

Ratings of Assault Vignettes

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Patient assault, the attacking of another person with part of the patient's body or an object, is a serious concern in healthcare. One way to study assault is using simulation methodology; in this case, patient assault vignettes. The purpose of the study was to compare all possible orders of responding to three vignettes describing incidents between a male patient and a female nurse in which the nurse is mildly assaulted, severely assaulted, or verbally abused by the patient (the control condition). Subjects were 32 female senior-year nursing students and 28 practicing nurses. It was found that response levels to a given vignette could predict a subject's response to the other vignettes. Also, a significant "bench marking" effect was found. If a subject responded to the mild assault vignette first, the subject's overall response pattern best fit the general nonlinear assignment-of-blame pattern observed. If the subject responded to the severe assault or control vignette first, this vignette set a bench mark for responding from which the subject's subsequent responses did not deviate greatly. The latter slightly distorted the subject's V-shaped nonlinear response pattern.

Violence is now the Center for Disease Control's (CDC's) top priority (Rosenberg, 1993). Assault by patients on other patients and staff is reaching epidemic proportions both within hospital units and in outpatient areas. The high rate of assault is a significant problem across type of institutions (Carmel & Hunter, 1989; Love & Hunter, 1996; Report on Assaultive Behavior in VHA Facilities, 1995; Shultz, 1994).

Assault occurs in psychiatric and non-psychiatric areas such as admitting areas and long-term care/nursing home care units (Report on Assaultive Behavior in VHA Facilities in FY 1991, 1994; Tam, Engelsmann, & Fugere, 1996). There is vast evidence of assault as a high risk in emergency rooms (Mahoney, 1991). Assault also affects nurses in home care (Fisher, 1994). Injury rates to staff from assault by patients may surpass rates of injury in construction work, the country's most dangerous occupation (Lusk, 1992). The Bureau of Labor Statistics reports 22,400 workplace attacks where people were seriously injured, 1063 workplace deaths, and that female nurses and nurse's aids were the prime targets (Labor Letter, 1994). In a national, multi-region study, Poster and Ryan (1994) found that 76% of the nurses surveyed ($n = 557$) had been assaulted at least once in their careers. A recent review of five studies of

injury from inpatient aggression demonstrated that nursing staff in public sector psychiatric hospitals are at greater risk of occupational injury from violence alone than workers in high risk occupations such as mining, lumber, manufacturing and heavy construction (Love & Hunter, 1996).

The American Nurses Association cited an increase in injuries among hospital workers as a special characteristic of violence that has emerged in the 1990's (Lipscomb & Love, 1992). Many of the patients nurses encounter use violence as a means to manage conflict in their everyday lives. More and more patients are arriving at the hospital with lethal weapons- up to 25% in some city trauma units. Contaminated syringes have been used to threaten or assault nurses. Visitors, intruders and fellow employees may also introduce violence to the work environment of the nurse.

Investigating assaultive behavior is a difficult task for a variety of reasons. The major obstacle is that researchers cannot study real aggressive incidents in a systematic and controlled fashion. The requirements of an experimental design such as manipulation of the independent variable, a control group, and random assignment of subjects, are not possible (Polit & Hungler, 1991).

Patient Assault Vignettes

The patient assault vignettes describe a nurse who is attempting to discuss with a patient his plans for a weekend pass. The discussion takes place in the dayroom of a psychiatric hospital. Specific conversation topics and behaviors of the patient and nurse are described in the vignettes. Communication breaks down and the nurse is physically assaulted (verbally attacked in control versions) by the patient. The sex of the nurse-victim and the severity of assault to the victim (no physical assault-control, mild physical assault and severe physical assault) are varied. These variations, sex of the nurse-victim by severity of assault (2 x 3 design), produce six possible combinations and result in six vignettes. Each vignette is followed by 13 items assessing attribution of causality for assault or what is perceived as accountable for the assault.

Psychometric Background of Vignettes

The vignettes have been extensively tested for reliability and validity. Internal consistency and content validity are described.

