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Effect of Informational Posting and Employee Inspection on Safety Hazard Reduction in a Retail Drug Store

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EFFECT OF INFORMATIONAL POSTING AND EMPLOYEE INSPECTION ON SAFETY HAZARD REDUCTION IN A RETAIL DRUG STORE

by

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EFFECT OF INFORMATIONAL POSTING AND
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Undesired safety conditions were operationally defined for a large retail drug store. The recording of unsafe conditions were conducted for two different employee shifts for ten weeks. A multiple baseline design (ABC-ACB) was used in which three conditions were introduced: (a) baseline, (b) public posting of a safety performance chart, and (c) individual employee inspections. Results indicated that the frequency of safety hazards declined 23% from baseline for the public post-condition and declined 44% for the employee inspection condition (averaged across both shifts). An advanced analysis of variance indicated significant mean differences ($p < .01$) between baseline and employee inspection for both shifts. An additional measure was taken correlating photograph ratings by employees on a safety dimension and an attractiveness dimension. The coefficient of correlation was statistically significant ($r = .76$; $p < .05$). The results indicate that a training program involving employee inspections may be an effective way of reducing undesirable safety conditions.

ACKNOWLEDGEMENTS

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Craig A. Berger

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TABLE OF CONTENTS

LIST OF FIGURES

CHAPTER I

INTRODUCTION

Industrial accidents in the United States are a major concern for employers and employees. Injuries totaled 2,300,000 in 1977; there were 12,500 deaths; employees receiving medical attention as a result of a work-related injury reached a staggering 11.4 million. A sum of 9.3 billion dollars was paid out in workman's compensation premiums in 1977; more was paid out in lost wages, medical expenses, insurance administration costs, property damages, and lost work time--roughly 17.8 billion dollars. Countless number of consumer accidents due to hazardous shopping conditions added more problems for organizations in terms of poor public relations as well as financial considerations (Accident Facts, Note 1; Oliveri, Note 2). In order to reduce these costs researchers have looked at various methods attempting to improve safety performance.

Two main areas seem to be dominant in recent attempts. One area deals with unsafe working conditions and the other area with unsafe employee behaviors. It should be noted, however, that supervisory factors such as assuring proper equipment maintenance and providing adequate operating procedures have been found as the most important facts for a successful safety management program (Fine, 1974).

That aside, current research has dealt with three main areas of measuring safety performance. These areas include the frequency of safety hazards (Sulzer-Azaroff & deSantamaria, 1980; Sulzer-Azaroff, 1978; Rhoton, 1980), the number of industrial accidents (Rubinsky & Smith, 1973; Smith, Anger, & Uslan, Note 3), and the conforming to specific safety regulations or requirements (Komaki, Barwick, & Scott, 1978; Laner & Sell, 1960). While traditional safety research dealt with personal traits and accident proneness, either consciously or unconsciously (Ellis, 1975), a recent trend is towards an applied behavior analysis approach.

Safe or unsafe subject performance has resulted in positive and aversive consequences in different settings. Positive consequences were arranged for desired conditions or behaviors in settings which include the coal mining industry, chemical plants, and automobile assembly plants (Fox, Note 4; Ritschl, Miran, Hall, Sigler & Hopkins, Note 5; Hermann, Note 6; Haynes, Note 7). Such consequences included trading stamps, lotteries, selected prizes, etc. Aversive consequences were applied to unsafe behaviors in industrial settings and service areas (Rubinsky & Smith, 1973; Leslie & Adams, 1973; Larson, Schnelle, Kirchner, Carr, Domash, & Risley, 1980). In one instance the researchers simulated an accident during training by mechanically spraying water in the face of a subject who operated a machine in such a way as to cause an accident if actual conditions were present.

The management of antecedent conditions has also been researched (Jason, 1979-1980; Laner & Sell, 1960). Posted signs or requests to initiate safe behavior were the key variables in those studies. It was found that safety posters with a specific message increased the number of safety requirements properly adhered to while a general message (e.g., "safety first") had no effect.

The largest area dealing with the management of consequences for safe or unsafe performance has been feedback and combinations of feedback with either positive or aversive consequences (Kim & Hamner, 1976; Komaki, Barwick, & Scott, 1979; Hopkins, Note 8; Sulzer-Azaroff, & deSantamaria, 1980; Rhoton, 1980; Zohar, Cohen, & Azar, 1980). Such manipulations included posting graphs, goal setting, supervisory praise, etc.

The results of the preceding research attempts seem to indicate that through an application of applied behavior analysis techniques you can obtain a significant increase in safe performances, reductions in reported injuries, and a decrease in the number of hazardous working conditions created by human performance (Sulzer-Azaroff et al., 1980; Komaki et al., 1978). These desirable results have been achieved through the use of performance feedback systems, praise contingent upon performance, specific instructional posters, simulated training devices, and various incentive packages.

