternative, he may assign and transfer the claim to the department, taking only the benefits established under the workmen's compensation law.

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peutic device prescribed by every treating or consulting physician,³⁶ the files developed by the department in the processing of claims contain an enormous amount of detail concerning the medical treatment received by an injured workman. It is thus possible to determine how many times and at what intervals an injured worker visited his treating physician, the number of specialists consulted, the number and length of hospitalizations and the reasons therefore, the therapy treatments ordered, the amount and type of drugs purchased on prescriptions, and the various appliances utilized in the treatment of the injury. Given this wealth of information concerning the course of treatment followed, it seemed that claimants' behavior indicative of pain could be measured with an objectivity and certainty which could not be expected in a project utilizing subjective evaluations of pain. Of course, such research could be and was performed in a manner which preserved complete confidentiality of the workers whose claims were analyzed.³⁷

B. The Comparison Sets

If the pendency of a claim for compensation causes pain, and hence behavior indicative of pain, one of the most likely groups to manifest that behavior would seem to be that group composed of claimants who elected to assert third-party claims against persons other than their employer for the injuries suffered. Those persons have at stake the possibility of recovering economic losses pursuant to rules of damage which produce awards substantially in excess of the benefits available under the workmen's compensation laws. The statutory awards for permanent partial disability result in uniform awards which do not reflect the actual earnings received by a worker prior to injury.³⁸ Consequently, while workmen's compensation awards are generally low, for particular workers they may be considerably less than the actual economic loss. In addition, the worker may recover

36. WASH. ADMIN. CODE § 296-20-125 (1975).

37. The files analyzed were not removed from the offices of the Department of Labor and Industries, nor were any photo or other copies made of papers or documents in the files. Information contained in the files was recorded on forms upon which names were not recorded; only the file number was used for the purpose of identification. No record was made by the investigators of the correlation of file numbers and names, nor were names recorded on any other paper taken from the departmental office. Investigators were specifically instructed never to reveal to any person outside the department the name of a person whose file was analyzed.

38. See WASH. REV. CODE §§ 51.32.060, .080, .090 (1976).

damages for pain and suffering in the third-party tort action,³⁹ whereas the Washington workmen's compensation statute makes no provision for such a recovery. Moreover, workers who have filed third-party actions are represented by lawyers whose presence by itself, as mentioned above, might be thought to be an aggravating factor.⁴⁰ Accordingly, it was decided that a group of claimants with third-party claims should be compared with a group of claimants who had no third-party claims to determine whether there were observable differences in their behavior. These groups formed the first comparison set.

The suspicion that lawyers cause patients to have pain was to be tested separately by comparing a group of claimants who were represented by lawyers in presenting their claims to the department with a group of claimants who lacked representation by a lawyer. These groups formed the second comparison set.

Successful comparison of the groups in the two proposed sets required the selection of certain verifiable aspects of claimant behavior which will be compared. The behavioral manifestations which were chosen as indicators of the amount of pain experienced include the number of contacts between physician and patient, the number of different physicians consulted, the number of specialists consulted, the number of prescriptions for drugs given, the types of drugs prescribed, the number of visits to therapists, the number and value of supportive devices prescribed and purchased, the number of diagnostic procedures used, the number of hospital admissions, the total length of stays in hospitals, the number of admissions to hospitals for diagnostic purposes, the number of admissions to hospitals for corrective or therapeutic purposes, as well as the number of days lost from work.

Data concerning the use of prescribed analgesic drugs are presumably the best indicators of pain and pain behavior. There are, however, many types of analgesic drugs of varying strength, and reduction

39. The claim for pain and suffering damages is apparently subject to the lien of the state. See 2A A. LARSON, *THE LAW OF WORKMEN'S COMPENSATION* § 74.35 (1976). But that lien would be of significance only in the unlikely event the third-party claim did not produce a recovery for medical expenses and economic loss equal to the workmen's compensation benefits. The third-party claim may also produce compensation for disfigurement. See *Hand v. Greyhound Corp.*, 49 Wn. 2d 171, 181, 299 P.2d 554, 559 (1956) (Rosellini, J., dissenting).

40. Although some workers might choose to file a third-party claim without retaining a lawyer to represent them, all of those involved in the present study who filed third-party claims, as well as some who did not, obtained legal representation. See note 63 and accompanying text *supra*.

to common units for measurement is necessary if comparisons are to be made. Accordingly, narcotic and barbiturate equivalency tables were prepared for the various types of drugs, and the various drugs prescribed were reduced to narcotic and barbiturate units,⁴¹ making possible comparisons of drug use between individuals for whom drugs of various brand names and size had been prescribed.⁴²

1. *The third-party tort claim set*

A random selection was made of 105 recently closed cases involving third-party tort claims from the files of the department. The data concerning medical treatment of the claimants were recorded for analysis and comparison with a control group of claimants who did not have third-party claims pending. The control group, composed of 103 cases, was also selected from recently closed cases in the department files.⁴³

To assure the validity of the comparison it was necessary to be certain that the severity of injuries in the two groups was similar. If one group experienced more severe injuries, that group would be expected to engage in more pain behavior due to the injuries, thus masking any effect of lawyers or litigation on pain behavior. The control group was therefore chosen to ensure a close match between the groups on the basis of the percentage of permanent partial disability as determined by the department.⁴⁴

Since data were gathered during the time each claimant's file was open, a close match between groups in the length of that time was also desirable. If files of the claimants in one group were open longer than those of the other group, more pain behavior might be recorded in the former group because of the increased time elapsed. This too might mask the effect, if any, of lawyers and litigation on pain behavior.

41. For a summary of the information utilized to prepare the equivalency tables, see Halpern, *Treating Pain with Drugs*, 57 MINN. MED. 176 (1974).

