

# Rape Rumors: The Effects of Reporting or Denying Rumors of Sexual Assaults on Campus<sup>1</sup>

CARRIE B. FRIED<sup>2</sup> AND AMIEE MAXWELL<sup>3</sup>

*Winona State University*

Two studies examine the effects of reporting rumors of sexual assaults on a college campus. Participants read headlines and short articles about an unfamiliar college. Key headlines and articles reported an increase in sexual assaults as a fact, a rumor, a denied rumor, or a proven falsehood. Participants then rated perceptions of the college, including opinions on the level of crime and safety on campus. Results showed that both reporting the crimes as rumors and reporting denials of the rumors increased concerns compared to control conditions, but these concerns were lower than the concerns raised by reporting the assaults as fact. Findings are in line with predictions and match previous research on rumors and the impact of reported innuendo.

In Fall 2000, rumors of multiple sexual assaults on or near our campus spread through the student body. The rumors were that approximately a dozen sexual assaults had occurred during the summer months and were continuing into the fall. Early in the fall semester, the rumors were the basis for an article in the campus newspaper. The article relayed the stories, but clearly stated that they were unsubstantiated rumors. Eventually, the persistence of the rumors prompted university officials to act.

A second article in the campus newspaper quoted campus officials as saying the rumors were false. In the article, administrators further stated that there were no official reports of assaults received by campus security or the local police department, and that no sexual assaults had been reported on campus since 1997. Administrators also sent a campus-wide e-mail to each student saying that the rumored assaults were not true and that the university “enjoys a safe environment.” Eventually, though

<sup>1</sup>The research presented in this paper was presented previously at the 74<sup>th</sup> annual Midwestern Psychological Association Conference, Chicago, IL, May 2002.

<sup>2</sup>Correspondence concerning this article should be addressed to Carrie Fried, Department of Psychology, Winona State University, Winona, MN 55987. E-mail: cfried@winona.edu

<sup>3</sup>Amiee Maxwell is now at the University of Utah.

not immediately, the rumors faded, and students largely forgot about the incident.<sup>4</sup>

This situation raises several interesting questions on the effects of media reports of rumors. Specifically, what are the effects of reporting unsubstantiated stories, even if it is clear that they are only rumors? Further, how effective are denials in defusing the negative impact of rumors?

This case probably is not unique. Crime is an increasingly prevalent and publicized problem on college campuses (Bennett-Johnson, 1997). This is especially true for sexual crimes. College students are bombarded with statistics about sexual assaults on campus (Schwartz & Dekeseredy, 1997). Over half of college newspapers have reported cases of sexual assault (Bogal-Allbritten & Allbritten, 1992), and it is a widely held belief among college communities that 1 in 4 college-age women will be a victim of rape or attempted rape during their college careers. Koss, Gidycz, and Wisniewski (1987) surveyed over 7,000 students on 35 different universities and found that 1 in 8 women reported having been raped, and over 25% reported that they had been raped or had experienced an act of attempted rape. These findings seem to be the basis for the widely used 1-in-4 statistic.

Increased media attention and coverage have further bolstered the perceptions of high crime rates on campus. Such media attention can drive up beliefs about crimes on campus and increase fears because viewers rate events that receive the most coverage as the most important (Iyengar, Kinder, Peters, & Krosnick, 1984). Heavy readers of newspapers, which report on a great deal of crime, tend to believe that crime is more rampant. Further, beliefs about crime among this group were found to be unrelated to official crime rates (O'Connell & Whelan, 1996). Some have pointed out that universities are viewed as dangerous because the media have magnified a few violent campus crimes (Fisher, 1995). These studies show that the style and degree to which the media portrays campus crime may influence perceptions of crime more than do actual crime statistics.

These findings suggest that people are likely to believe rumors of crime waves on campus. In cases like that on our campus, rumors of multiple sexual assaults seem credible, spread through campus, and increase fear among students. But would students continue to believe campus crime stories even if media sources made it clear that they were only rumors?

*Rumors* are unverified but potentially important pieces of information about current events (Allport & Postman, 1947; Rosnow, 1991). They are

<sup>4</sup>Whether or not the rumors were true remains unclear. According to officials at campus security and the local police department, no official reports of sexual assaults were ever filed. However, other groups (e.g., Women's Resource Center) reported that they received numerous reports from victims and friends of victims, but that those who were involved chose not to file official complaints.

most powerful when the topic is salient and when verifiable evidence is unavailable (Rosnow & Fine, 1976). Rumors often have the same impact as hard news (DiFonzo & Bordia, 1997; DiFonzo, Bordia, & Rosnow, 1994). For example, DiFonzo and Bordia exposed subjects to stories relevant to a company's stock performance, presenting them as either news or rumors, and examined the effects on trading decisions. The results showed that even though subjects claimed that the rumors were unreliable and not believed, the rumors affected behavior in ways identical to news.

