

## **The Influence of Depression on the Attribution of Responsibility for an Accident<sup>1</sup>**

**John L. Rodman**

*State University of New York at Albany*

**Jerry M. Burger<sup>2</sup>**

*University of Santa Clara*

*The role of depression in the attribution of responsibility for an accident was examined. Mildly depressed, slightly depressed, and nondepressed college students were presented with accident descriptions in which the victims suffered either nonsevere or severe consequences. Nondepressed subjects attributed more responsibility for the accident to uncontrollable factors in the nonsevere than in the severe accident condition, thus replicating the defensive attribution effect. Slightly depressed subjects showed no difference in attributions across severity conditions. Mildly depressed subjects showed a nonsignificant tendency ( $p < .10$ ) to attribute more responsibility to uncontrollable factors in the severe than in the nonsevere condition. The findings are consistent with earlier research suggesting that depressed and nondepressed individuals differ in their tendencies to distort attributions.*

A recent trend in research on depression has been concerned with the role of causal attribution in the etiology, maintenance, and alleviation of depression (cf. Abramson, Seligman, & Teasdale, 1978). Among the questions addressed in this research is the accuracy of the attributions depressed individuals make for the events in their lives. A series of studies on this issue (Alloy & Abramson, 1979; Golin, Terrell, & Johnson, 1977; Golin, Terrell, Weitz,

<sup>1</sup>Data presented in this manuscript were taken from the master's thesis of the first author completed at Wake Forest University.

<sup>2</sup>Address all correspondence to Jerry M. Burger, Department of Psychology, University of Santa Clara, Santa Clara, California 95053.

& Drost, 1979; Rozensky, Rehm, Pry, & Roth, 1977; Lewinsohn, Mischel, Chaplain, & Barton, 1980) have pointed to a somewhat counterintuitive conclusion. That is, all of these investigations have found that it is the nondepressed, rather than the depressed, individual who is likely to distort perceptions of causality. For example, in a series of studies Alloy and Abramson (1979) found that mildly depressed college students were more accurate in their judgments of contingency concerning their responses and the onset of a light than were the nondepressed subjects. Nondepressed subjects consistently gave themselves more credit for controlling the onset of the light than they actually had. It has been suggested that the use of such an attributional bias may serve the important function of allowing the nondepressed person to avoid perceiving depressing events (Schwartz, 1981). Alloy and Abramson (1979) suggest that the depressed individual may suffer because of an absence of the nondepressive's "adaptive cognitive biases."

Numerous social psychology investigations have been concerned with the distorting or biasing of attributions of causality (cf. Ross, 1977; Nisbett & Ross, 1980). It has been well documented that individuals tend to report causal attributions in certain situations that differ from more objectively based assessments. One of the attributional errors that has been researched extensively is the "defensive attribution" bias (Walster, 1966; Shaver, 1970). In a typical experimental paradigm, subjects have described to them an accident in which the individuals involved suffer either mild or severe consequences. According to Walster (1966), people are motivated not to attribute the cause of the severe accident to chance, thereby reducing the perceived possibility that such an accident is uncontrollable and that it might someday happen to them. The basic defensive attribution effect then is that subjects attribute more responsibility to the perpetrator in the severe-accident condition than in the mild-accident condition.

If depressives and nondepressives differ in terms of cognitive style, then it would be expected that depression level would have an effect upon the extent to which individuals demonstrate the defensive attribution bias. Earlier work on depression and attributions indicates that depressives are less likely to perceive the cause of an event in a self-gratifying manner than are nondepressives. Therefore, we might not expect to find different attributional patterns for depressed subjects reading about accidents with either mild or severe consequences. Consistent with the other research in this area, however, nondepressed persons would be expected to display the defensive attribution effect.

The present investigation presented nondepressed, slightly depressed, and depressed college students with a description of an accident with either severe or nonsevere consequences. It was expected that the strength of the

defensive attribution effect would decrease as the level of subject depression increased.

## METHOD

### *Subjects*

In all, 120 undergraduate students served in the original sample in exchange for class credit. Fifty-six of these subjects (30 males, 26 females) were selected for the final sample on the basis of depression scores.

### *Procedure*

Subjects participated in the experiment in groups of 40. Experimenters explained that the subjects would be participating in two short, unrelated investigations. The first experimenter said that she needed some personality measures completed, and administered the Beck Depression Inventory (BDI; Beck, 1972). The BDI assesses depression levels by asking subjects to indicate the extent to which they currently experience each of 21 symptoms of depression. Scores can range from 0 to 63 on the inventory, with cutoff points of 10, 16, and 24 for mildly, moderately, and severely depressed classifications, respectively. Although designed to assess depression in clinical populations, the BDI has been found to be an appropriate instrument for measuring depression in a college population (Bumberry, Oliver, & McClure, 1978).