42. Of course, such comparisons are made on the basis of an assumption that the worker for whom the drugs were prescribed in fact took the drugs as prescribed, whereas it is possible that he or she in fact did not take the drugs but instead gave them to a spouse, sold them, or simply left them unused. There is, however, no reason to expect that there would be a difference in the overall behavior of the groups being tested.

43. Only 103 control files were finally usable, although an effort was made to obtain as many control files as used in the test group.

44. See Figure 1, at p. 262 *infra*.

FIGURE 1

THIRD-PARTY TORT CLAIM COMPARISON SET
PERCENTAGE OF PERMANENT PARTIAL DISABILITY AWARDED

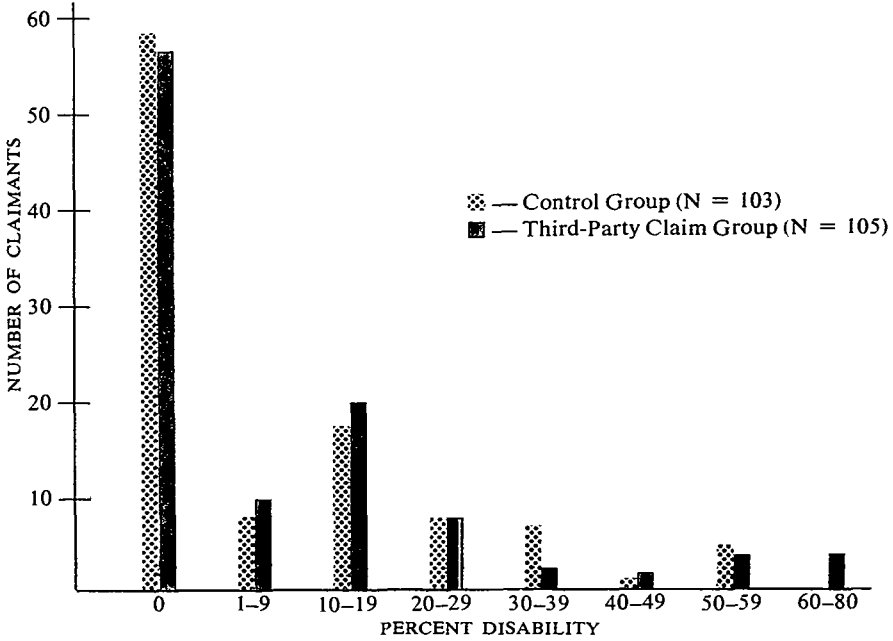


FIGURE 2

THIRD-PARTY TORT CLAIM COMPARISON SET
TIME CLAIMANTS' FILES WERE OPEN

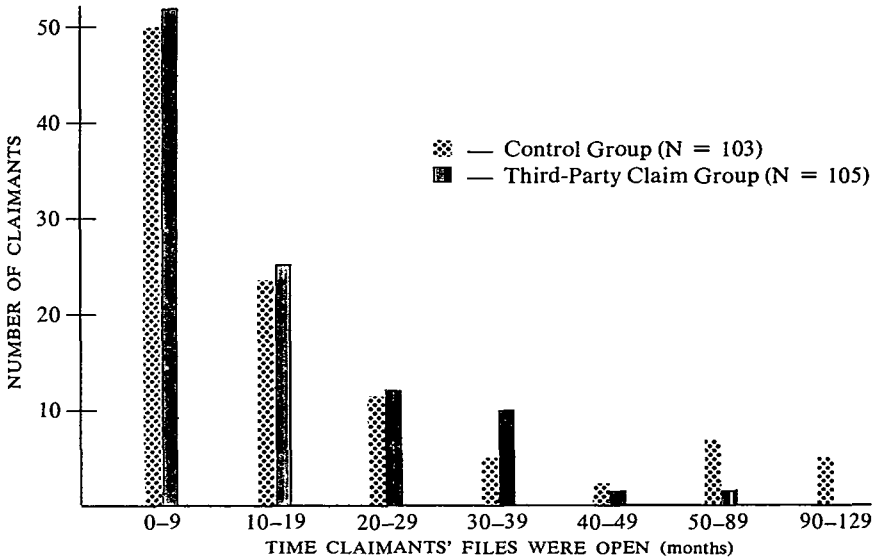
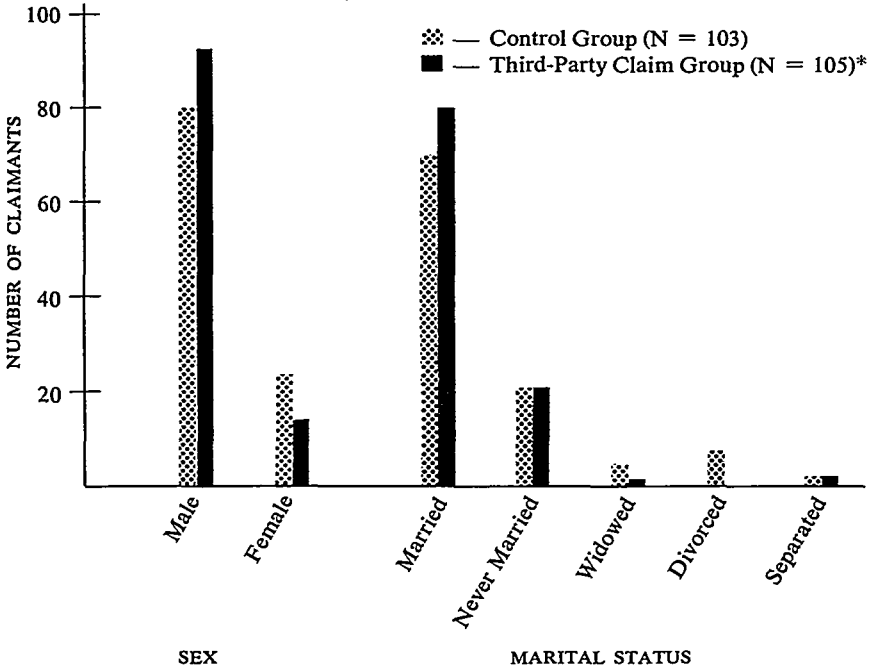


