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## RESPONSE BIAS IN SELF-REPORTED HISTORY OF PLAINTIFFS COMPARED WITH NONLITIGATING PATIENTS<sup>1</sup>

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*Summary.*—Response bias refers to systematic error in the data produced by patients or research subjects, e.g., due to erroneous recall or reporting. In forensic settings, response bias appears to be associated with the nature of the proceedings. The present study tested whether patients in litigation exhibit different response patterns than nonlitigating patients when asked about their preinjury problems. 34 litigants and 80 nonlitigants rated various areas of cognitive and emotional functioning as problematic in the past and currently. The primary finding was that plaintiffs reported preinjury functioning superior to that of controls. These findings suggest the need for caution in inferences that litigants are either reliable or deceitful because response biases may affect self-reports in a misleading fashion.

The essential problem of a forensic psychological evaluation is to compare the plaintiff's functioning before and after an injury. To make this comparison, accurate history is essential because without a baseline present complaints are uninterpretable. One source of history is the plaintiff's self-report. However, researchers in many disciplines whose experts appear in forensic cases, e.g., medicine, epidemiology, toxicology, and psychology, have noted that self-report data are affected by recall that is selective and unreliable (e.g., see Feinstein, 1979, 1988; Feinstein & Horwitz, 1982; Gehlbach, 1993; Rothman, 1986; Turk & Salovey, 1988).

Response bias is systematic or nonrandom error in the patient's recall or reporting of information. Response bias may take the form of systematic reporting errors, or reporting bias. For example, examinees may selectively reveal or suppress certain data. Recall bias is a form of response bias which appears as systematically inaccurate or incomplete memory of important aspects of one's history (Feinstein, 1988; Last, 1995; Hennekens & Buring, 1987). If persons with different characteristics participate at different rates in litigation, skewed data may result from selection (Last, 1995; Taubes, 1995).

Numerous factors account for systematic errors in self-report data. For example, cognitive heuristics and biases can interfere with optimal or accurate processing of information (for reviews see Fiske & Taylor, 1991; Nisbett & Ross, 1980; Sherman & Cortsy, 1984; Kahneman, Slovic, & Tversky,

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1982). Differences in the characteristics of those who volunteer for research studies versus those who do not can produce systematic differences in results (Last, 1995; Rosnow, 1993; Taubes, 1995). Demand characteristics such as the behavior of experimenters or clinicians who are aware of the hypotheses of a study or evaluation can inadvertently shape responses of participants in ways that confirm expectancies (Snyder, 1981; Snyder & Swann, 1978; Snyder & Thomsen, 1988). Tendencies to rewrite personal histories that are consistent with present circumstances can distort recollections (see Ross, 1989). Sometimes participants deliberately skew data to appear in a positive or negative light (e.g., Furnham, 1986; Lamb, Berry, Wetter, & Baer, 1994).

Response biases can have dramatic, concrete manifestations affecting the types of data relied upon by experts in forensic psychology. Mittenberg, DiGiulio, Perrin, and Bass (1992) found that patients with head injuries reported fewer premorbid symptoms than did normal controls when asked about symptoms they had before their accident. In epidemiological investigations of toxic exposure, beliefs that exposure to toxic chemicals occurred have induced recall and reporting of extraordinary levels of perceived pathology even when toxic exposure was later shown to have never occurred (Guidotti & Jacobs, 1993). Loftus has demonstrated that subjects can be led to recall events that never happened (e.g., see Loftus & Palmer, 1974; Loftus & Ketcham, 1991). Several recent studies and reviews have suggested that plaintiffs exhibit response biases in testing and symptom reporting when compared with nonlitigating patients or other normative populations (e.g., see Dunn, Lees-Haley, Brown, Williams, & English, 1995; Fox, Lees-Haley, Earnest, & Dolezal-Wood, 1995a, 1995b; Lees-Haley & Brown, 1993). However, no study has compared the historical self-reports of cognitive and emotional symptoms of litigating and nonlitigating patients. The purpose of this study was to compare the self-reported preinjury history of patients in litigation with those of patients not in litigation.