Upon collecting the BDI, the first experimenter left the room. The second experimenter then introduced the attribution task, supposedly part of an unrelated investigation. All subjects were provided with a booklet containing instructions, an accident description, and a short questionnaire. The instructions informed the subjects that the experimenter was interested in jury decisions. Subjects were encouraged to read the accident description as if they were members of the jury hearing the case. Subjects then read a one-page description of a three-car accident. As noted in a recent review by Burger (1981), most defensive attribution studies have asked subjects about the perpetrator's responsibility rather than testing the theory more directly by asking about the role of uncontrollable factors. The accident description therefore was written to give all three drivers a role in the accident, yet still allow for the perception of some uncontrollable variables. Burger (1981) also notes the importance of perceived similarity with the accident perpetrator. By ambiguously describing three different perpetrators (who were also the victims), we hoped to reduce the problem of the subject's strongly identifying with any one of them.

The accident was described for all subjects as one in which one car skidded on a patch of ice, causing a second car to swerve into the next lane in an unsuccessful effort to avoid a collision. A third car then struck the second car. All three drivers were described as perpetrators (e.g., driving too fast, no brake lights) and as victims. The booklets were randomly distributed so that half of the subjects received a description of an accident with severe consequences (e.g., driver in critical condition with head injuries) while the other half received a description of an accident with nonsevere consequences (e.g., driver received minor cuts and abrasions).

The questionnaire contained several items asking subjects about their perceptions of the accident. The key dependent measure was contained in an item asking subjects to divide 100% among four potential sources of responsibility for the accident. These four sources were each of the three drivers and "uncontrollable circumstances." A fifth category called "other," with space for description, also was provided, but no subject chose to use this option.

Before examining responses on the attribution task, 56 subjects were selected from the group of 120 to constitute the final sample. It was necessary to include 120 subjects in the original sample in order to find enough depressed subjects. Beck (1972) suggests a score of at least 10 to classify an individual as even mildly depressed. Sixteen subjects in the student population were found who met this criterion ( $\bar{X} = 12.4$ ). The 20 subjects with the lowest BDI scores were used to create the nondepressed group ( $\bar{X} = 0$ ). Finally, a third group of 20 subjects with scores ranging in between these two groups was selected in a manner that maximized the differences in BDI scores from the mildly depressed and nondepressed groups ( $\bar{X} = 5.1$ ). This group, the slightly depressed, was included in the design to aid in the interpretation of the predicted interaction.

## RESULTS

Subjects were asked the percentage of responsibility for the accident they would assign to each of the three drivers and to uncontrollable factors. The main dependent variable was the extent to which subjects attributed the accident to uncontrollable factors. A 2(severe-nonsevere) by 3(mildly depressed-slightly depressed-nondepressed) ANOVA revealed a significant severity by depression level interaction for the uncontrollable factors variable,  $F(2, 50) = 7.02, p < .002$ . The interaction is shown in Table I. An examination of sex differences revealed no significant effects; therefore, sex was not included in the data analyses.

**Table I.** Mean Percentage of Accident Responsibility Attributed to Uncontrollable Factors<sup>a</sup>

	Nondepressed		Slightly depressed		Depressed	
Severe accident	7.00	(9.19)	14.00	(16.12)	16.90	(16.02)
Nonsevere accident	30.50	(22.17)	16.50	(12.70)	3.75	(3.54)

<sup>a</sup> $N = 10$  for all cells except the two depressed cells, where  $N = 8$ . Standard deviations appear in parentheses.

The strength of the defensive attribution bias was then examined through planned comparisons of the severe and nonsevere outcome conditions within each of the three depression groups. It was found that nondepressed subjects attributed significantly more responsibility to uncontrollable factors in the nonsevere than in the severe condition ( $p < .01$ ), thus replicating the basic defensive attribution effect. No difference was found across severity conditions in the slightly depressed group. However, depressed subjects tended to attribute more responsibility to uncontrollable factors in the severe than in the nonsevere condition ( $p < .10$ ). No significant effects were found on the extent to which subjects attributed responsibility to any of the three drivers.

## DISCUSSION

The results of the present experiment provide some insight into the attributional patterns of depressed and nondepressed persons. Consistent with earlier findings on differences in perception of causality as a function of depression, mildly depressed and slightly depressed college students failed to attribute more responsibility to uncontrollable factors when the accident was described as nonsevere than when it was described as severe. The nondepressed students, on the other hand, demonstrated the basic defensive attribution effect by attributing more responsibility to uncontrollable factors in the nonsevere than in the severe condition.