FIGURE 3

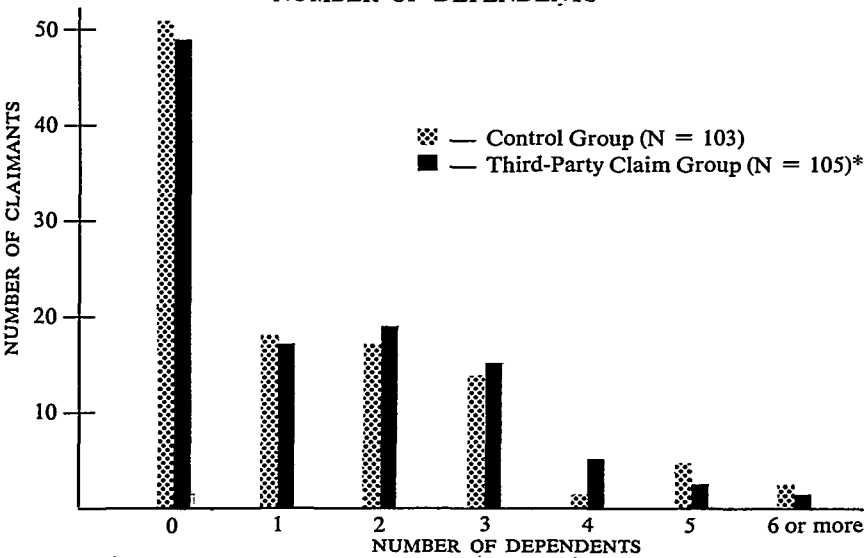
THIRD-PARTY TORT CLAIM COMPARISON SET
SEX/MARITAL STATUS



*Data unavailable for 1 claimant.

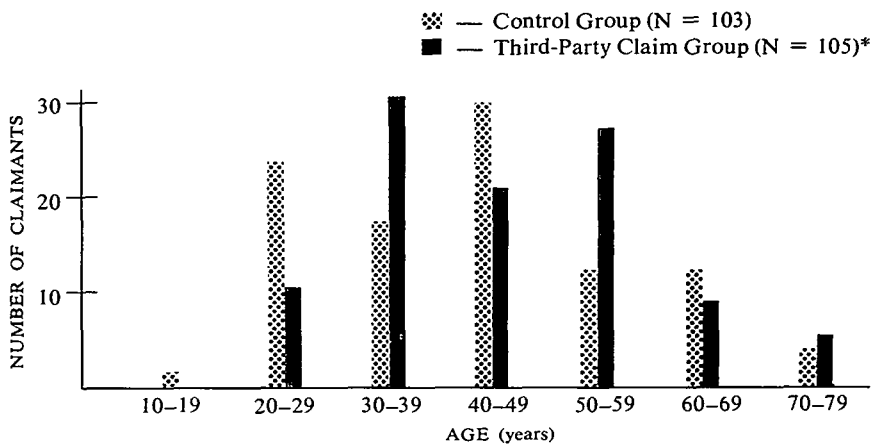
FIGURE 4

THIRD-PARTY TORT CLAIM COMPARISON SET
NUMBER OF DEPENDENTS



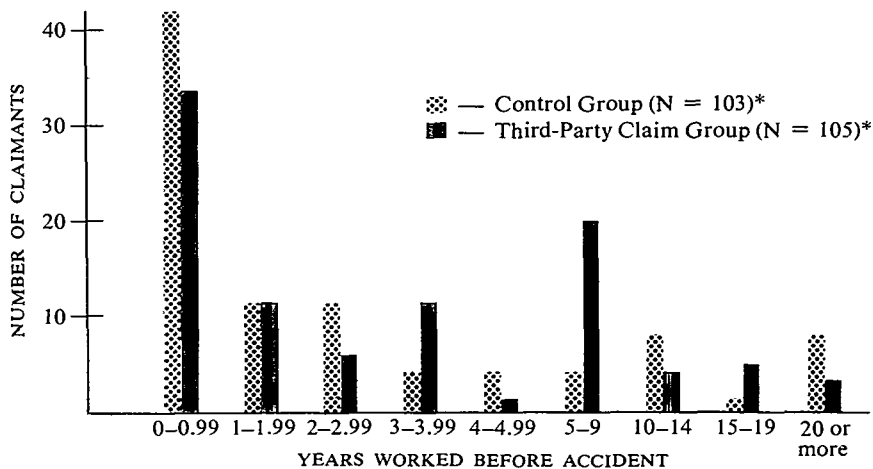
*Data unavailable for 1 claimant.

FIGURE 5
 THIRD-PARTY TORT CLAIM COMPARISON SET
 AGE DISTRIBUTION



*Data unavailable for 1 claimant.

FIGURE 6
 THIRD-PARTY TORT CLAIM COMPARISON SET
 YEARS WORKED BEFORE ACCIDENT



*Data unavailable for 7 claimants.

