

FEAR AROUSAL, PRIOR PRODUCT USAGE, AND PERSUASION: AN ADVERTISING STUDY

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An experimental test of the optimal level of fear arousal on product and brand intentions was conducted. The impact of high and low prior product usage was also examined. Five increasingly fear-arousing print ads established a continuum of fear arousal.

INTRODUCTION

The persuasive technique of using threat and fear arousal in marketing has received more attention in recent years as marketing scholars attempt to understand the effectiveness of this technique (e.g., Tanner, Hunt, and Eppright 1991). Hundreds of studies in the fields of social psychology, communication, and speech have been conducted on the use and persuasive effectiveness of threats, warnings, and fear arousal. Unfortunately, there have been numerous conflicting findings and a full understanding of how these tactics operate has yet to emerge.

LITERATURE REVIEW AND HYPOTHESES

The emotion of fear influences short term attitudes and behavior directly. Strong fear is effective in arousing interest and attention (Janis and Feshbach 1953) and short term attitude change (Leventhal and Niles 1964). Berkowitz and Cottingham (1960) found that strong fear was more persuasive than weak fear when the communication was initially low in interest value (seat belt use), and that the dramatic impact of the strong fear communication made it more interesting than the weak fear message. Similarly, fear has been positively correlated with attention and interest (e.g., Dabbs and Leventhal 1966). In their meta-analysis Boster and Mongeau (1984) concluded that fear has a positive linear relationship with persuasion. However, in a study on AIDS-related health behaviors higher levels of fear tended to weaken the relationship between fear and intentions and increased anxiety reducing behav-

iors with homosexual subjects. In contrast, fear-arousal had a positive effect on intentions with heterosexual subjects (Van der Velde and Van der Pligt 1991). In the Van der Velde study, fear had a positive impact on intentions in the group that had low initial concern with the threat but with the group that had high preexisting concern, additional fear arousal was counterproductive. Fear is a transient state which makes threat information more salient and then dissipates rapidly (Beck and Lund 1981). However, fear can be so disturbing that individuals react by attempting to reduce the fear resulting in defensive avoidance response which interferes with accepting the recommendation (e.g., Leventhal, Singer, and Jones 1965). Some researchers have even reported evidence of boomerang effects where threat and fear arousal have actually lead to an increase in the maladaptive behavior (e.g., Rogers and Mewborn 1976).

Resistance theory (Stuteville 1970) suggests that only low levels of fear will have a positive effect on persuasion because higher levels of fear cause defensive avoidance responses. Curvilinear hypotheses of fear arousal effectiveness (e.g., Janis 1967) state that moderate levels of fear are more persuasive than either high or low levels. There is no attitude change at low levels of fear because consumers do not believe there is a need for change. However, when fear becomes too intense defensive avoidance interferes with recommendation acceptance. The optimal level of fear is therefore a moderate point between these two extremes. Janis and Leventhal proposed that this moderate point changed depending on "numerous content, situational, and dispositional factors" (Janis and Leventhal 1968, p. 1056).

The topic of overexposure to the sun is not of such high concern to either the low or high prior user groups to cause significant levels of prior anxiety. Symptoms of overexposure to the sun are unlikely to be present for

many in the sample and thus the negative effects of the threat will be discounted because they will occur in the future. Thus, it is hypothesized that the fear-arousing ads will stimulate interest, attention, and lead to persuasion. In this experiment, fear will not be excessively high and cause counterproductive levels of defensive avoidance. Five fear-arousing ads are utilized, each offering a higher level of fear arousal from very low to very high. Such a broad manipulation of fear is unprecedented in the literature and allows an excellent opportunity to assess whether fear arousal has positive, negative, or curvilinear effects on persuasion. Following Rogers (1984) intention is the outcome variable rather than attitude because it has proven to be a more sensitive measure of the impact of threat appeals.

H_{a1} The ads will have a positive effect on product intentions when compared to the baseline of prior use of sunscreen.

H_{a2} The high fear-arousing ads will cause higher brand and product intentions than the low fear-arousing ads. There will be no resistance or curvilinear effects.