Rumors usually arise from common concerns and are spread as news when reliable or factual information is absent (Rosnow, 1991). People incorporate rumors into their beliefs, which affect the way they view and interpret the world (Pratkanis & Aronson, 1992). Rumors can create fears, but also provide reasons and explanations for concerns or anxieties that already exist (Allport & Postman, 1947; Festinger, 1957; Rosnow, 1991). Indeed, Rosnow postulated that personal anxiety is one of the four main variables of rumor behavior. DiFonzo et al. (1994) pointed to reducing anxiety as a key component in controlling the negative impact of rumors.

Some rumors are transmitted more readily than are others. Walker and Blaine (1991) evaluated the transmission of planted rumors, comparing *dread rumors* (rumors related to unpleasant consequences) to *wish rumors* (rumors related to pleasant consequences). They found that dread rumors were transmitted and heard by more individuals than were wish rumors, suggesting that rumors associated with unpleasant consequences are spread more extensively.

Certainly, particularly for young college women, rumors of a sexual assailant running rampant and going unpunished would be dread rumors. Since rumors about a wave of sexual assaults fits neatly into perceptions of increased crime on campus and are the form of rumors most likely to spread, one would predict that such rumors would have an impact. Simply being exposed to rumors of sexual assaults, even if they are identified clearly as mere rumors, likely would increase concerns about crime and safety among students.

It is clear that media reports of crime can influence perceptions of crime and that rumors about crimes such as sexual assault are likely to take hold, spread, and be believed. The present research seeks to examine the potential impact of reporting such rumors in the media and the effectiveness of attempts to defuse such rumors by denying their validity directly. The key questions raised by the present example are whether reports of the rumors influence the audience, and whether denials of the rumors will quell concerns raised by the rumors. In other words, what effect did our campus newspaper have when it reported the rumors, and did college administrators help their cause by publicizing a denial of the rumors? There are two lines of research that shed light on the present study: research on rumor rebuttals and research on reported innuendo.

Research on rumor denial has shown that the source of the denial influences its success. Bordia, DiFonzo, and Travers (1998) demonstrated that rumor rebuttals coming from a knowledgeable inside source have the most impact in quelling rumors. Rumors having to do with tighter grade point average requirements for majors were dispelled best by direct rebuttals from a department head. Bordia, DiFonzo, and Schulz (2000) showed further that a denial is most successful when the source of the denial is perceived as honest and knowledgeable; in other words, highly credible. In these studies, a direct denial seems to be an effective means of defusing a rumor.

In the present example, the knowledgeable source within the organization (i.e., a college administrator) may have credibility problems. Unlike the research described previously, in the present example, the knowledgeable source stands to lose a great deal if people believe the rumors. If a source is seen as having a personal or professional investment in the issue, and their message is in line with this investment, they are seen as less credible and will be less persuasive (Eagly, Wood, & Chaiken, 1978). Therefore, the fact that the denial came from the campus administration is a mixed bag. They would be in a position to know about crimes on campus, but they also have a strong motivation to protect the image of their campus. Because of this, denials from college administrators may not be seen as originating from an impartial source and may not be the most effective in calming concerns about crime and safety.

There is empirical evidence to support this. Tybout, Calder, and Sternthal (1981) examined reactions to negative rumors about McDonald's and found that attitudes were most negative among subjects who were exposed to the rumors and read a direct rebuttal of the rumors purportedly from McDonald's. The authors postulate that this is because the rebuttal reminded subjects of the original rumor and focused subjects' thoughts on the negative aspects of the rumor and McDonald's. Koller (1992) also found that direct rebuttals were ineffective at reducing the impact of rumors among subjects who had heard the initial rumors.

Iyer and Debevec (1991) examined rebuttal strategies by manipulating both the source of the rumor and the source or type of the rebuttal (vested interest, neutral, and no refutation). Their results showed no main effect for the source or type of the rebuttal, but an interaction between the source of the rumor and the type or source of the rebuttal. The effectiveness of the rebuttals depended on knowing who started the rumor. In neutral rumor source conditions (i.e., rumors originating from an uninvolved third party), they found that rebuttals from another neutral source were best at dispelling the rumors, but no difference between denials from those with a vested interest and no denial. In the negative-stakeholder conditions (i.e., rumors originating from sources who would be damaged by the rumor), they found that no denial worked best, rebuttal from a neutral source second, and

rebuttal from a vested interest worst. In the positive-stakeholder condition (i.e., rumors originating from sources who would benefit from the rumor), they found that vested-interest denials were most effective, neutral source denials second, and no denial worst.

In these studies, no single clear pattern of the effectiveness of denials in reducing the negative impact of rumors stands out. Research by Bordia and colleagues (Bordia et al., 1998, 2000) has suggested that direct denials from the party targeted by the rumors will be effective; but in these cases, the party itself did not stand to lose much by the rumors being true. Research by Tybout et al. (1981) and Koller (1992) found that in cases in which the party had something to lose by the rumors being true, direct denials by the party were not effective in defusing the rumors. Finally, Iyer and Debevec (1991) showed that the effectiveness of the denials depended entirely on the source of the rumor.