FIGURE 7

THIRD-PARTY TORT CLAIM COMPARISON SET
NUMBER OF PREVIOUS CLAIMS

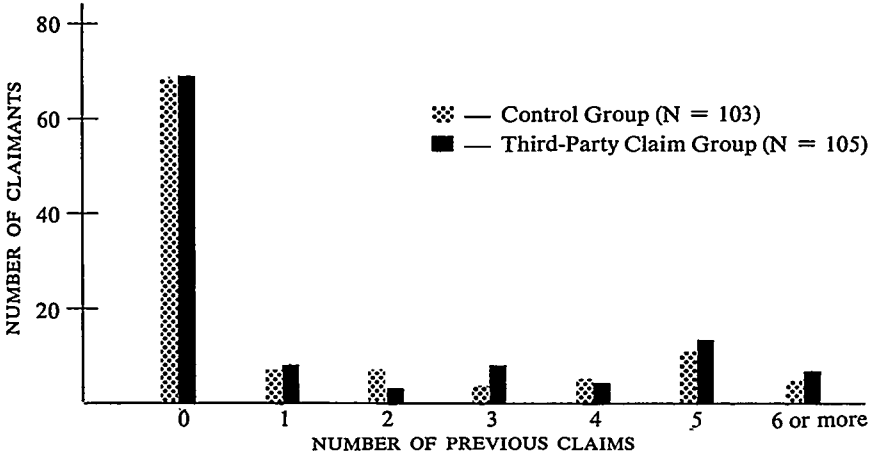
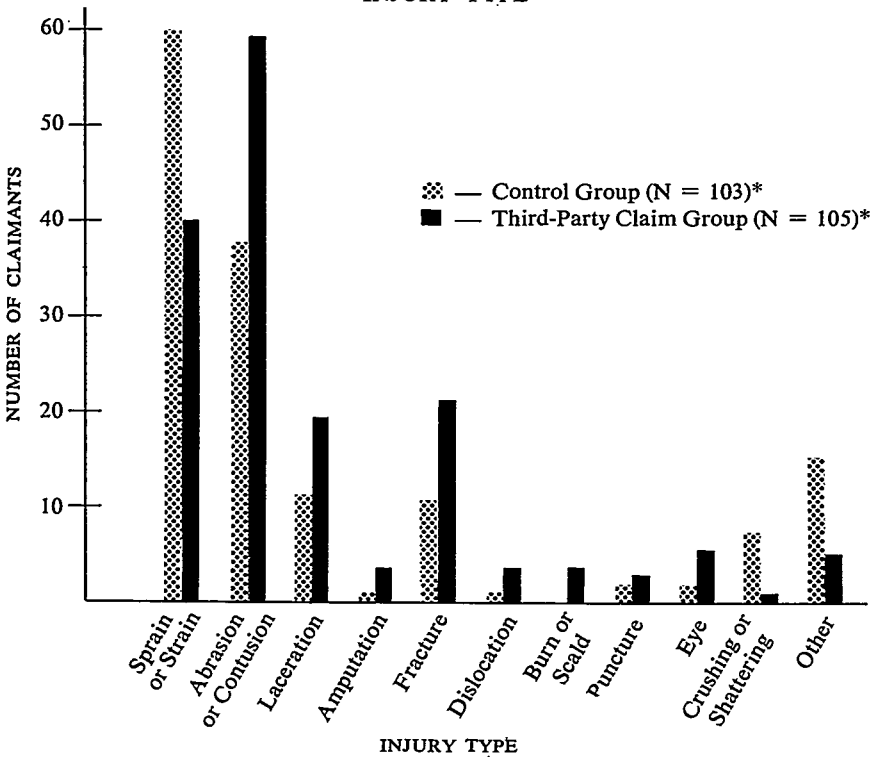


FIGURE 8

THIRD-PARTY TORT CLAIM COMPARISON SET
INJURY TYPE



*Some claimants received more than one type of injury.

Although there was a difference between the two groups in that four claimants in the control group had files open for from 100 to 130 months, whereas only one claimant in the third-party claim group was followed more than seventy months,⁴⁵ an examination of the data revealed that this factor had little or no adverse effect upon the findings.

The third-party claim cases being tested and the control group were closely matched with respect to sex, marital status, and number of dependents.⁴⁶ A difference did exist with respect to the ages of the persons in the two groups, the control group having a greater proportion of persons between the ages of twenty and twenty-nine than the test group and the test group having a greater proportion of persons between the ages of fifty and fifty-nine than the control group.⁴⁷ With respect to the number of years worked before the accident involved, the two groups were not identical, but the difference was not statistically significant.⁴⁸ Nor was there a significant difference regarding the number of claims previously filed.⁴⁹ Comparison of the types of injuries, however, revealed significant differences, with the test group having fewer cases of strain or sprain and more cases involving bruises, contusions, and abrasions.⁵⁰ On the whole, for the purpose of testing the hypothesis, the two groups appeared to be remarkably similar with respect to demographic and related matters.

Given the strength of the popular belief that lawyers and litigation aggravate pain, it is quite surprising that for almost all of the types of behavior selected to test the hypothesis there was no significantly greater occurrence of pain behavior in the group of persons having third-party claims than in the group having only claims for workmen's compensation. Thus, as in Table 1, with respect to days lost from

45. See Figure 2, at p. 262 *supra*.

46. See Figures 3 & 4, at p. 263 *supra*. Twenty-one of the test group and the same number of the control group had never been married. Eighty of the test group were married and 71 of the control group were married. The few remaining claimants in the two groups were widowed, separated, or divorced, with a close match in distribution except that all six persons who were divorced were in the control group. Fifty-one of the control group had no dependents, whereas 49 of the test group had no dependents. There was an almost equal distribution by number of dependents for those persons who had dependents.

47. See Figure 5, at p. 264 *supra*.

48. See Figure 6, at p. 264 *supra*. The conventional statistical standard, that there is no greater than one chance in twenty that differences occurred by chance, was used as the primary tool to evaluate data obtained in this study. See G. SNEDECOR & W. COCHRAN, *STATISTICAL METHODS* 27, 104 (6th ed. 1967).