A number of flaws in the current research seem to be present, however. The number of reversal designs possible in applied settings may be limited by the nature of the social setting in which the behavior takes place (Baer, 1968). Since reversal designs are effective in determining the effectiveness of an intervention strategy, this may be considered a major drawback. While some of the cited studies employ this design (Komaki et al., 1978), some do not (Smith, Anger, & Uslan, 1973). Other possible confounds are the generalizability of the sample (Rubinsky & Smith, 1973; Sulzer-Azaroff, 1978) and the reliability and objectivity of the studies (Rhoton, 1980; Smith et al., 1979).

The strategy of using various feedback systems to reduce safety hazards has been successful but the cause of the reduction in hazards is not clear. Since feedback strategies are usually combined with some other variable it is difficult to ascertain the effect of the feedback variable alone. Is the hazard reduction due to the publicly posted performance chart or the instructions that typically go with it? Could it be the praise from the supervisors which is so often applied simultaneously that produces the effect? Clear separation of different variables seems to be lacking and the need for this separation is important to determine the effect of one specific form of feedback on safety performance.

Also lacking in the research is the investigation of the extent to which an employee is involved in the safety program. Clearly the majority of the studies cited above indicate a high level of inactivity in terms of the employee's role in the safety program or, at the very least, the failure to talk about the role. When an employee is active with the implementation of an organizational program, there are some data to suggest that this employee becomes more responsible and, consequently, performs better (Paul, Robertson, & Herzberg, 1969). Perhaps whether or not an employee directly involved with the collection of safety hazard information is a significant variable and should be studied.

While providing a safe environment is important for the well-being of both employees and consumers, the physical appearance of a hazard-free store should also be studied. Does a hazard-free store induce the customers to stay in the store longer, return a second or a third time, or find shopping a pleasurable experience? Do employees consider a "safe" store a more desirable place to work than an "unsafe" store? Is a hazard-free store more attractive looking than a store full of safety hazards? Answers to these questions could lead to procedures that have a direct impact on the productivity and employee morale in a particular setting. If by decreasing the number of safety hazards within a setting you can obtain an attractive place to shop or work, you might increase employee morale and productivity as well as reduce the number of accidents.

The purpose of the present study is to investigate the effect of one variable in the feedback system (informational performance chart) in order to assess its single effect on hazard reduction. This study is also concerned with the individual employee and his/her contribution in reducing safety hazards. Employee perceptions of unsafe conditions and the effect of these conditions on attractiveness of the store itself will also be investigated.

CHAPTER II

METHOD

Setting

The study was conducted in a large retail drug store in southwestern Michigan. The store was divided into various departments which include cosmetics, camera, liquor, and a pharmacy. The study was initiated after a memo from the organizational safety director to all stores within the region. The memo stated a need for all the stores to be more safety conscious since a number of consumers and employees were being injured as a result of hazardous conditions within the stores. The experimenter approached the store manager and asked if there was a problem and, if so, what could be done to help alleviate it. After a short discussion the manager agreed to allow the experimenter to intervene.

Subjects

The subjects were the employees of the store and were classified as either full-time employees (9 a.m. - 5 p.m.) or part-time employees (5 p.m. - 9 p.m.). There were eight males and 10 females on the full-time shift, ranging in age from 23 to 51. There were six males and 10 females on the part-time shift and they ranged in age from 18 to 55.

Observational Recording

A list of 11 categories of safety hazards found within the store was developed through the cooperation of the organizational safety director, the management of the store, and the experimenter. The list covered all parts of the store and was operationally defined to avoid any ambiguities when the safety inspection was carried out. For example, the category of materials leaning on a display was defined as any store products on any shelf 3-1/2 feet or higher above the floor displayed in such a way as to have the products leaning at more than a 15 degree angle (Appendix B).

Data were recorded at randomly selected times between 12 p.m. and 4 p.m., for the full-time shift and between 5 p.m. and 9 p.m. for the part-time shift, Monday through Thursday for 10 weeks. The observer walked up and down every aisle and covered every part of the store's floor. All hazards as defined by the safety hazard checklist and operational definition sheet were recorded. The hazards were recorded at the end of each aisle to avoid any potential embarrassment to the individual responsible for that section of the store. At the end of the safety inspection the observer summed all hazards and recorded that number on the observation recording sheet. Interobserver reliability was assessed once a week using the percentage agreement method. The reliability observers were a psychology graduate student and a criminal justice undergraduate.

The experimenter explained, in detail, the safety conditions checklist and the operational definition sheet to the reliability observers. Each reliability observer was subjected to several trial inspections in order to ensure accuracy of their findings. Any ambiguities that arose as to what was considered a hazard was made clear at this time. Interobserver reliability was conducted throughout the course of the study, was carried out at different times for both shifts, and was done at randomly selected times. The experimenter and the reliability observer walked up and down every aisle in the store together and recorded any hazards as defined by the operational definition sheet at the end of each aisle. When the inspection was concluded, the experimenter and the reliability observer compared their safety condition checklists and summed all agreements and disagreements.