Another line of research closely corresponds with the present example and sheds light on the research questions. Innuendo research conducted by Wegner, Wenzlaff, Kerker, and Beattie (1981) was the primary line of research that guided thinking in the present study. Wenger et al. looked at the effects of innuendo by studying participants' ratings of fictitious political candidates. Participants were given newspaper headlines involving candidates and then were asked to rate their impressions of each candidate. The headlines either reported a negative behavior as fact (e.g., "Robert Smith Linked to Fraudulent Business Deal"), raised the question of negative behavior via innuendo (e.g., "Is Robert Smith Linked to a Fraudulent Business Deal?"), or mentioned negative behaviors but completely exonerated the candidate (e.g., "No Connection Exists Between Robert Smith and Fraudulent Business"). Candidates who were linked with a directly incriminating headline were rated more negatively than were candidates who were associated with a neutral headline (e.g., "Robert Smith is Coming to Town"). More importantly, candidates whose behavior was merely questioned by the headline also were rated more negatively than the neutral control headline, and were rated almost as negatively as those candidates who were incriminated directly. Extrapolating from this, we predict that any mention of an increase in sexual assaults, even if reported as a rumor, would increase concerns about safety on campus.

Innuendo research also leads to some predictions about the effectiveness of reporting denials. A key finding of Wegner et al.'s (1981) innuendo research is that reports completely exonerating candidates of negative behaviors increased negative feelings toward the candidates. These exoneration headlines (e.g., "No Connection Exists Between Robert Smith and Fraudulent Business") led to more negative ratings than did the neutral control condition. Merely pairing a candidate with a negative behavior appears to damage the reputation of a political candidate. In light of these findings, we

predict that publicly denying the rumors in print will be an ineffective way to eliminate their impact entirely. Indeed, such denials may create beliefs that sexual assaults are a problem on campus.

Taken together, research on perceived levels of crime on campus and the impact of media coverage of crime, research on rumors and rumor denial, and Wegner et al.'s (1981) innuendo research all shed light on the incidences that sparked this research. Certainly, they help to explain why students accepted the rumors so readily, and why attempts to dispel the rumors may have been ineffective.

The present study seeks to examine how reporting rumors of crime and reporting denials affect perceptions of campus safety. The design was inspired directly by the case on our campus, but closely mirrors Wegner et al.'s (1981) innuendo research. Participants read headlines and short articles reporting on increases in sexual assaults. There were four experimental conditions: (a) increase in assaults reported as fact (true condition); (b) assaults reported as a rumor (rumor condition); (c) university officials denying the rumors (denial condition); and (d) reports that outside experts had proven the rumors to be false (untrue condition). Other participants read neutral control headlines. Participants then rated the perceived safety of the university referred to in the stories.

We predicted a pattern of results similar to Wegner et al. (1981) and supported by the research on rumors and rumor denials. Obviously, we predicted that reporting the sexual assaults as fact would lead to the greatest concerns for safety, while the neutral controls would lead to the least concerns. In addition, we made the following three predictions about the results of the rumor, denial, and untrue conditions.

*Hypothesis 1.* Reporting the rumors will lead to increased concerns about safety, although concerns will not be as high as in the true condition.

*Hypothesis 2.* Reports of denials from university officials will lead to fewer concerns compared to the straight reporting of rumors or facts, but will not be as effective as reports that the rumors have been proven to be untrue by an impartial source. The denial condition also will have higher levels of concern than will the control condition.

*Hypothesis 3.* The untrue condition itself will lead to increased concerns about safety when compared to the control condition.

### Study 1

We developed several forms of newspaper headlines and short articles that either presented sexual assaults as a fact, as a rumor, as a denied rumor,

or as a proven falsehood. In addition to the various forms of headlines, we examine a credibility variable of "news reporting source." A longstanding finding in persuasion research is that information from more credible sources is more persuasive than is information from less credible sources (Hovland & Weiss, 1951; Petty & Cacioppo, 1986). Wegner et al. (1981), however, found that the credibility of the source (i.e., quality of the newspaper) had little effect on perceptions.

The present study includes a news source credibility variable in an attempt to determine if reports from a less reputable news source will influence the impact of the rumor headlines. In order to closely replicate the incident that inspired the study, newspaper headlines were purportedly from either a campus newspaper (low credibility) or a local city newspaper (higher credibility).

### *Method*

#### *Participants*

Participants were 138 undergraduate, general psychology students who volunteered to participate. The students received extra credit for participating.

#### *Stimulus Material*

*Newspaper headlines and articles.* A set of five headlines and short articles was arranged on a single sheet of paper in a pattern similar to the front page of a newspaper. The articles purportedly pertained to Central Michigan University in Mount Pleasant, Michigan. We chose Central Michigan University because it was likely to evoke neutral responses. Our students were unfamiliar with the college and would not have preconceptions about the campus or level of crime in the community. Also, the college was not associated with a large city. It would be possible for participants to separate opinions about the safety on campus from crime issues in the larger community. That might not be possible for a college located in a large urban area like Chicago or Detroit.