49. See Figure 7, at p. 265 *supra*.

50. See Figure 8, at p. 265 *supra*.

TABLE 1
PAIN BEHAVIOR IN THE THIRD-PARTY
TORT CLAIM COMPARISON SET

Behavior	Control Group (N=103)		Third-Party Claim Group (N=105)		Statistically Significant Difference Between Groups? ^a
	Mean	Standard Deviation	Mean	Standard Deviation	
Days lost from work	87.06 ^b	131.80	86.54 ^c	135.54	No
Number of patient-physician contacts	12.71	16.12	12.79	14.03	No
Number of specialists consulted	1.25	1.91	0.71	0.84	No
Number of different physicians consulted	3.18	2.91	2.47	1.61	Yes (p=.03)
Number of visits to therapists	9.84	24.08	13.99	30.48	No
Number of supportive devices under \$200	0.17	0.47	0.30	0.92	No
Number of supportive devices over \$200	0.02	0.14	0.14	0.42	Yes (p<.01)
Number of diagnostic procedures used	3.76	3.59	4.13	3.82	No
Number of diagnostic procedures in hospital	2.10	2.89	1.76	3.16	No
Number of hospital admissions	0.76	1.00	0.74	0.90	No
Number of hospital admissions for corrective purposes	0.38	1.01	0.68	0.88	No
Number of hospital admissions for therapeutic purposes	0.46	0.84	0.04	0.19	No
Length of stay in hospital (days)	4.76	7.57	3.80	8.40	No
Number of admissions to rehabilitative centers	0.52	2.80	0.03	0.17	No
Length of stay in rehabilitative centers (days)	3.18	14.79	0.38	2.48	No

a. Two-tailed t-test at 5 percent level ($p = .05$). G. SNEDECOR & W. COCHRAN, STATISTICAL METHODS 104 (6th ed. 1967).

b. Median = 29.63.

c. Median = 36.25.

work, for persons with third-party claims the mean was 86.54 days per claimant and the median 36.25, whereas for those with only

workmen's compensation claims the mean was 87.06 days and the median 29.63 days. The same absence of a significant difference existed with respect to matters such as the total number of patient-physician contacts, the number of specialists consulted, the number of visits to therapists, the number of diagnostic procedures used, the number of supportive devices costing more than \$25 but less than \$200, the number of hospital admissions, the total length of stay in hospitals, the number of diagnostic procedures used in hospitals, the number of admissions to hospitals for corrective purposes or for therapeutic purposes, and the number of admissions and length of stay in the state rehabilitation center.

Only three of the variables showed statistically significant differences between the groups. Two of these support the hypothesis; one contradicts it. The two items regarding which persons having third-party claims engaged in behavior indicative of pain at a statistically significantly higher rate than the control group were the use of prescribed pain-relieving drugs and the use of supportive devices costing more than \$200. Thus, only twenty-six of the persons with third-party claims had no prescriptions for pain-relieving drugs, whereas thirty-five of the control group had no prescriptions for pain-relieving drugs.⁵¹ That difference is barely great enough to be significant.⁵² Ten persons with third-party claims had supportive devices costing \$200 or more, whereas only one person in the control group had such an expensive device. This difference, while statistically significant, involved so few of the persons with third-party claims that it may not be indicative of the behavior of the entire group. In addition, the difference may be explained by an element of showmanship on the part of lawyers representing third-party claimants. Contrary to the hypothesis, a statistically significantly higher proportion of the control group saw more different doctors than did the persons with third-party claims.⁵³

An attempt was made to refine the analysis of the drug use data by comparing the amount of drugs used by persons with third-party

51. Thirty-nine persons with third-party claims had multiple prescriptions for pain-relieving drugs, whereas only 33 of the control group had multiple prescriptions; 41 of the persons with third-party claims had single prescriptions for pain-relieving drugs, whereas only 35 persons in the control group had single prescriptions.

52. The results showed that $p < .05$. A similar test conducted after eliminating claimants whose files were open more than 70 months revealed no significant difference between the groups ($p = .49$).

53. See Table 1, at p. 267 *supra*.

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claims with the amount used by the control group. As mentioned above, the various types of drugs used were reduced to common units, making comparisons possible. In Table 2, a comparison was made of the mean number of narcotic units used by members of the two groups during each of the first six months following injury.⁵⁴ The mean was higher for the control group of persons having only workmen's compensation claims for all but the second and sixth months; however, in no month was the difference statistically significant. The narcotic usage data were also analyzed by means of the Mann-Whitney test, a statistical procedure which makes possible a more robust comparison⁵⁵ than that which is obtained by computation of means.⁵⁶ The Mann-Whitney test suggested that there was a statistically significant difference between the two groups only for the first month following injury, consisting of greater narcotic usage by the control group. The results of this test thus weigh against the hypothesis. For both groups narcotic usage had dropped off sharply by the sixth month,⁵⁷ even though the hypothesis

TABLE 2
DRUG USAGE BY MONTH AFTER INJURY
IN THE THIRD-PARTY TORT CLAIM COMPARISON SET

Month	Mean Narcotic Usage in Standard Units ^a			Mean Barbiturate Usage in Standard Units ^a		
	Control Group (N=103)	Third-Party Claim Group (N=105)	More Usage in Third-Party Claim Group? ^b	Control Group (N=103)	Third-Party Claim Group (N=105)	More Usage in Third-Party Claim Group? ^b
1	4.85	3.38	No	16.93	10.94	No
2	1.01	1.80	Yes	5.89	5.81	No
3	2.10	0.61	No	6.97	1.05	No
4	1.03	0.60	No	3.03	1.35	No
5	1.48	0.22	No	7.79	1.14	No
6	0.17	0.21	Yes	1.71	0.57	No

a. See notes 41 & 42 and accompanying text *supra*.

b. Does not indicate whether difference is statistically significant.