Interobserver reliability was calculated by dividing the total number of agreements by the total number of agreements and disagreements (with respect to the number of safety hazards observed). The mean for interobserver reliability for the entire study was 94.1% and ranged from 78.9% to 100% (collapsed across both shifts for six sessions).

Apparatus and Materials

The apparatus and materials used in the study consisted of the following:

1. Observational recording sheet consisting of a list of 11 categories of safety hazards within the store, their frequency, and location.

2. Safety conditions performance chart updated twice a

week and consisting of the frequency of hazards for their respective session.

3. A rating scale relevant to a series of photographs.

4. Thirty photographs depicting safe and unsafe conditions within the store as defined by the operational definition sheet.

Design

A multiple baseline across shifts, ABC-ACB design was used to ascertain the effect of the independent variables on the frequency of safety hazards and photograph ratings. Baseline was recorded for Shift One for nine sessions (two weeks), a little longer for Shift Two. A publicly posted safety performance chart was implemented for Shift One following the baseline period. The safety performance chart indicated the frequency of safety hazards for its respective session and was posted in the employee lounge. It contained the total number of hazards found within the store, not specifying any particular department or individual. The chart took the form of a histogram and included two days of hazards for every marking. The chart clearly indicated what employee shift it represented and was updated every Monday and Wednesday by the experimenter.

A typed statement from the store manager preceded the posting of the chart explaining that a study was being conducted with respect to the number of safety hazards found within the store. The statement went on to say that a safety performance chart would be posted indicating an increase, decrease, or no change in the frequency of safety hazards.

The safety performance chart was removed when the frequency of hazards began to stabilize. Subject recording of safety hazards was then implemented for Shift One. Randomly selected subjects were asked to conduct the daily safety inspection during their respective shift. They were briefly instructed as to the dimensions of the safety conditions checklist and were told to count the frequency of hazards found in the store as specified in the observational data sheet and the operational definition sheet. When the subject concluded the inspection, he or she discussed any questions pertaining to the safety conditions checklist with the experimenter. The subject recording of safety hazards was conducted across both shifts and utilized a different subject each session. The safety hazard information collected by the subjects was not used as part of the data for the study. The experimenter also collected data during this phase and this data was used for the purpose of measurement. Subjects were not told that their safety hazard information would not be used but were debriefed at a later date. The experimenter felt that the information collected by the subjects wouldn't be totally accurate after only one trial inspection and since the purpose was one of training and involvement, the data collected was not used as part of the measurement or reliability.

Following the baseline period for Shift Two, subject recording of safety hazards took place. This was conducted in the same manner as described previously. The subject recording phase was stopped after all the available subjects for this treatment condition had been used for inspection. Immediately following this phase a safety performance chart was publicly posted. This chart was identical to the chart used for Shift One with the exception of indicating what shift it represented.

Frequency of Hazards

The frequency of hazards variable consisted of the accumulation of all recorded hazards as defined by the observational data sheet and the operational definition sheet for each session. Safety inspections were carried out once a day for both the full-time and part-time shifts. Only the hazards found during these inspections were included in the data recording. The observer was visably noticeable during the inspection and made no effort of concealing his whereabouts.

Photograph Ratings

Thirty photographs were taken by the experimenter before, during, and after the intervention phases and encompassed both safe and unsafe conditions within the store. When the study was completed the experimenter administered the photographs to 10 randomly selected subjects and asked the subjects to rate them on a safety dimension and a merchandising dimension (i.e., attractiveness). The subjects were initially given a safety dimension scale in which they were asked to rate the 30 photographs on a scale from one to seven ("one" corresponding to a very unsafe condition and "seven" corresponding to a very safe condition). The same subjects were then asked to complete a seven step scale on an attractiveness dimension using the same 30 photographs in the same order (response of "one" corresponding to a very unattractive and "seven" corresponding to a very attractive). The photographs were in a random order with respect to being "unsafe" or "safe," and were also randomized with respect to being taken before, during, or after the intervention. A simple Pearson product-moment correlation was then taken between the scores on the safety dimension with the scores on the attractiveness dimension. The subjects were selected from both the full-time and the part-time shift.

CHAPTER III

RESULTS

Figure 1 indicates the frequency of safety hazards present in the store for the baseline, informational posting, and employee inspection phases for both Shifts One and Two. During baseline, the mean frequencies of safety hazards for Shifts One and Two were 19.56 and 19.38, respectively. Shift One had a range of hazards from a low of 13 to a high of 25 (reached three times). The range of hazards for Shift Two varied from a low of eight to a high of 32. It should be noted that the low points in the range of hazards for both shifts were found during the initial stages of data collection.