#### METHOD

##### *Subjects*

Participants were 34 consecutive plaintiffs (15 men, 19 women), with a mean age of 40.8 yr. ( $SD=13.4$ ), and 80 nonplaintiff patients from a family practice (25 men, 55 women), with a mean age of 39.9 yr. ( $SD=13.3$ ). Plaintiffs were exclusively trauma victims with diverse injuries. Included were plaintiffs with brain injuries, burns, toxic exposures, sexual harassment, wrongful termination, musculoskeletal injuries, police brutality, and discrimination. The single most common injury reported was a traumatic brain injury. Plaintiffs were asked about their pre- and postinjury experiences immediately before interviewing and testing in a forensic evaluation. Family practice medical patients participated while waiting to see family physicians for a

range of services. Included were those seeking treatment for a wide range of common ailments and persons scheduled for annual physicals.

### *Materials and Procedure*

Participants were given a questionnaire asking them to report the severity with which specific symptoms, behavior, and aspects of life were problematic in the past and at present. First, participants were asked to recall how problematic each item was in the past. Plaintiffs were instructed to make these ratings to characterize their lives pre-injury, and controls (nonlitigating patients) were instructed to make these ratings for three years ago (as an approximation of the median amount of time between these evaluations and the time prior to injury for the plaintiffs). All participants were then asked to rate how much of a problem each area was currently. Each participant rated 13 items of cognitive and emotional functioning that appear frequently in the complaints of plaintiffs in forensic evaluations of emotional distress and neurotoxicological and traumatic brain injury. Participants rated the extent to which they had problems with concentration, memory, depression, anxiety, alcohol, drugs, ability to work or attend school, irritability, headaches, confusion, self-esteem, fatigue, and life in general. Ratings were made on 9-point scales anchored at the extremes, where 1 = "Very satisfied: This is/was not a problem area for me" and 9 = "Very dissatisfied: This is/was a real problem area for me."

## RESULTS

### *Overview of Analyses*

As noted above, the fundamental question in a forensic psychological evaluation is the difference between the plaintiff's quality of life pre- and postinjury. To consider whether plaintiffs exhibit response biases in providing data relevant to this question we made five comparisons. (1) We compared plaintiffs' with nonplaintiffs' ratings of past functioning (*Plaintiff Before/Nonplaintiff Before*). If plaintiffs exhibit bias by rating their pre-injury lives higher, they should exhibit lower ratings of pre-injury problems than the nonplaintiffs. (2) Plaintiffs' ratings of present functioning were compared to those of nonplaintiffs (*Plaintiff Now/Nonplaintiff Now*) to test whether present functioning was viewed more negatively by litigants than by nonlitigants. (3) Past and present ratings were compared for plaintiffs and for nonplaintiffs (*Plaintiff Before/Plaintiff Now and Nonplaintiff Before/Nonplaintiff Now*). Using self-reports of current functioning as a standard, the comparison of Nonplaintiff Before with Nonplaintiff Now provides insight into whether inquiring about problems in hindsight generates biased reporting. If Nonplaintiffs' measures for Before and Now are essentially identical, this lends credibility to ratings of their functioning three years in the past, based

on the assumption that life is not remarkably different now than three years ago for most people in terms of the criteria we studied. We presumed that plaintiffs would report the present more negatively than the past but made the comparison nonetheless to examine expectations with empirical data. (4) Finally, to explore plaintiffs' recollections with current base rates plaintiffs' ratings of preinjury functioning were compared to nonplaintiffs' ratings of current functioning (*Plaintiff Before/Nonplaintiff Now*). In other words, we used self-reports of nonplaintiff patients as a standard by which to gauge the validity of plaintiff self-reports.