54. This analysis was intended to eliminate any effect due to the difference between the groups in the number of months the files were open.

55. P. ARMITAGE, *STATISTICAL METHODS IN MEDICAL RESEARCH* 394 (1971).

56. *Id.* at 398. The Mann-Whitney test reduces the effect given extreme numbers in order to arrive at what is believed to be a more accurate comparison. See *id.* at 397-98.

57. See Table 2 *supra*.

would suggest that by that time, attorney approval of pain behavior would have significantly increased the use of narcotic drugs by persons with third-party claims. Analysis of the data on barbiturate usage also weighs against the hypothesis. In every month, the control group used more barbiturates than the group with third-party claims.⁵⁸

Another item of behavior deserving close attention for testing the hypothesis is the number of days lost from work. One might expect, if the hypothesis were correct, that the presence of an attorney and the availability of a third-party claim would induce greater absence from work. As mentioned above, however, the mean of the total number of days lost from work for persons with third-party claims was 86.54, whereas the mean for persons with only workmen's compensation was 87.06.⁵⁹ The difference is not statistically significant, but the comparison does weigh against the hypothesis. As a further refinement an analysis was made of the number of days lost from work by month during the first six months following injury, using both the means test and the Mann-Whitney test. The two analyses used produced somewhat divergent results. The conventional means test⁶⁰ showed significantly more days lost from work in the third-party claim group only in the first month. The Mann-Whitney test⁶¹ showed significantly

TABLE 3

DAYS LOST FROM WORK BY MONTH AFTER INJURY
IN THE THIRD-PARTY TORT CLAIM COMPARISON SET

Month	Control Group Mean (N=103)	Third-Party Claim Group Mean (N=105)	More Days Lost in Third-Party Claim Group? ^a
1	8.16	10.93	Yes
2	9.17	11.03	Yes
3	8.17	8.52	Yes
4	7.39	6.65	No
5	5.86	5.89	Yes
6	4.90	4.89	No

a. Does not indicate whether difference is statistically significant.

58. *Id.*

59. See Table 1, at p. 267 *supra*.

60. See G. SNEDECOR & W. COCHRAN, *supra* note 48.

61. See notes 55 & 56 and accompanying text *supra*.

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more days lost from work in the third-party claim group during all six months. As shown in Table 3, the means test also produced a smaller number of days lost for the test group during the fourth month, and an equal number of days lost during the fifth and sixth months.

It might be thought that an analysis performed after eliminating claimants who were found by the department to have no permanent disability would provide a more sensitive test of the hypothesis. Several such analyses were performed but the results provided no support for the hypothesis.⁶²

2. *The lawyer and no lawyer representation set*

In the first comparison set, those persons who had third-party claims were represented by lawyers, whereas only a few of those in the control group of that set had legal representation. Thus, in addition to testing the effect upon pain behavior of the existence of a third-party claim, that set tested whether the presence of a lawyer had the effect of inducing pain behavior in a client. As was noted, no significant difference in pain behavior could be detected between the two groups. This was so even though the persons with third-party claims had the possibility of a specific recovery for pain and suffering as well as greater compensation for comparable injuries to their earning capacity than under workmen's compensation alone. It would, therefore, be most surprising if a set composed of persons making only claims for workmen's compensation disclosed differences in pain behavior because of the presence or absence of legal representation. Although the hypothesis for the test of the lawyer and no lawyer representation set was that representation by lawyers did increase pain behavior, analysis of the statistics for the set does not support that hypothesis.

The group of persons who were represented by a lawyer in the processing of their claims for workmen's compensation was established by drawing ninety-nine cases in which there had been such representation from recently settled cases in the Department of Labor and Industries. In all these cases the department found that the claimant had suffered some level of permanent partial disability. The control group for this set was created by eliminating from the control group

62. Both the numbers and types of specialists consulted and the number of pain-relieving drug prescriptions given were analyzed. No significant differences were discovered.

for the third-party claim set those cases in which there had been either legal representation or a finding of no permanent partial disability. After these adjustments, the control group consisted of thirty-six cases.⁶³ Although it might have been preferable to have test and control groups of more nearly the same size, analysis of the distribution of findings of permanent partial disability in the two groups disclosed no statistically significant difference between them in that important respect.⁶⁴

The mean of the ages of the control group was a little less than forty-five and one-half years, whereas the mean of the ages of the test group was a little over forty-six and one-half years. Seventy-five percent of the control group were males, whereas eighty-three percent of the test group were males. An affinity for litigation might be reflected in the number of claims previously filed,⁶⁵ but the differences were not sufficient to meet the conventional standard for statistical significance. A significantly greater proportion of lawyer-represented claimants had reopened their claims than had claimants without such representation.⁶⁶ The difference probably arose because a claimant is more likely to consult a lawyer *after* receiving what was an unacceptable initial determination from the department than before any determination is made. Consistent with this view concerning reopenings is the fact that the mean of the time elapsed since injury was only four years for the control group and a little over five and one-half years for the test group. There was no significant difference in the location of injuries in the two groups, with the exception that the test group had more than twice the percentage of claimants with injuries to the lumbar-

63. Files from 101 cases were drawn from recently settled cases in which the claimant was represented by a lawyer; inadequacies of recording data ultimately reduced this test group to 99 files. Although the claimant was represented by a lawyer in only a few cases in the third-party claim set control group, a substantial number of files had to be eliminated in order to guard against bias which might stem from the less serious injuries of claimants for which no finding of permanent partial disability was made.

64. The mean of permanent partial disability for the control group was 21.03% and the mean of permanent partial disability for the test group was 26.92%, indicating a slightly greater severity of injury with the test group. Standard deviation for the control group was 17.578% and standard error was 2.930%, whereas standard deviation for the test group was 21.789% and standard error was 2.190%. A chi square test of the distribution of permanent partial disability ratings indicates no significant difference between the groups.