Internal Consistency

The 13-item rating scale subjects used to respond to the vignettes was found to have two underlying, but correlated, factors. Using commonalities in the diagonals and an eigen cutoff value of 1.0, two factors accounted for 72% of the variance observed in the sample ($n = 58$) (Lanza & Carifio, 1992). These two factors were personal attribution and attribution by fellow workers. Because the two factors were correlated ($r = 0.52$), a total score (summation of all 13 items) is used in all analyses.

The Cronbach internal consistency coefficient for the 13 vignette-rating items was $r = 0.91$ ($n = 64$), and the 1-week test-retest reliability coefficient was $r = 0.86$ ($n = 55$). These reliability coefficients were the same across all variations of the vignettes used (Lanza & Carifio, 1992). All 13 items significantly predicted total attribution score, with both the median and mean item total correlation being $r = 0.70$ ($n = 64$) (Lanza & Carifio, 1992). Item total correlations ranged from 0.36 to 0.89, with 10 of the 13 item total correlations being > 0.70 . Total attribution scores, moreover, were also found to correlate with age at ($r = 0.31$) ($n = 58$; $p < .01$), job experience at $r = 0.20$ ($n = 58$; $p < .10$) and with scores from the Rubin and Peplau (1973) Just World Scale at $r = 0.54$ ($n = 55$; $p < .01$) (Lanza & Carifio, 1992). The levels of these concurrent validity coefficients were as predicted from theory and the literature.

Content Validity

A panel of 12 judges (six nurses, three psychologists, and three psychiatrists) rated each of the six vignettes in random order using the verbal aggression and physical aggression subscale items of the Overt Aggression Scale (Yudofsky, Silver, Jackson, Endicott, & Williams, 1986; see Lanza & Carifio, 1991a, for details). The interjudge

agreement was $r = 0.94$, and the judges' ratings discriminate the control (verbal abuse only), mild, and severe assault vignettes from each other with ratio level mean differences. None of the judges rated either version of the control vignette as having any physical assault present in the vignette.

Preliminary Research Findings of Subjects' Responses to the Vignettes

Initial research results framed the questions to be addressed by the current study. These initial responses were obtained to our six vignettes from 66 practicing nurses who were randomly assigned one vignette to read and answer questions. In this study, both female and male nurses were blamed as much for the incident that occurred with the patient in the control (verbal abuse only) vignette as they were in the severe assault vignette. They were blamed more in the mild assault vignette than they were in either the control or severe assault vignettes. Female nurses, however, were blamed more than male nurses for the incident in the control and severe assault vignettes, but not in the mild assault vignette. These complex findings were shown to fit the nonlinear elliptic umbilic model of catastrophe theory (Zeeman, 1976), not the linear models and interpretations of these variables currently in the literature (see Lanza & Carifio, 1991b, for details).

The data from our initial studies left several important questions unanswered because subjects had responded to only one of the six vignettes we had constructed. The specific research questions were:

1. What are the correlation's between subject responses to each of these vignettes?
2. Does the order in which the vignettes are responded to have an effect on the type of responses made?
3. Are experienced nurses' responses to these vignettes different than other adults?
4. Can we replicate our initial surprising non-linear results with another sample of nurses?

Examining the effects of all possible combinations of the six vignettes at once would require too many subjects (and be too much burden for each subject). Therefore, only the control (verbal abuse only), mild, and severe assault vignettes depicting a female nurse and a male patient were used in this study. The overall purpose of the study was to compare all possible orders of responding to three vignettes describing incidents between a male patient and a female nurse in which the nurse is mildly assaulted, severely assaulted, or verbally abused by the patient (the control condition).