*Plaintiff Before/Nonplaintiff Before*

Means for the dependent variables are shown in Table 1. To protect against inflated Type I error associated with repeated tests (Tabachnick & Fidell, 1983), a one-way, between-subjects multivariate analysis of variance was performed on the dependent variables. A reliable multivariate main effect was obtained ( $F_{13,90} = 1.84, p < .05$ ). Univariate tests showed that eight of the 13 areas were perceived as less problematic by plaintiffs than by non-plaintiff controls. No single preinjury item was reported as more problematic for plaintiffs.

TABLE 1  
MEANS AND STANDARD DEVIATIONS ON DEPENDENT VARIABLES  
AS A FUNCTION OF GROUP AND TIME FRAME

Variables Rated	Forensic Group				Control Group			
	Before		Now		Before		Now	
	M	SD	M	SD	M	SD	M	SD
Life in General	2.6	2.1	6.7	2.4	3.5	2.3	3.1	2.0
Headache	2.1	2.0	5.8	2.9	3.0	2.4	3.1	2.0
Confusion	1.5	0.8	5.9	2.7	2.2	2.0	2.2	1.9
Self-esteem	2.2	1.6	5.9	2.9	3.4	2.4	2.9	2.0
Fatigue	2.1	1.8	6.2	2.7	3.7	2.4	3.9	2.4
Concentrate	1.9	1.5	6.9	2.1	3.3	2.1	3.2	2.0
Memory	2.0	1.5	6.8	2.2	2.8	1.8	3.1	1.9
Depression	2.0	1.8	6.9	2.4	3.3	2.4	3.3	2.1
Anxiety	2.5	2.9	6.7	2.4	3.7	2.5	3.5	2.4
Alcohol	1.3	0.7	2.1	2.2	1.9	1.7	1.3	0.9
Drugs	1.0	0.1	1.5	1.4	1.2	1.4	1.1	0.5
Work/School	2.2	2.2	7.0	2.5	2.4	2.1	2.5	2.0
Irritability	2.4	1.7	6.1	2.6	3.6	2.2	3.6	2.3

Note.—Smaller numbers indicate greater satisfaction, from 1 = "Very satisfied: This is/was not a problem area for me" to 9 = "Very dissatisfied: This is/was a real problem area for me."

Preinjury plaintiffs rated the item *life in general* as less a problem than did nonplaintiffs ( $F_{1,102} = 5.64, p < .05$ ). Cognitive functioning was rated less problematic by preinjury plaintiffs than by controls, with plaintiffs indicating

greater satisfaction with their ability to concentrate ( $F_{1,102} = 10.68, p < .05$ ), and with their memory ( $F_{1,102} = 3.94, p < .05$ ). Emotional reactions also were viewed as less problematic by plaintiffs than by controls. Prior history of depression was rated less problem ( $F_{1,102} = 6.27, p < .05$ ) as was anxiety ( $F_{1,102} = 4.28, p < .05$ ). Plaintiffs indicated greater satisfaction with self-esteem than did nonplaintiffs ( $F_{1,102} = 6.23, p < .05$ ). Bothersome symptoms were viewed as less problematic. Compared to nonplaintiffs, plaintiffs indicated that they experienced fewer problems with irritability ( $F_{1,102} = 6.61, p < .05$ ) and fewer problems with fatigue ( $F_{1,102} = 10.62, p < .05$ ). Although plaintiffs indicated that the remaining areas were less problematic than did nonplaintiffs, these differences did not reach significance (all  $ps > .05$ ).

*Plaintiff Now/Nonplaintiff Now*

Not surprisingly, multivariate analysis showed that current functioning was viewed more negatively by plaintiffs than by nonplaintiffs ( $F_{13,86} = 11.47, p < .05$ ). Univariate analyses of variance showed plaintiffs significantly more dissatisfied with all categories of functioning (all  $ps \leq .01$ ) except for problems with drug use, on which plaintiffs and nonplaintiffs did not reliably differ ( $F_{1,102} = 3.25, p = .05$ ).