65. The mean for the number of claims previously filed for members of the control group was 2.36, whereas the same mean for the test group was 3.35.

66. Lawyer-represented claimants reopened 86% of their cases, whereas claimants without lawyer representation reopened only 14% of their cases.

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lumbo-sacral area of the spine. There were no significant differences in the types of injuries (*e.g.*, fracture, dislocation, or laceration).

Consistent with the results from the third-party claim set, the lawyer and no lawyer set failed to produce substantial support for the hypothesis, as illustrated in Table 4. There was a statistically significant difference with respect to the number of specialists consulted, with the test group utilizing more specialists than the control group. This could be interpreted as an indication of the claimants' pain, but it more likely reflects the desire of lawyers to build a stronger case by obtaining the opinions of experts. The specialists utilized to a greater extent by persons in the test group were orthopedists, neurologists, psychiatrists, and physical therapists.⁶⁷ The test group used physical therapists at a rate three times that of the control group,⁶⁸ which sug-

TABLE 4
PAIN BEHAVIOR IN THE LAWYER/NO LAWYER
COMPARISON SET

Behavior	Control (No Lawyer) Group (N=36)		Test (Lawyer) Group (N=99)		Statistically Significant Difference Between Groups? ^a
	Mean	Standard Deviation	Mean	Standard Deviation	
Days lost from work	173.00	159.53	226.00	281.08	No
Number of patient-physician contacts (12 month period)	10.39	8.61	12.91	14.09	No
Number of specialists consulted	1.84	1.86	3.24	2.00	Yes ($p < .001$)
Number of supportive devices used (12 month period)	0.69	0.98	0.41	0.65	No
Number of hospital admissions	0.94	0.75	0.91	0.97	No
Length of stay in hospital (days)	5.80	6.59	6.52	10.83	No

a. Two-tailed t-test at 5 percent level ($p = .05$). G. SNEDECOR & W. COCHRAN, *STATISTICAL METHODS* 104 (6th ed. 1967).

67. Usage was as follows: orthopedists 60% of the control group, 73% of the test group; neurologists 26% of the control group, 44% of the test group; psychiatrists 11% of the control group, 23% of the test group; and physical therapists 14% of the control group, 43.5% of the test group.

68. See note 67 *supra*. The greater usage of physical therapists is not the result

gests either the fallacy of the belief that lawyers resist attempts to cure their clients or that they are willing to "risk" such a cure for the purposes of building a stronger case.

The fact that there was no statistically significant difference in the total number of physician contacts between the two groups over a twelve-month period⁶⁹ further supports the view that lawyer-represented claimants utilized specialists primarily to build a case. During the same period the control group made greater use of supportive devices. It also had a higher rate for total admission to hospitals, although the differences were not significant. The mean number of days for stays in hospitals was greater for the test group than for the control group, but that difference likewise was not statistically significant.⁷⁰

The miscellany of other data concerning the two groups likewise produced no statistically significant differences. Because of its sensitivity as a measure of pain and its importance in types of pain behavior, the data concerning drug usage deserve comment. There was no statistically significant difference in the percentages of the two groups having multiple, single, or no prescriptions for drugs, but the percentage of the test group having multiple prescriptions for drugs was lower than the percentage of the control group, and the percentage of the test group having no prescriptions for drugs was higher than that percentage of the control group.⁷¹ Analysis of the mean use of drugs in narcotic and barbiturate units over a period of sixteen months likewise disclosed nothing of statistical significance, as shown in Table 5. It should be reported, however, that the control group had a higher mean for the use of narcotic drugs in nine of sixteen months and a higher mean for the use of barbiturates in eleven of the sixteen months. It should also be noted that in only one of the last six months of the sixteen-month period dating from injury did the test group use more narcotic or more barbiturate drugs than the control group. Consider-

of departmental policy. According to Dr. Dean Johnson, medical consultant for the Department of Labor and Industries, State of Washington, physical therapy is not a favored treatment but has a limited value in the first three weeks following injury. If improvement has not occurred within that time the department is disinclined to continue treatment.

69. See Table 4, at p. 273 *supra*.

70. *Id.*

71. Persons having multiple prescriptions for drugs were 61.1% of the control group and 59.6% of the test group. Persons having no prescriptions for drugs were only 11.1% of the control group and 18.2% of the test group.

TABLE 5
 DRUG USAGE BY MONTH AFTER INJURY
 IN THE LAWYER/NO LAWYER
 COMPARISON SET

Month	Mean Narcotic Usage in Standard Units ^a			Mean Barbiturate Usage in Standard Units ^a		
	Control (No Lawyer) Group (N=36)	Test (Lawyer) Group (N=99)	More Usage in Test Group? ^b	Control (No Lawyer) Group (N=36)	Test (Lawyer) Group (N=99)	More Usage in Test Group? ^b
1	8.55	4.01	No	28.33	17.49	No
2	1.25	2.93	Yes	5.47	7.24	Yes
3	5.42	2.22	No	17.72	6.89	No
4	2.61	1.51	No	6.61	14.42	Yes
5	3.92	2.03	No	21.94	7.27	No
6	0.00	3.01	Yes	3.33	9.13	Yes
7	0.75	3.44	Yes	4.00	8.61	Yes
8	0.56	2.67	Yes	15.78	5.36	No
9	1.00	1.42	Yes	4.06	2.47	No
10	0.28	1.18	Yes	15.39	3.08	No
11	2.94	1.67	No	3.81	2.22	No
12	1.94	0.87	No	11.39	1.15	No
13	0.44	0.21	No	2.22	0.67	No
14	0.00	0.77	Yes	0.00	2.26	Yes
15	1.42	0.28	No	2.50	2.42	No
16	1.39	0.09	No	9.33	0.30	No

a. See notes 41 & 42 and accompanying text *supra*.