Fear-arousing messages have differing effects on various market segments. For consumers with moderate or high prior use of sunscreen, consistency effects suggest that there will be a definite positive linear pattern across the fear-arousing ads. Those who are currently using sunscreen have already accepted the threat and the recommendation. Social judgement theory (Sherif and Sherif 1967) posits that one's own attitude is a powerful anchor and messages that are relatively close to that anchor are assimilated and seen as closer than they really are. Messages that are very discrepant from the anchor are contrasted and seen as further away than they really are. The theory defines the range of positions that are close enough to the anchor to be acceptable as the latitude of acceptance. The range of positions that are too far away from the anchor are labeled the latitude of rejection. The latitude of non-commitment describes those positions that the individual finds neither acceptable nor unacceptable. If a position falls within the latitude of acceptance, persuasion is likely; if it falls within the latitude of rejection, persuasion is unlikely. The sunscreen fear-arousing messages will fall within the latitude of acceptance. The message serves as a reinforcement of their prior behavior. Following Pallak et al. (1972), the extreme consonant message is expected to be most persuasive. In this case the extreme consonant message is the very high fear-arousing ad, the next extreme message is the high fear-arousing ad and so forth. The high fear-arous-

ing ads fall within the latitude of acceptance and the high level of threat makes them more extreme and thus more persuasive than the low fear-arousing ads.

There is evidence that consistency effects manifest themselves in fear appeal experiments. In a series of three studies Horowitz discovered that the fear and persuasion relationship is moderated by whether subjects voluntarily participate in the experiment (Horowitz 1969, 1972; Horowitz and Gumenik 1970). For volunteers there was a strong positive correlation between fear and compliance, but for nonvolunteers there was no relationship. Boster and Mongeau (1984) replicated these findings in a meta-analysis of 20 studies. One explanation for these results is that the volunteers processed the fear-arousing message more carefully to remain cognitively consistent with the act of volunteering and thus were more affected by the message than were nonvolunteers who were not so motivated to process the message. Other variables, such as prior use of the product or health consciousness, could function in a similar consistency producing fashion. Colburn (1967) offers related evidence suggesting a consistency effect between perceived severity of the threat and the stridency of the message. In this experiment high prior users of sunscreen presumably view overexposure to the sun as a more serious threat than do low prior users and following Colburn would react more positively to high rather than low fear-arousing ads.

H_{a3} There will be a positive linear pattern across the fear-arousing ads on product and brand intentions in the high prior use group.

Because the fear-arousing messages are inconsistent with the existing behavior of the low prior users, this group is more likely to deny the threat or otherwise defensively avoid the message. This group views overexposure to the sun as a less severe threat and based on Colburn's (1967) findings would react more favorably to a lower level of fear arousal. In terms of social judgment theory, the high fear-arousing ads are too discrepant with the existing attitudes and behavior of the low user group and fall within the latitude of rejection. Lower level fear-arousing ads are less discrepant and would therefore be more persuasive than the high fear-arousing ads.

Reactance theory (Brehm and Brehm 1981) also supports the hypothesis that high fear-arousing ads will be less persuasive for the low user group. Because the high fear-arousing ads are more strident they represent a greater threat to the freedom of the low user group to

engage in unprotected sun exposure (e.g., tanning). The theory of psychological reactance states that there is a positive correlation between the degree the message recommendation is perceived to be a restriction of freedom and the likelihood the recommendation will be rejected.

It is hypothesized that for the low prior user group, low or moderate fear-arousing ads will be superior to high fear-arousing ads. Lower levels of fear-arousing ads will communicate the danger while minimizing the inconsistency with prior behavior, the level of fear arousal will be consistent with perceived severity, and lower perceptions of freedom restriction will occur.

- Ha₄ In the low prior use group, low and moderate fear-arousing ads will have a greater positive effect on intentions than high fear-arousing ads.

There are a number of reasons why the low prior users group may be using sunscreen infrequently or not at all including: ignorance of the threat; high value placed on the benefits of tanning; and the perception that they are not vulnerable to overexposure to the sun because they have a darker complexion. It is expected that high prior users will value tanning less than low users and low users will be darker complected than high users.