The name of the newspaper from which the articles supposedly were drawn was printed in boldface and in 36-point font at the top of the page. The newspaper was identified as either the *Central Michigan Press* (a campus newspaper) or the *Mount Pleasant News* (a local city newspaper). This manipulation represented the reporting source credibility manipulation, with the campus newspaper expected to be a less credible source than the city newspaper.

The five headlines/articles were presented in separate text boxes, with four articles arranged horizontally and one article arranged vertically. The articles under each headline were not complete, but were three to four sentences long and were designed to look like synopses or the beginning of an extended article. There were four filler articles that were designed to provide neutral information about the college (e.g., "Mascot Volunteers Needed," "Nobel Prize Winner to Speak on Campus"). These articles were identical across all conditions.

The key headline dealt with the issue of sexual assault on the Central Michigan University campus. This headline was manipulated in five different forms (true, rumor, denial, untrue, and control) to test for rumor/innuendo effects. In the true condition, the headline was an assertion of the problem as a fact ("Sexual Assault is an Increasing Problem on Campus"), and the article stated that recent campus crime reports have shown an increase in the number of sexual assaults on campus. In the rumor condition, the headline raised the issue of sexual assaults as a question ("Is Sexual Assault an Increasing Problem on Our Campus?"), and the article reported rumors of recent sexual assaults, clearly identifying them as rumors only. In the denial condition, the headline read "Administration Denies Rumors of Sexual Assault," and the article quoted university officials as saying that there was no truth to rumors of a recent increase in sexual assaults on campus. In the untrue condition, the headline read "Campus Sexual Assault Rumors Proven Untrue," and the article reported that rumors of sexual assault had been proven to be untrue by a reputable investigative organization that was not affiliated with the university. The neutral condition headline read "Campus Crime Reports Available," and the article stated that the campus recently had released its yearly crime report.

Table 1 contains the texts of the headlines and the articles. Together, the newspaper source and headline form yielded a 2 (Reporting Source Credibility: high vs. low)  $\times$  5 (Headline Form: true, rumor, denial, untrue, or neutral) between-subjects factorial design.

*Dependent measures.* A series of 20 statements was printed on a separate page, which instructed participants to rate their agreement with the statements based on the articles they had just read. The statements were rated on a 6-point scale ranging from 1 (*strongly agree*) to 6 (*strongly disagree*).

There were 5 statements pertaining to campus safety issues. These statements are "Crime is a problem on this campus," "The administration should spend more money on security," "Females on this campus should use escorts when walking alone at night," "Students are safe attending this school," and "Sexual assault is a problem on campus." There were 4 statements that assessed believability and the trustworthiness of the newspaper (e.g., "Newspaper articles like these are a reliable source of information,"



Table 1  
*Text Used in Key Experimental Conditions for Studies 1 and 2*

Condition	Headline	Text
True	Sexual Assault is an Increasing Problem on Campus	Recent campus crime reports show an alarming rise in the number of sexual assaults and attempted assaults occurring on campus. Twice as many reports have been made compared to last year at this time, including the recent assault of two first-year students at an on-campus party last month.
Rumor	Is Sexual Assault an Increasing Problem on Our Campus?	Is sexual assault a bigger problem than we think? Although there are no official campus reports, rumors have been circulating that there has been a considerable increase in the amount of sexual assaults happening on campus. Rumors of residence-hall rapes have been sweeping through campus.
Denial	Administration Denies Rumors of Sexual Assault	University officials have released a statement today responding to the recent rumors of an increase in sexual assaults on campus. "There is absolutely no truth to rumors of a recent rise of sexual assaults occurring on campus," the Director of Security reported. The Vice President of Student Affairs also stated that "Security and administration maintains the safest possible environment for students."
Untrue	Campus Assault Rumors Proven Untrue	An intense study by an independent group, not affiliated with the university, has concluded that the rumors of increased sexual assaults on campus are untrue. The group examined actual crime reports but also examined the rumors by interviewing students. The group stated that there is no truth to these rumors, and they resemble a case of an "urban legend."
Control: Study 1	Campus Crime Reports Available	Campus crime statistics for 1999-2000 are now available. Copies of this report will be available to each student or faculty member upon request. Copies may be requested at the security office or may be viewed online on the university homepage. This report will also be published in the course catalog.
Control: Study 2	Prospective Students Coming	Starting next week, the campus will host prospective students and their parents. Events will include formal meetings and tours, but campus officials also invite current students to talk to visitors they see on campus about what it is like to live on campus and in the community.

and “News articles like these are important in keeping students informed”). The remaining 11 questions pertained to the filler headlines and were statements about various areas of college life (e.g., “This university has school spirit,” and “Faculty members care about student education”). Key statements were distributed evenly among the filler statements.

### *Procedure*

Participants read and signed a standard informed-consent form and then received the stimulus material. Materials were passed out to participants in a random order, thus assuring random assignment to condition.