b. Does not indicate whether difference is statistically significant.

ing that lawyer involvement during this period is much more likely than during the first ten months, the data suggest that, while perhaps not analgesic, lawyers have not had the great adverse effect upon their clients' pain behavior that has sometimes been attributed to them. On the other hand, the mean for the total number of days lost from work was larger for the test group than it was for the control group, although again this statistic is not significant by conventional standards.⁷²

III. SUMMARY AND CONCLUSIONS

The data produced by this study do not support the hypothesis

72. See Table 4, at p. 273 *supra*.

upon which the project was based. The possibility in the third-party tort claim set of obtaining an enlarged recovery for economic losses awarded for pain and suffering did not produce additional pain behavior on the part of persons having such claims. Consultation with and representation by lawyers did not appear to cause additional pain behavior. If behavior is influenced by consequences—and this is at least in general incontestable—how does it happen that monetary payoffs and exposure to both the irritations and enticements of the legal system did not influence the behavior of the persons whose cases were studied?

One possible reason may be that all of the persons involved in the study, both test and control groups, had a claim pending with the Department of Labor and Industries for workmen's compensation. Possibly the pendency of one claim is sufficient to generate all of the pain behavior related to the compensation claims process. If this is so, it suggests that what were thought to be aggravating factors—lawyer representation and the complications of hearing procedures—are relatively insignificant in producing such pain behavior.

Another possibility is that psychogenic or operantly conditioned pain is produced primarily by the more frequent and constant factors of family life, social conditions, and job pressures. Perhaps involvement with lawyers and legal proceedings occur with such infrequency that they are not sufficiently effective to become identifiable as causes of pain behavior. Perhaps the family, social, and job factors are so potent in shaping behavior that in many instances they overcome the pain-producing potential of the claims process.

Considering how positive the convictions to the contrary are, it is suggested with considerable hesitation that representation by lawyers has an analgesic rather than an aggravating effect upon pain. If the economic loss is large enough, a lawyer will be interested in the case regardless of whether there is pain. As a result, the person who otherwise would utilize pain behavior to obtain attention may now have the attention of a person of considerable stature in the community. Perhaps the belief that someone is concerned and working to ensure the adequacy of the injured workman's economic future serves as a consolation which has an effect upon pain experiences.

It is, of course, possible that physicians have erred in concluding that involvement with lawyers and the claims process aggravates pain problems. Some of what is reported in the literature is episodic in na-

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ture; much of the conversational discussion is anecdotal. Perhaps the consequence has been something akin to classic cases of racial or religious prejudice. Unfavorable traits exist and are noted in individuals who happen to be members of the race or practitioners of the religion which is condemned. Those traits are attributed to all members of the race or practitioners of the religion even though, in reality, there is no higher incidence of those traits among persons of that race or religious conviction. Is it possible that physicians have observed psychogenic or operantly conditioned pain in certain patients who have claims pending and erroneously concluded that pendency of a claim is a significant factor in producing pain behavior?

At any rate, the data reported here, within their limitations, raise the question whether the prevailing stereotypes regarding compensation, litigation, and pain patients are valid. These findings caution us that the effects of litigation and the possibility of compensation on the intensity and persistence of impairment from pain and injury may be easy to oversimplify.

Another possible reason for the failure of the hypothesis is that the data studied are inadequate or unrepresentative. Pain is subjective and the study attempted to measure pain behavior by objective criteria, a procedure which seemed greatly preferable to an investigation resting upon the subjective evaluations of individuals as to the amount and severity of their pain. After all, one who complains of pain is likely to go, or be sent, to see a physician. The physician is likely to institute various treatments, to prescribe drugs, to order further diagnostic procedures, and to involve specialists as consultants. Although such data should produce reliable evidence of pain behavior, the assumption that it will may be faulty.

It also may have been a mistake to select for the third-party tort claim set persons who suffered varying degrees of injuries ranging from no permanent partial disability to permanent total disability. Concentration upon cases in which claimants had only serious injuries might have produced different results. It is believed, however, that litigation produces pain without an identifiable organic base. The possibility of testing this belief would have been reduced if only those with serious physical injuries were included in the study. Perhaps, too, the study of drug use should have been limited to those who had more than one prescription and also extended over a longer period of time than was pursued in the statistical analysis.

The data would have permitted another and important test had it contained the exact date upon which each person retained a lawyer to represent him, making possible a before and after study of that individual's pain behavior. Unfortunately, the files of the Department of Labor and Industry did not reveal that date, and representation by a lawyer was established by miscellaneous pieces of correspondence. At the outset of the project it was contemplated that another before and after study would be made. That study was to be of files in which the third-party claim was settled before the Department of Labor and Industries closed its file on the workmen's compensation claim. One might expect pain behavior to decrease after settlement of the third-party tort suit. Unfortunately, the department was unable to locate enough files of this type to permit a statistical study to be made. On the other hand, the lack of files may offer support for the validity of the data produced in the study. The department does not close a file until the claimant's condition has become fixed and stabilized. Perhaps the department's ability to close almost all of its files prior to settlement of the third-party claim indicates that the presence of a third-party claim does not aggravate the medical problems of the worker.

The authors acknowledge the many factors which may have played a subtle part in influencing the results of this study; indeed, one of the purposes of publication is to encourage others to discover reasons why the data failed to support the hypothesis upon which the project was based. The results of this project will almost certainly not change the firmly held beliefs of many knowledgeable persons that the pendency of compensation claims complicates problems of treatment and aggravates pain for persons involved in the claims process. It certainly does not disprove that hypothesis. We hope our efforts will open the question for additional scrutiny and produce other investigations of the effect of a pending claim on behavior indicative of pain.