- Ha₅ Perceived benefits-of-a-tan will be higher in the low compared to the high prior use group.

- Ha₆ Complexion will be darker in the low compared to the high prior use group.

Intention is broken down into product and brand dimensions. There may be differences in the persuasive impact of fear-arousing ads on the product sunscreen versus a specific sunscreen brand. It is possible that fear-arousing ads are more effective in positively shifting attitudes toward product use than they are in stimulating brand trial or loyalty. The viewer's focus on reducing anxiety via any reasonable solution, which would include all products in the category, may overwhelm the specific brand preference advocated by the ad. This would be especially true when consumers perceive little difference in effectiveness and convenience among brands. This reasoning is supported by findings in the health literature that individuals frequently modify recommended treatments and self-medicate (Leventhal, Safer, and Panagis 1983). It is also possible that when little brand efficacy differentiation exists negative feelings resulting from high fear-arousing ads may spillover to the brand but not to the

product. Consumers may resent the advertiser for causing fear and discomfort and not purchase the brand but instead purchase a competitive brand to avoid the threat.

- Ha₇ Fear-arousal will have a greater positive effect on product intentions than brand intentions.

SAMPLE AND TOPIC

Female college students from 3 different mid-east universities and office workers from a mid-eastern city comprised the sample. The sample size was 292, with an average age of 26.4, which consisted of a range from 19 to 50 years old. The median age was 24. The ads were targeted to women and thus the study excluded males.

METHODOLOGY

The factors in the experiment were fear-arousing ads and prior product usage. The ads ranged from a very low level of fear-arousal to a very high level (Exhibits I-V). Fear-arousal was manipulated via magnitude of noxiousness. Magnitude of noxiousness was enhanced through increasingly noxious outcomes, semantic vividness, graphic visuals, and personalization of the ad model. Noxiousness in the ads ranges from being unfashionable, to wrinkling, to skin cancer and death, and finally to a combination of death and facial disfigurement. In each threat ad, XYZ sunscreen is recommended as an effective way to protect oneself. Sunscreen was defined as having a "sun protection factor" (SPF) of 15 or greater.

RESULTS

Cronbach's (1951) coefficient alphas assessing the reliability of the measurement scales were very good, with fear at .89, benefits-of-a-tan .93, brand intentions .94, product intentions .95.

Two-way ANOVA was used to test the fear manipulation, with the ads and prior use as the factors. The fear manipulation was very successful. Fear arousal showed clear discrimination across the ads, $F(4,282) = 36.72$, $p < .0000$. There was no difference in fear arousal between low and high prior users, $F(1,282) = .06$, $p < .8078$. There was also no interaction between fear ads a prior use, $F(4,282) = .39$, $p < .815$. Each ad stimulated progressively higher levels of fear in the predicted order from the low to very high fear-arousing ads ranging from 1.56 to 4.09 on a

7-point scale. All pairwise comparisons were significant except for the difference between the moderate (3.55) and high (3.67) fear-arousing ads. Given that print advertisements were utilized, the level of fear aroused was substantial. This supports the notion that print advertisements can arouse fear. Nevertheless, one could argue that 4.09 on a 7-point scale is not a very high level of fear. The key point is that a continuum of fear was established over 5 ads which presents the opportunity to test curvilinear theories of fear arousal. However, because the range of fear was restricted from 1.56 to 4.09 on a 7-point scale we were unable to examine the full effects of fear arousal.

As expected there were significant differences in prior use of sunscreen between the low and high user groups $F(1,273) = 634.74$, $p < .0000$. On an 11-point scale from 0 to 10 the high prior use group was 5.58 in reported use of sunscreen and the low user group was .87.

To test H_{a1} a series of paired *t*-tests and ANOVA were performed. The ads significantly affected intentions to use the product. Before viewing the ads the sample reported a prior use of sunscreen of 3.20 and after viewing the ads it was 4.89, $t = -14.09$, $p < .0000$. This was true for both the low prior use group (.80 vs. 2.73, $t = -10.72$, $p < .0000$) and the high prior use group (5.65 vs. 7.10, $t = -9.26$, $p < .0000$). Considering that this brand was positioned as a new brand the ads as a group had a sizeable positive impact on brand intentions (4.09). This effect was much greater for high prior users (5.58) than low prior users (2.70) $F(1,282)$, $= 113.84$, $p < .0000$. Thus, considering the ads as a whole there were no boomerang effects and strong support for H_{a1} .