Participants were instructed to read the headlines and articles carefully and try to form an impression of the campus. When participants finished reading the headlines, they turned the page and then were instructed to rate their impressions of the university on the 20 statements. They were asked not to look at the headlines any further and were told that the statements were designed to tap into their overall impressions of the university and may not apply specifically to the articles.

When they were finished, participants turned in their completed materials and were debriefed and thanked for their participation. Debriefing included informing students that the articles were fictional and developed solely for this research, and that they did not reflect real events at Central Michigan University.

### *Results*

A manipulation check was performed on the measures of (newspaper) source credibility. The questions measuring the newspapers' credibility were combined into a single score, with higher numbers indicating higher credibility. The scale had an overall alpha level of .73. Collapsed across headline condition, the credible source (town newspaper;  $M = 4.14$ ,  $SD = 1.00$ ,  $n = 69$ ) did not differ from the less credible source (student newspaper;  $M = 4.27$ ,  $SD = 0.98$ ,  $n = 69$ ),  $F(1, 136) = 0.65$ ,  $p = .42$ . Participants did not view the student newspaper as less credible than the small-town newspaper. However, the means indicate that participants found both newspapers to be credible. To test this, all scores were combined and compared in a one-sample  $t$  test against the scale midpoint (3.50). The ratings of credibility were significantly higher than this midpoint,  $t(137) = 8.36$ ,  $p < .001$  (two-tailed).

The statement “Students are safe attending this school” was reverse-scored, and then responses on all five statements measuring perceptions of crime and safety were combined into a single score. For ease of interpretation, this overall

score was reversed so that higher numbers indicate more concerns about crime and safety. Reliability testing on the scale shows an overall alpha of .80. A 5 (Headline Form) × 2 (Source Credibility) ANOVA reveals no significant interaction,  $F(4, 128) = 0.51, p = .73, d = .19$ ; nor any significant main effect for type of newspaper,  $F(1, 128) = 0.53, p = .47, d = .19$ . There was, however, a main effect for type of headline,  $F(4, 128) = 13.98, p < .001, d = 1.00$ . Given these results, and the results of the manipulation check, we collapsed across newspaper type for all of the remaining analyses.

As predicted, the true condition had the highest concerns about safety ( $M = 4.38, SD = 0.74, n = 26$ ), followed by the rumor condition ( $M = 3.92, SD = 0.93, n = 27$ ), the denial condition ( $M = 3.32, SD = 0.73, n = 28$ ), and the untrue condition ( $M = 2.88, SD = 0.72, n = 28$ ). Unexpectedly, the neutral condition ( $M = 3.27, SD = 0.91, n = 29$ ) fell between the denial and the untrue conditions.

Pairwise contrasts were conducted comparing each condition to the condition next to it. These show that each of the experimental conditions differed significantly from each other at the .05 level. The control condition did not differ significantly from either the denial or the untrue conditions. The results can be seen in Figure 1, and the results of the pairwise contrasts can be seen in Table 2.

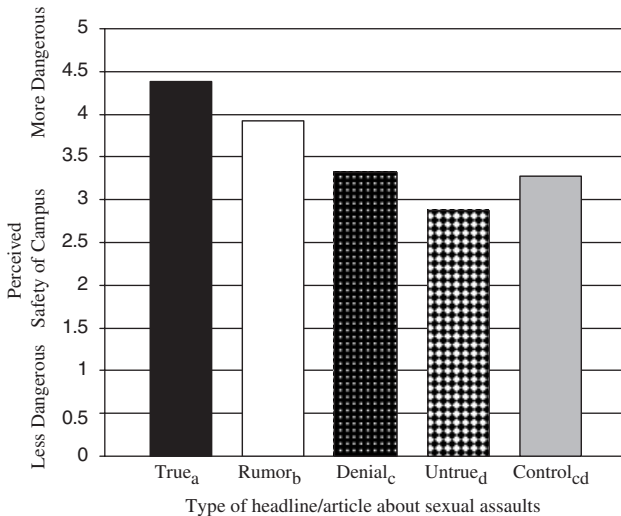


Figure 1. Mean perceptions of campus crime based on type of headline: Study 1. Shared subscripts indicate that conditions do not differ significantly.

Table 2

*Results of Planned Pairwise Contrasts: Study 1*

Comparison	<i>T</i>	<i>p</i>	<i>SE</i>	Effect size ( <i>d</i> )
True–Rumor	2.06	.041	.224	0.56
Rumor–Denial	2.72	.007	.220	0.75
Denial–Untrue	2.03	.044	.218	0.56
Control–Untrue	1.81	.073	.216	0.49
Denial–Control	0.24	.808	.216	0.07

*Discussion*

Study 1 lends only partial support for the hypotheses. As predicted, reporting the assaults as fact did lead to the highest levels of concern. In addition, as predicted in Hypothesis 1, simply reporting the rumors about sexual assaults increased concerns about crime and safety. This occurred even though the rumors were raised only in the form of a question, and the article made it clear that they were only rumors. Although these headlines led to lower concerns than did reporting the sexual assaults as a fact (true condition), they led to higher concerns compared to all of the other conditions.