Methodology

The three vignettes, the control (verbal abuse only), mild, and severe assault vignettes depicting a female nurse and a male patient, were randomly given in all possible (i.e., six different) orders to 42 female senior-year nursing students at a public university in the northeast and to 48 female experienced nurses at a veteran's hospital in the northeast. Personal background data (age, education level, job area, sex, and years of experience), and responses to Rubin and Peplau's (1973) Just World Scale were also collected. Additionally, a six-item Patient Assault History Scale was developed and administered so that subjects could be classified for analytical purposes in terms of patient assault experience (from none to a great deal) and firsthand experience of mild or/and severe assault.

Instruments

Just World Scale

Rubin and Peplau (1973, 1975) developed the Just World Scale to examine the relatively enduring individual differences in the extent to which people perceive others as deserving their fates in a wide range of situations. The respondent is asked to indicate degree of agreement or disagreement on a 6-point continuum with items being labeled "J" being scored as "just" and "U" as unjust. Scores are based on total item scores reflecting belief in a just world.

In two separate studies, there was a wide distribution of total scores on the scale, ranging from total rejection to qualified acceptance of the just world ideology. The scale had high internal consistency (coefficient alpha or KR-20

equal to .80 and .81) and predictive validity was evidenced in several studies. The psychometric data suggest that, in spite of the broad spectrum of contents sampled, the scale is tapping an underlying general belief that can be meaningfully viewed as a single attitudinal continuum (Rubin & Peplau, 1973, 1975).

Patient Assault History Questionnaire

The six items were number of times ever assaulted, and questions related to the latest assault: time out of work and to recover, extent of physical and emotional reactions as well as type of treatment received.

Subject Return Rate and Treatment in Analysis

Only 32 of the 42 senior nursing students (76.2%) and 28 of 48 experienced nurses (58.3%) returned completed packages. This nonresponse rate had two major effects on the data. First, it caused unequal *N*s in terms of the six different orders of the three vignettes to which each subject responded, making the randomization that we attempted to achieve in this design questionable at best. Second, the degree to which the background variables were randomized within each group was also questionable. We performed a preliminary set of analyses to assess the degree of probability to which randomizations were or were not achieved by the methodology we used and the resultant nonresponse rates that occurred in this study.

Findings

Subject Characteristics

Table 1 presents the means, standard deviations, and *t* values for the senior-year nursing students (*n* = 32) and

Table 1
Means, Standard Deviations, and *t* Values Between Senior Nursing Students (*n* = 32) and Practicing Nurses (*n* = 28)

Variables	Senior Nursing Students		Practicing Nurses		<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Age	30.1	11.4	44.4	10.2	5.3*	<0.001
Years experience	6.2	10.1	17.6	8.8	4.9*	<0.001
Total assault history	8.5	2.8	9.8	3.3	1.7	<0.10
Times assaulted*	2.0	1.1	2.3	1.1	1.2	>0.05
Severity of injury*	1.4	0.5	1.6	0.7	1.5	>0.05
Days out	1.0	0.1	1.2	0.7	1.6	>0.05
Recovery time	1.2	0.5	1.4	0.9	1.0	>0.05
Emotion level*	1.8	1.0	2.2	0.9	1.6	>0.05
Amt. treatment*	1.1	0.8	1.1	0.7	1.0	>0.05
Just World	70.6	5.3	68.9	6.6	1.1	>0.05

*Items that compose Patient Assault History Scale

experienced nurses ($n = 28$) for key background variables. As can be seen from Table 1, senior-year nursing students and experienced nurses significantly differed from each other in terms of age ($t = 5.3, df = 59, p < .001$) and years of nursing experience ($t = 4.9, df = 59, p < .001$), but did not significantly differ from each other in terms of scores on the Just World Scale and Patient Assault History Scale at either the total score or item score level. The average age of senior nursing students was 30.1 years, whereas the average age of the experienced nurses was 44.4 years. The average number of years of experience for the senior nursing students was 6.2, whereas the average number of years of nursing experience for the experienced nurses was 17.6. Approximately one third of the senior nursing students in this study had some nursing experience (i.e., were not inexperienced). These nursing students had an associate degree in nursing; they had returned to school after working for awhile to complete their BS degree. The lack of significant differences on the Just World Scale and the Patient Assault History Scale total and item scores supports that these variables are similar (randomized) in each group and that the effects of the nonresponse rates do not seem to be significant.