MANOVA was used to test the impact of prior use on product and brand intentions. There was a significant difference between high and low prior users on product intentions (6.97 vs. 2.90) and brand intentions (5.58 vs. 2.70), Wilks' $\lambda = .5122$, *d.f.* = 2, $F = 115.72$, $p < .0001$.

To test H_{a2} , a MANOVA was conducted to determine the impact of the fear-arousing ads on product and brand intentions. The fear-arousing ads also had a significant effect on product and brand intentions, Wilks' $\lambda = .9194$, $F = 2.61$, *d.f.* = 8, $p < .0085$. Generally, high fear-arousing ads were superior to low fear-arousing ads supporting H_{a2} . On product intentions there was a positive linear pattern from low fear arousal to high fear-arousal, except that the moderate fear-arousing ad outscored the high fear-

arousing ad (i.e., 4.02, 4.38, 5.03, 4.91, 5.95). The same pattern was found with brand intentions but the scores were lower (i.e., 3.5, 3.59, 4.61, 4.03, 4.65). There was no evidence of any curvilinear effects.

Breaking the independent variables down by product and brand variables the resulting ANOVAs reveal that there were significant differences between the fear-arousing ads on product intentions $F(4,275) = 3.77$, $p < .0053$ but not on brand intentions $F(4,282) = 1.56$, $p < .1846$. The pattern of means and pairwise comparisons for the fear-arousing ads on product intentions reveals that the very high ad (5.79) was superior to all other ads and the moderate ad (5.03) was superior to the very low ad. H_{a3} stated that there would be a positive linear pattern in the fear-arousing ads across intentions in the high prior use group. This was not the case. The ads had no significant effect on product intentions $F(4,136) = .39$, $p < .8174$, or brand intentions $F(4,136) = 1.83$, $p < .1261$ in the high prior use group. However, in the low prior use group there was a significant difference between the fear-arousing ads on product intentions $F(4,139) = 4.72$, $p < .0013$ and brand intentions $F(4,146) = 2.82$, $p < .0273$. Pairwise comparisons of the ads on product intentions reveal that the very high ad (4.18) is superior to every other ad and that the very low ad (1.69) is inferior to all other ads. The pattern of the means are generally positive linear, from low to high fear-arousal (i.e., 1.69, 2.58, 2.77, 2.79, 4.18). These results do not support H_{a4} , which states that low and moderate fear-arousing ads would be most effective with this group.

The pairwise comparisons on brand intentions in the low prior use group show similar results. The very low ad (1.58) is significantly less effective than each of the other ads. In this case, the means reveal an even more distinct positive linear pattern from very low to very high fear-arousal (e.g., 1.58, 2.67, 2.76, 3.05, 3.44). Again, H_{a4} is not supported. The effectiveness of high fear-arousing ads in the low prior use group is even more surprising when one considers that on the basis of perceived benefits-of-a-tan and complexion the low prior use group had beliefs and physical characteristics that would presumably inhibit the use of sunscreen. Specifically, low prior users valued the benefits of having a tan (5.66) more than the high prior use group (4.89) $F(1,290) = 14.11$, $p < .0002$ and reported themselves as having a darker (3.23) complexion than high users (2.52) $F(1,284) = 18.90$, $p < .0000$. These results were expected and support H_{a5} and H_{a6} .

The fear arousing ads as a group had a greater impact on product purchase intentions (4.88) than on brand

intentions (4.08) ($t = 7.36, p < .0000$). However, this effect was consistent across all levels of fear arousal. Higher levels of fear did not cause lower brand intentions and higher product intentions as hypothesized in H_{a7} . The high prior use group was the major cause of the difference between brand and product intentions. High prior users had significantly higher product intentions (7.10) than brand intentions (5.60) ($t = 8.01, p < .0000$). There were no differences between product and brand intentions with low prior users (2.81 vs. 2.67, $t = 1.59, p < .11$).