The test of Hypothesis 2, whether or not denials from university officials would be effective, depends on whether they are compared to the rumor or true conditions or the proven falsehood (untrue) condition. The denial condition fell squarely between the two. Reporting that the administration denied the rumors led to increased concerns about safety when compared to the untrue condition, but these denials had less negative impact than did stating the rumors alone or stating the sexual assaults as fact. There was no support for Hypothesis 3. Reporting the rumors as proven falsehoods did not lead to increased concerns, compared to the neutral control.

The results of the neutral condition were not as predicted and made the tests of Hypotheses 2 and 3 highly problematic. This condition did not differ significantly from either the denial or the untrue conditions, and actually led to slightly greater concerns than did the untrue condition. It is possible that this condition was not as “neutral” as intended; that is, the headline and article mentioned the upcoming publication of the annual crime report. Although the article did not refer to the levels of crime increasing on campus, the mere mention of crime statistics may have made people think about

higher levels of crime. Participants may have been unaware that campuses are required to release these crime reports annually, and they might have assumed mistakenly that releasing a crime report meant that the campus had crimes to report. The faulty neutral control condition thus makes it impossible to test the effects of the denial and untrue conditions.

There was a second shortcoming of Study 1: There was no evidence for any reporting (newspaper) source credibility effect, either on the safety dependent variable or on the manipulation check. Apparently, we did not manipulate source credibility successfully. The small-town *Mount Pleasant News* and the campus newspaper did not differ in their credibility. The analysis did seem to indicate, however, that both newspapers were seen as reasonably credible sources of information.

## Study 2

Study 2 is designed to address some of the weaknesses in Study 1 and to obtain a clearer picture of the effects of reporting rumors of sexual assault. We made two main changes in Study 2. First, changes were made to the neutral control condition to remove references to crimes on campus and to provide a more neutral comparison condition. We predict that a more neutral control condition will allow for a better test of the hypotheses. Second, Study 2 dropped source credibility as a factor.

## *Method*

### *Participants*

The participants were 125 general psychology students. They received extra credit for participating in the study.

### *Stimulus Material and Procedure*

The materials and procedures used in Study 2 are identical to those that were used in Study 1, with the following exceptions. First, the neutral control condition was changed to make no reference to crime. The headline read "Prospective Students to Visit Campus," with a brief accompanying article about potential students visiting. Second, we dropped the source credibility variable, and all articles were identified as coming from the *Mount Pleasant News*. The dependent measures are identical to those that were used in Study 1.

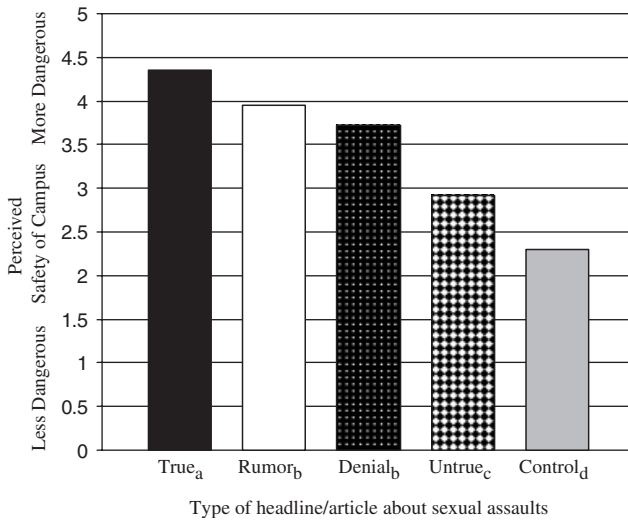


Figure 2. Mean perceptions of campus crime with non-crime-related control condition: Study 2. Shared subscripts indicate that conditions do not differ significantly.

### Results

As in Study 1, appropriate statements were reverse-scored, and all of the responses measuring perceptions of crime and safety were combined into a single score. Higher numbers indicate greater concern.

The alpha on the combined scale was .83. An ANOVA indicates a significant overall effect for type of headline,  $F(4, 120) = 35.65$ ,  $p < .001$ ,  $d = 1.19$ . As predicted, the true condition led to the most concern about crime ( $M = 4.36$ ,  $SD = 0.68$ ,  $n = 25$ ), followed by the rumor condition ( $M = 3.95$ ,  $SD = 0.85$ ,  $n = 25$ ), the denial condition ( $M = 3.72$ ,  $SD = 0.57$ ,  $n = 25$ ), the untrue condition ( $M = 2.92$ ,  $SD = 0.71$ ,  $n = 25$ ), and finally the control condition ( $M = 2.30$ ,  $SD = 0.66$ ,  $n = 25$ ).

Planned pairwise contrasts indicate that the rumor and denial conditions did not differ significantly from each other, but all of the other conditions differed from each other at the .05 level. The results are presented in Figure 2, and results of the pairwise contrasts are presented in Table 3.