Table 2 presents a summary of F ratios for severity of incident in the vignette (control, mild, or severe) by group (senior nursing students vs. experienced nurses) 3×2 analyses of variance that were done on just world score, assault history scores, age, and years of experience. As can be seen from Table 2, no significant differences (or interactions) were found between vignette types on any of these four variables, which further supports that these seven variables are similar in each group and that the effects of the nonresponse rates do not seem to be significant.

The intercorrelations between the major variables are presented in Table 3. As can be seen, the correlations among the control, mild, and severe assault vignettes ranges from $r = 0.73$ (control to mild) to $r = 0.85$ (mild to severe). Re-

sponses to any one of the three vignettes are predictable from a subject's response to one or both of the other vignettes. Furthermore, there is consistency in the pattern of a subject's responses across the three vignettes as indicated by the intercorrelations among the three vignettes. However, this pattern of responses is nonlinear. Total blame scores on the three vignettes, (see Table 3) are not correlated with age, job experience, assault history, or with scores from the Just World Scale.

The results on a one-way repeated measures analysis of variance on the three vignette scores by the six responding-order combinations is presented in Table 4. There was a highly significant main effect ($F[2,108] = 10.52; p < .001$) between the three vignette types (control, mild, and severe), but no significant effect due to order of responding to the three vignettes. Examination of the cell means in reveals two major points. First, the mean levels between the three vignettes is nonlinear; namely, respondents blamed the female nurse for the incident that occurred with the patient in the mild assault vignette more than for the incidents that occurred in the control or severe assault vignettes. This non-linear pattern is essentially the same as that observed in our original study (Lanza & Carifio, 1991b), as can be seen in Table 5.

The second point observed from Table 4 is that the type of vignette a subject responded to first appears to have an effect on the subject's response pattern. Subjects who responded to the mild assault vignette first conformed more to the nonlinear causal attribution pattern than subjects who just responded to the control or severe assault vignettes.

This is due to the "semi-artificiality" of the vignettes. One does not typically respond to three abuse situations in a row in the space of a couple of minutes where one can check one's previous responses. Consequently, if one first rates the severe assault situation then it would seem from the data that this may be setting a psychological "benchmark" in terms of one's rating of the mild and control vi-

Table 2
Summary of F Ratios for Severity of Incident in the Vignette by Group (3×2) Analysis of Variance on Total Just World Scale Scores, Patient Total Assault History Score, Age, and Years of Experience ($n = 60$)

Source	df	Just World	Assault History	Age	Years Experience
Group (A)	1	2.39	2.31	14.89*	14.95*
Vignette type (B)	2	0.29	0.26	1.42	0.95
A x B	2	0.26	0.03	0.04	1.26
Error	54				

* $p < .001$

Table 3
Intercorrelations Between the Three Vignettes and Other Variables ($n = 60$)

	Vignette			Age	Assault experience	Years experience
	Mild assault	Severe assault	Just World			
Control vignette	0.73*	0.83*	0.07	-0.11	-0.10	0.08
Mild assault vignette	1.00	0.85*	0.15	-0.06	-0.14	0.05
Severe assault vignette			1.00	0.00	0.29*	0.05
Just World			1.00	0.00	0.29*	0.05
Age				1.00	0.06	0.82*
Assault experience					1.00	0.32*
Years experience						1.00

* $p < .01$

Table 4
One-Way Repeated Measures Analysis of Variance on Total Blame of the Nurse in the Incident Scores by the Six Orders of Response to the Vignettes ($n = 60$)