DISCUSSION

Generally, the ads had a positive impact on intentions and there were no boomerang effects. High fear-arousing ads were more effective than low fear-arousing ads on product and brand intentions. However, this effect was caused by the intentions of the low prior use group. Contrary to the hypotheses that high fear-arousing ads would be beyond the latitude of acceptance of the low prior use group, represent a restriction on their freedom, or be too inconsistent with their prior behavior, there were clear positive linear patterns from low to high fear-arousing ads for both product and brand intentions. Apparently, the arousal of fear focused the attention and interest of this group on the threat of overexposure to the sun and increased their intentions to protect themselves, both by the brand advertised and the product. This group did not react negatively to the strident fear-arousing messages as suggested by the consistency hypothesis and the theory of psychological reactance. This was true even though they valued the maladaptive behavior (e.g., tanning) and had darker complexions than the high user group. The low prior users were also much more inclined to purchase the brand compared to the product than were the high prior users. Nevertheless, the high prior use group had much higher brand and product intentions than the low prior user group. These findings suggest that practitioners should not assume that high fear-arousing messages are ineffective for groups who are not currently practicing the recommended behavior. The high and very high fear-arousing ads were quite severe and they were effective. The findings for this group support the notion that generally fear-arousal in communication has a positive linear effect on persuasion. There was a reasonable spread in fear-arousal across the ads and no curvilinear effects were found, providing no support for this theory. However, the range of fear arousal was somewhat restricted, thus a complete test of curvilinear effects was not possible. There was no support for resistance theory.

In the high prior user group the level of fear-arousal had no effect on intentions. There were no differences between the ads in this group and the hypothesized consistency effect did not occur. This was not due to a ceiling effect. The ads significantly raised product intentions over prior usage levels but there were no significant differences between the ads. Overall, intentions to use the brand were fairly high (5.58) but again, no differences between the ads. With this group, who was already familiar with the threat and engaging in the recommended behavior, fear arousal was inconsequential.

All the fear-arousing ads were more effective on product intentions than they were with brand intentions. However, this effect was consistent across all levels of fear arousal suggesting that high fear-arousing ads do not create negative spillover to the brand. Consumers in this experiment simply had higher intentions regarding the general product class of sunscreen rather than the brand mentioned in the experiment. Subjects in the experiment were instructed that the brand in the ads was a new brand that had not been named yet and therefore was being referred to as "XYZ." It is possible that the lack of brand name caused the higher intention levels for the product. The high prior user groups' familiarity with competitive brands probably lead to their higher intentions for the general product. In the low prior use group, the difference between brand and product intentions was only .14, whereas the difference in the high prior user group was 2.50. Nevertheless, the high prior users had much higher intentions to purchase the new brand (5.60) than the low users (2.67). The high prior users were simply more intent on purchasing the product (7.10).

CONCLUSION

Why was fear arousal very effective for low prior users and not effective for high prior users? One explanation is that fear arousal is most effective when initial concern and interest with the threat is low. In this case fear serves as a shock, creating interest and stimulating action. This was the case with the low prior users in this experiment. Increasing levels of fear created more interest and concern with this group that lead to increasingly higher intentions. This explanation also fits with the Van der Velde study (1991). In that experiment the heterosexual group had a comparatively lower concern for AIDS and fear arousal had a positive effect on intentions. Marketers dealing with topics in which the target market has a low level of interest and compliance should consider using a high fear-arousing message.

For groups who are already familiar with the threat and have a moderate or low level of concern, fear arousal has no shock effect and increasing fear has no effect. This was the case with the high prior user group. With a group in which preexisting concern with the threat is very high, fear may still have a counterproductive effect on accepting the recommended behavior. For example, fear had a counterproductive effect with the homosexual group in the Van der Velde study.

Finally, fear arousal does not necessarily cause negative affect to spillover onto intentions to purchase the brand advertised compared to purchasing competitive brands. One suspects that such negative spillover may occur if the ad was perceived as exaggerated or manipulative and further research on this issue is warranted.

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