### Discussion

The more neutral control condition used in Study 2 resulted in a clearer pattern of data and a better test of the hypotheses. As predicted, reporting

Table 3

*Results of Planned Pairwise Contrasts: Study 2*

Comparison	<i>t</i>	<i>p</i>	<i>SE</i>	Effect size ( <i>d</i> )
True–Rumor	2.07	.040	.196	0.60
Rumor–Denial	1.18	.240	.196	0.34
Denial–Untrue	4.08	< .001	.196	1.17
Control–Untrue	3.13	.002	.196	0.90
Rumor–Control	8.40	< .001	.196	2.43
Denial–True	3.26	.001	.196	0.94

the sexual assaults as fact led to the highest levels of concern, while the neutral control condition with no mention of crime led to the lowest levels. As can be seen in Table 3, planned contrasts show that concern levels in the fact condition were significantly higher than the three rumor conditions combined, while levels in the control condition were significantly lower than the three rumor conditions combined.

As predicted in Hypothesis 1, reporting the assaults as rumors (rumor condition) led to increased concerns about crime. This condition showed significantly higher levels of concern than did either the untrue condition or the control condition. This demonstrates that reporting rumors can lead to increased concerns. Participants do not discredit information completely if it is reported as a rumor, although this information led to lower concerns than did the assaults reported as fact.

Support for Hypothesis 2—that denials from university officials would lead to fewer concerns compared to the reporting of rumors alone, but would not be as effective as reports of the rumors being disproved by an impartial source—was mixed. The denial condition led to significantly lower concerns than did the true condition, but the concerns raised by the denial were not significantly lower than those raised by simply reporting the rumors. In addition, the concerns raised by the reports of the denials were significantly higher than the concerns raised by the reports that the rumors had been proven to be untrue. These findings suggest that denials from the university officials were not completely effective in eliminating the negative impact of the rumors.

The data supported Hypothesis 3: The untrue condition led to increased concerns about safety when compared to the control condition. Although this condition led to significantly lower safety concerns than any of the other

experimental conditions, it still was significantly higher than the neutral control.

### General Discussion

In both studies, reporting the rumors and reporting the denials by university officials led to some increased concerns about safety on campus. Pointing out that the information was based on rumor, or reporting denials of the rumors from university officials, did lead to lower levels of concern than did reports of the crimes as fact. However, they led to higher levels of concern when compared to the no-crime neutral control of Study 2 or the proven falsehood conditions in both studies.

This seems to replicate rumor denial research by Tybout et al. (1981) and to mirror Wegner et al.'s (1981) innuendo research. Rumors seem to be treated as "almost" facts; and when they are reported, they have a significant impact on attitudes. Also, denials from those with a vested interest were not entirely effective at eliminating the negative effect of the rumors. In fact, it appears that any mention of sexual assaults led to some level of increased concerns about safety.

Part of the reason that denials and even reports of proven falsehoods (untrue condition) did not erase completely the effect of the rumors of sexual assaults may have to do with how the information is encoded. According to Wegner (1989), the topic (e.g., sexual assaults) and the discounting information (e.g., denials or rumors proven to be untrue) are two separate pieces of information. The subject adds information that the reader never had before (e.g., possibility of a serial rapist), and she will process automatically and elaborate on that information. This elaboration may be mediated, but will never be eliminated, by further information discounting the subject (Gilbert, 1991).

The denial or discounting cognition will never erase the original cognition. This effect appears in research on belief persistence, where participants continue to believe information even after they are told that the information is false (Anderson, Lepper, & Ross, 1980). Belief persistence can be so powerful that subjects will continue to believe false performance feedback (Ross, Lepper, & Hubbard, 1975) and will do so even if they are told beforehand that the feedback they will receive is false (Wegner, Coulton, & Wenzlaff, 1985). This belief persistence may explain why rumors may continue to influence attitudes even when participants are told that the rumors are false.

There are at least two practical lessons that can be taken from these results. First, the media needs to be careful about reporting rumors. Reported rumors can lead to concerns about safety almost as extreme as the



concerns raised by stating the sexual assaults as fact. Even reporting that the rumors have been proven to be false can have a negative impact. With the present study, we cannot examine the effects on people who have heard the rumors already. It is possible that denials and reports disproving rumors would lower concerns among those who had heard the rumors already. But at least among those who had not been exposed to the rumors previously, these results suggest that reporting the rumors may have the opposite effect as was intended. This seems to be especially relevant in situations in which the messages of denials are likely to reach a wider audience than the rumors themselves reached.

Another lesson to be learned from this research has to do with how organizations should deal with rumors. It is fair to assume that in the case on our campus, college administrators were concerned about student safety, believed that the rumors were false, and felt that reassuring the students would calm fears among students. However, publicly denying rumors may not eliminate their impact entirely, especially if the denial comes from a source with a vested interest. The damage done by the rumors cannot be erased completely by using a vested-interest denial. However, publishing reports that the rumors were proven to be untrue by a neutral party did seem to be fairly effective.