*Plaintiff Before/Plaintiff Now–Nonplaintiff Before/Nonplaintiff Now*

Plaintiffs' ratings of preinjury functioning were compared with their ratings of current functioning. As expected, plaintiffs viewed their present status as significantly worse than their pre-injury status ( $F_{13,37} = 14.62, p < .05$ ). Univariate analyses indicated that plaintiffs viewed all but two categories of functioning as worse now than before (all  $ps < .05$ ). Only alcohol and drug usage were seen as no worse now than before (both  $ps \geq .10$ ). By comparison, nonplaintiffs viewed their current functioning as no different than their prior functioning ( $F_{13,139} = 1.19, p > .05$ ).

*Plaintiff Before/Nonplaintiff Now*

For this analysis, nonplaintiff ratings of current functioning were treated as base rates for each item. That is, the extent to which nonplaintiffs indicated satisfaction for each item of present functioning was considered the standard or norm against which plaintiff ratings of preaccident functioning could be compared. Multivariate analysis indicated reliable differences ( $F_{13,88} = 1.82, p < .05$ ). Univariate analyses showed plaintiffs' perceptions of preinjury functioning differed significantly from nonplaintiffs' perceptions of current functioning on seven indicators. Preinjury cognitive functioning (concentration, memory), affective functioning (depression, anxiety), and bothersome symptoms (headache, irritability, fatigue) were reported as less troublesome by plaintiffs than current ratings on the same items for nonplaintiffs.

## DISCUSSION AND CONCLUSION

These data showed that retrospective assessments of cognitive, affective, symptomatic, and general life functioning were more positive for plaintiffs than for nonplaintiffs. There is no empirical evidence suggesting that plaintiffs are healthier and better functioning than other people preinjury. A more plausible hypothesis is that contextual factors, particularly the medicolegal context, are associated with response biases. Prior functioning appears to be recalled more favorably by persons involved in litigation than by persons uninvolved in litigation.

It is not clear to what extent selection bias enters into these findings. The population of persons choosing to become plaintiffs is not random, and they may self-select along lines relevant to symptom reporting or attendance to physical symptoms. They may experience different preinjury environments than nonplaintiffs, and they certainly are exposed to different social environmental stimuli after they embark on litigation. For example, plaintiffs are rarely evaluated by blinded examiners and appear frequently to have been influenced by one or more clinical examiners as well as by attorneys and others. Regardless of the origin of the process, these results are consistent with the hypothesis that plaintiffs exhibit a response bias concerning their preinjury status by discounting problems and elevating positive functioning in a fashion consistent with enhancement of damages.

Although preliminary, the present investigation provides direction for research that ultimately may assist the courts in evaluating objectively the testimony of plaintiffs. For example, when cross examination shows the testimony of a plaintiff to be untrue, the trier of fact may conclude the plaintiff was deceitful. However, an alternative explanation is that the medicolegal context may elicit response biases resulting in distorted recall which may be unintentional. Rather than purposely falsifying testimony, plaintiffs instead may respond automatically, i.e., without intention, awareness, or control (see Bargh, 1989) to contextual (litigation) cues that guide memory of previous functioning and interpretation of current status in a fashion consistent with injury.

To document more convincingly the role of litigation in retrospective assessments of functioning, researchers should match control subjects more precisely with participants who are litigants. For example, rather than being patients from a family medical practice, control subjects should be individuals who have sustained injuries but who are not in litigation. In addition, certain specific questions deserve more research attention: To what extent does litigation precipitate response biases on various types of tests such as neuropsychological functioning, personality, and emotional distress? How are such response biases manifested in interviews and on symptom checklists? How are causal attributions affected? Which types of data are most af-

fect? Are there corrective measures such as preliminary instructions or corrective procedures in scoring or interpretation, which can reduce the effects of response biases and improve the quality of the data? Applied and basic research on these issues can make an important contribution to pressing problems in the forensic arena.

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