Vignette Response Order	Control			Mild Assault			Severe Assault		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
Mild/Severe/Control	17	27.4	6.7	17	29.9	7.1	17	24.6	5.5
Mild/Control/Severe	13	28.4	7.3	13	29.9	6.6	13	25.5	7.5
Control/Severe/Mild	6	31.0	9.6	6	29.2	10.2	6	27.8	8.6
Control/Mild/Severe	8	27.4	6.2	8	28.0	6.7	8	24.1	4.1
Severe/Mild/Control	9	28.2	8.2	9	28.4	6.3	9	28.4	10.0
Severe/Control/Mild	7	28.7	6.4	7	32.7	6.5	7	28.7	6.5
Total	60	28.2	7.2	60	29.7	7.6	60	26.1	7.3

Source	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Between groups				
Order (A)	5	45.03	0.35	>0.05
Error	54	128.30		
Within groups				
Vignette type (B)	2	133.59	10.52	<0.001
A x B	10	15.84	1.25	>0.05
Error	108	12.70		

Table 5
Mean Response Levels by Vignette Type for This and Original (1991b) Study

Study	Control			Mild Assault			Severe Assault		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
Current Female nurse	60	30.6	7.2	60	12.9	7.6	60	29.7	7.3
Female nurse Previous	9	35.2	9.4	7	38.4	12.6	13	34.1	7.5
Male nurse	8	29.6	11.0	9	39.8	9.7	12	29.6	9.4
Total	17	32.6	10.3	16	39.3	10.7	25	32.0	9.4

gnettes. This bench marking effect in making these kinds of judgments may be an important finding in and of itself, and one deserving further investigation, but in terms of this study, it is both a noise and a nuisance variable relative to analyzing and interpreting the data collected. Therefore, the data for the six responding orders were reduced to three "types of responding orders" or categories by combining response order categories in terms of which vignette type the subject responded to first, namely, control, mild or severe. Reducing the order variable to three categories indicating which vignette the subject responded to first also

increased the cell *Ns* for analyses. All subsequent analyses involving response order are reported using the revised definition of responding order.

The results of a one-way repeated measures analysis of variance on the three vignette scores by the three "collapsed" response order combinations are described in Table 6. The actual repeated measures ANOVA was run on all six combinations to reduce the error and increase the power of the test. The "combined" means reported in the table are to assist the reader to more easily see the results and trends. There was a significant main effect ($F[2,108] = 10.97; p$

Table 6
One-Way Repeated Measures Analysis of Variance on Total Blame of the Nurse in the Incident Scores by the Three Collapsed Response Order Combinations (*n* = 60)

Vignette Response Order	Control			Mild Assault			Severe Assault		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
Control First	17	28.4	7.4	17	29.1	6.1	17	25.2	6.1
Mild First	28	27.6	7.2	28	30.1	6.9	24	24.8	6.5
Severe First	15	29.1	6.8	15	29.5	6.3	6	29.6	8.1
Total	60	28.2	7.2	60	29.7	7.6	60	26.1	7.3

Source	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Between groups				
Order (A)	5	65.76	0.53	>0.05
Error	54	128.30		
Within groups				
Vignette type (B)	2	131.62	10.97	<0.001
A x B	10	40.99	3.42	<0.01
Error	108	12.70		

Table 7
One-Way Repeated Measures Analysis of Variance on Total Blame of the Nurse in the Incident Scores by the Years of Nursing Experience (None or Some)

Nursing Experience	Control			Mild Assault			Severe Assault		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
None	15	27.6	8.6	15	30.9	7.6	15	27.5	9.2
Some	106	31.0	7.8	106	33.1	8.5	106	30.0	9.1
Total	122	28.2	7.2	122	29.7	7.6	122	26.1	7.3

Source	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Between groups				
Experience (A)	1	31.10	0.22	>0.05
Error	120	141.60		
Within groups				
Vignette type (B)	2	262.20	18.10	<0.001
A x B	2	18.72	1.30	>0.05
Error	240	14.50		

Table 8
One-Way Trend Analyses of Incident in the Vignette by Amount of Prior Nursing Experience (None or Some) on Total Blame of the Nurse for the Incident Scores (n = 60)