In both studies, the reports led to significantly lower concerns than did the denial condition and, in fact, in Study I did not differ from the control. If organizations want to dispel rumors, this research seems to suggest that an investigation and a report from an uninvolved third party would be more effective.

#### References

- Allport, G. W., & Postman, L. J. (1947). *The psychology of rumor*. New York: Holt, Rinehart, & Winston.
- Anderson, C. A., Lepper, M. R., & Ross, L. (1980). Perseverance in social theories: The role of explanation in the persistence of discredited information. *Journal of Personality and Social Psychology*, *39*, 1037-1049.
- Bennett-Johnson, E. (1997). The emergence of American crime and violence on the college and university campus. *College Student Journal*, *31*, 129-136.
- Bogal-Allbritten, R., & Allbritten, W. L. (1992). An examination of institutional responses to rape and acquaintance rape on college campuses. *Family Violence and Sexual Assault Bulletin*, *8*, 20-23.
- Bordia, P., DiFonzo, N., & Shulz, C. A. (2000). Source characteristics in denying rumors or organizational closure: Honesty is the best policy. *Journal of Applied Social Psychology*, *30*, 2309-2321.

- Bordia, P., DiFonzo, N., & Travers, V. (1998). Denying rumors of organizational change: A higher source is not always better. *Communications Research Reports, 15*, 188-197.
- DiFonzo, N., & Bordia, P. (1997). Rumor and prediction: Making sense (but losing dollars) in the stock market. *Organizational Behavior and Human Decision Processes, 71*, 329-353.
- DiFonzo, N., Bordia, P., & Rosnow, R. L. (1994). Reining in rumors. *Organizational Dynamics, 23*, 47-62.
- Eagly, A., Wood, W., & Chaiken, S. (1978). Causal inferences about communicators and their effect on opinion change. *Journal of Personality and Social Psychology, 36*, 424-435.
- Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford, CA: Stanford University Press.
- Fisher, B. S. (1995). Crime and fear on campus. *Annals of the American Academy of Political and Social Science, 539*, 85-101.
- Gilbert, D. (1991). How mental systems believe. *American Psychologist, 46*, 107-119.
- Hovland, C. I., & Weiss, W. (1951). The influence of source credibility on communication effectiveness. *Public Opinion Quarterly, 15*, 635-650.
- Iyengar, S., Kinder, D. R., Peters, M. D., & Krosnick, J. A. (1984). The evening news and presidential evaluations. *Journal of Personality and Social Psychology, 11*, 778-787.
- Iyer, E. S., & Debevec, K. (1991). Origin of rumor and tone of message in rumor quelling strategies. *Psychology and Marketing, 8*, 161-175.
- Koller, M. (1992). Rumor rebuttal in the marketplace. *Journal of Economic Psychology, 13*, 167-186.
- Koss, M. P., Gidycz, C. A., & Wisniewski, N. (1987). The scope of rape: Incidence and prevalence of sexual aggression and victimization in a national sample of higher education students. *Journal of Consulting and Clinical Psychology, 55*, 162-170.
- O'Connell, M., & Whelan, A. (1996). The public perception of crime prevalence, newspaper readership, and "mean world" attitudes. *Legal and Criminal Psychology, 1*, 179-195.
- Petty, R. E., & Cacioppo, J. T. (1986). *Communication and persuasion: Central and peripheral routes to persuasion*. New York: Springer-Verlag.
- Pratkanis, A. R., & Aronson, E. (1992). *Age of propaganda: The everyday use and abuse of persuasion*. New York: W. H. Freeman and Company.
- Rosnow, R. L. (1991). Inside rumor: A personal journey. *American Psychologist, 46*, 484-496.
- Rosnow, R. L., & Fine, G. A. (1976). *Rumor and gossip: The social psychology of hearsay*. New York: Elsevier.

- Ross, L., Lepper, M. R., & Hubbard, M. (1975). Perseverance in self-perception and social perception: Biased attributional processes in the debriefing paradigm. *Journal of Personality and Social Psychology*, *32*, 880-892.
- Schwartz, M. D., & Dekeseredy, W. S. (1997). *Sexual assault on the college campus*. Thousand Oaks, CA: Sage.
- Tybout, A. M., Calder, B. J., & Sternthal, B. (1981). Using information processing theory to design marketing strategy. *Journal of Marketing Research*, *18*, 73-79.
- Walker, C. J., & Blaine, B. (1991). The virulence of dread rumors: A field experiment. *Language and Communication*, *11*, 291-297.
- Wegner, D. M. (1989). *White bears and other unwanted thoughts: Suppression, obsession, and the psychology of mind control*. New York, NY: Viking.
- Wegner, D. M., Coulton, G., & Wenzlaff, R. (1985). The transparency of denial: Briefing in the debriefing paradigm. *Journal of Personality and Social Psychology*, *49*, 338-346.
- Wegner, D. M., Wenzlaff, R., Kerker, M. R., & Beattie, A. E. (1981). Incrimination through innuendo: Can media questions become public answers? *Journal of Personality and Social Psychology*, *40*, 822-832.