This finding is consistent with Alloy and Abramson's (1979) suggestion that depressed persons may lack a cognitive bias that allows nondepressed persons to avoid becoming depressed. Although the data do not identify which group of subjects' perceptions are the most accurate, it can be suggested that by reducing their perception of the probability of being involved in a severe accident someday, nondepressed people may be able to avoid becoming depressed. Depressed individuals, on the other hand, may read about an accident and remind themselves that it is a sad world and that they too may be injured in such a manner.

One unexpected finding was the tendency for the mildly depressed subjects to attribute more responsibility to uncontrollable factors in the severe than in the nonsevere condition. Although only marginally significant, this finding suggests some interesting possibilities. It may be that at higher levels of depression people are not as unwilling as nondepressed persons to believe that they will become involved in a severe accident someday. This is consistent with Beck's (1972) observation that depressives often have a gloomy outlook about present circumstances and the future. The finding may also demonstrate further that depressed persons' attributions about themselves (as described in the learned helplessness model) and about others may not necessarily be in agreement (Sweeney, Shaeffer, & Golin, 1982).

Finally, a few notes of caution in the interpretation of these results should be added. The mean depression inventory score for the depressed group of students falls within the "mildly" depressed category according to Beck's (1972) scheme. Thus, the findings with these subjects should not be assumed to apply to a clinically depressed population. In addition, the present experiment was designed to examine directly the attribution of responsibility for an accident to uncontrollable factors, rather than to assess the perceived role of the perpetrator, as has been done in other studies. The individuals described in the accidents here were both perpetrator and victim, thus, as explained by Burger (1981), introducing the possibility of conflicting motives. Therefore, comparison of this study with other defensive attribution studies needs to proceed cautiously. Other limits of the investigation include the small number of subjects and the use of a single-item dependent measure. Nonetheless, in combination with similar experimental findings, the results of the present investigation demonstrate the influence of depression on causal attributions.

## REFERENCES

- Abramson, L. Y., Seligman, M. E. P., & Teasdale, J. D. (1978). Learned helplessness in humans: Critique and reformulation. *Journal of Abnormal Psychology, 87*, 49-74.
- Alloy, L. B., & Abramson, L. Y. (1979). Judgment of contingency in depressed and nondepressed students: Sadder but wiser? *Journal of Experimental Psychology: General, 108*, 441-485.
- Beck, A. T. (1972). *The diagnosis and management of depression*. Philadelphia: University of Pennsylvania Press.
- Bumberry, W., Oliver, J. M., & McClure, J. N. (1978). Validation of the Beck Depression Inventory in a university population using psychiatric estimate as the criterion. *Journal of Consulting and Clinical Psychology, 46*, 150-155.
- Burger, J. M. (1981). Motivational biases in the attribution of responsibility for an accident: A meta-analysis of the defensive-attribution hypothesis. *Psychological Bulletin, 90*, 496-512.
- Golin, S., Terrell, F., & Johnson, B. (1977). Depression and the illusion of control. *Journal of Abnormal Psychology, 86*, 440-442.

- Golin, S., Terrell, F., Weitz, J., & Drost, P. L. (1979). The illusion of control among depressed patients. *Journal of Abnormal Psychology, 88*, 454-457.
- Lewinsohn, P. M., Mischel, W., Chaplain, W., & Barton, R. (1980). Social competence and depression: The role of illusory self perceptions. *Journal of Abnormal Psychology, 89*, 203-212.
- Nisbett, R., & Ross, L. (1980). *Human inference: Strategies and shortcomings of social judgment*. Englewood Cliffs, New Jersey: Prentice-Hall.
- Ross, L. (1977). The intuitive psychologist and his shortcomings. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 10). New York: Academic Press.
- Rozensky, R. H., Rehm, L. P., Pry, G., & Roth, D. (1977). Depression and self-reinforcement behavior in hospitalized patients. *Journal of Behavior Therapy and Experimental Psychiatry, 8*, 35-38.
- Schwartz, B. (1981). Does helplessness cause depression, or do only depressed people become helpless? Comment on Alloy and Abramson. *Journal of Experimental Psychology: General, 110*, 429-435.
- Shaver, K. G. (1970). Defensive attribution: Effects of severity and relevance on the responsibility assigned for an accident. *Journal of Personality and Social Psychology, 14*, 101-113.
- Sweeney, P. D., Shaeffer, D., & Golin, S. (1982). Attributions about self and others in depression. *Personality and Social Psychology Bulletin, 8*, 37-42.
- Walster, E. (1966). Assignment of responsibility for an accident. *Journal of Personality and Social Psychology, 3*, 73-79.