Trend Factor	Source	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
No experience	Linear	1	15.79	0.23	>0.05
	Nonlinear	2	893.73	13.12	<0.001
	Error	12	68.12		
Some experience	Linear	1	9.40	0.14	>0.05
	Nonlinear	2	587.30	9.01	<0.001
	Error	104	65.20		
Both groups combined	Linear	1	11.60	0.13	>0.05
	Nonlinear	2	1741.00	18.80	<0.001
	Error	118	92.60		

<.001) between the three vignette types and a significant main effect ($F[10,108] = 3.42; p < .01$) due to the type of vignette responded to first.

The results of a one-way repeated measures analysis of variance on the three vignette scores by years of nursing experience (none or some) is presented in Table 7. There was a significant main effect ($F[2,240] = 18.1, p < .001$) between the three vignette types, but no significant main effect in terms of years of prior experience. The nonlinear trends of causal attribution are very clear for both groups of respondents.

The one-way trend analyses for the assignment-of-blame mean levels is presented in Table 8. All of the nonlinear trends in the data are very highly significant at the $p < 0.001$ level. The data presented in Table 8 show that female nurses are blamed more for mild assaults than severe assaults. Responses to the three vignettes were highly correlated to each other and response levels to a given vignette could be predicted from a subject's response to the other vignettes. No significant effect was observed due to the six possible orders in which a subject could respond to the three vignettes. A significant bench marking order effect was found. If a subject responded to the mild assault vignette first, the subject's overall response pattern best fit the general nonlinear assignment-of-causal attribution pattern. But if the subject responded to the severe assault or control vignettes first, these responses set a bench mark for the subject's subsequent responses.

That female nurses were blamed more for the incident in which a mild assault occurred than in the severe assault or control vignettes was confirmed in all analyses. These results are similar to the results of our previous studies (Lanza & Carifio, 1991b). We believe that nurses are blamed more severely for mild incidents than they are for severe incidents. The inverted V-shape nonlinear pattern that we have consistently found in the causal attribution of patient assault requires a nonlinear theory to explain it, such as Zeeman's (1976) catastrophe theory. When one of the two factors "dominates" or is present or absent to a great degree, bimodal results or "outcome states" will be observed as in the control (verbal aggression only) and severe assault conditions in our original study (see Table 5).

Conclusions

The results of our study suggest that a mild assault situation is within the range of expected professional functioning for the professional nurse. Typical nurse behaviors related to a mild assault situations include the assessment of patient aggressive potential, making predictions about the likelihood of assaultive behavior, and intervening in the actual assault. In terms of professional guidelines, male and female nurses are held equally accountable for their performance in such situations. Consequently, gender bias disappears and the amount of causal blame assigned to the nurse increases to its highest level in the mild assault situ-

ation.

Carmel and Hunter (1989) and Ryan and Poster (1989) cite empirical evidence to support the view that there are "contradiction zones" between professional expectations and specific incidents and situations in nursing. Male nurses are expected and tend to become actively involved in containing very violent behavior, whereas female nurses tend to be selectively excused from such activities. All nurses, however, regardless of sex, are expected to become involved in containing and appropriately managing aggressive and mildly violent patients.

Catastrophe theory predicts that gender bias and its effects in the differential causal attribution will manifest itself most in low and high conditions of aggressive and assaultive behavior, but will not be observed in midrange conditions. The theory, however, also predicts that the professional nurse will be "blamed" most in the midrange condition because this is the "catastrophe" in terms of the two contradictory factors (professionalism versus gender bias) affecting the causal attribution.

In conclusion, blame for assault is not objectively determined. Judgement about assault is influenced by prior experience with assault, nursing experience level, and severity of assault. This is particularly important as we consider hospital policies and practices in the investigation of assaults. If a nurse is an assault victim and/or witness to an assault, this may affect her judgements about blame for assaults. This has important applications when making judgements in risk management situations for hospital Total Quality Management activities.

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