For the informational posting phase, Shift One had a mean frequency of hazards of 16.5 ranging from a low of 13 (twice) to a high of 24. Data for Shift Two's informational posting period indicated a mean of 13.67 with a range of 10 to 21.

The mean frequency of hazards for Shift One decreased to 10.44 during the employee inspection phase and decreased to 11.5 for Shift Two. Ranges for this treatment scaled from six to 14 and from six to 15 for Shifts One and Two, respectively.

Overall, Shift One had a 16% decline in safety hazards from baseline during the informational posting treatment and that reduction decreased to 47% from baseline for the employee

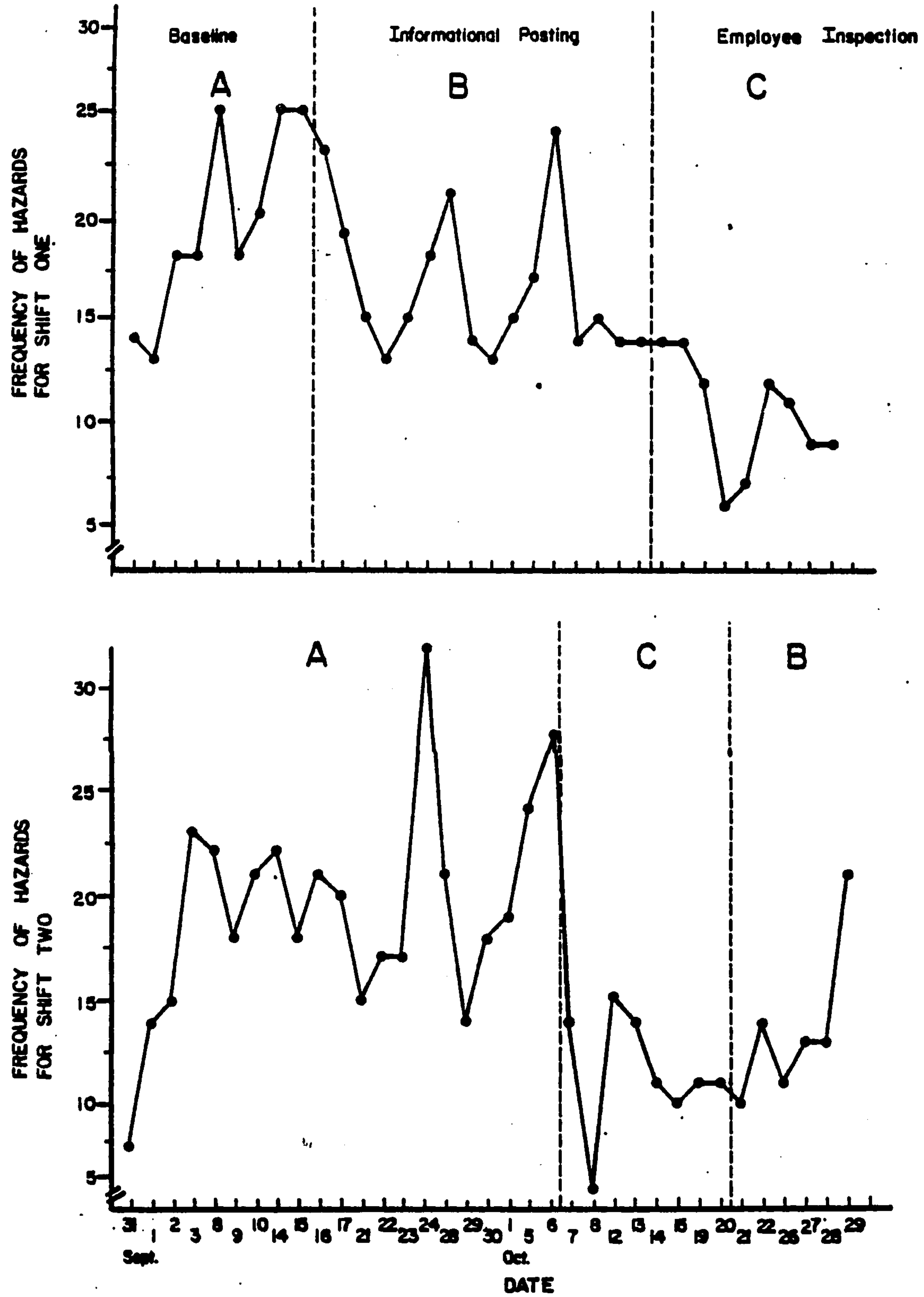

FIGURE I

Frequency of hazards for baseline, informational posting and employee inspection for Shift One and Shift Two inspection treatment. Shift Two showed a 29.5% decrease from baseline for the informational posting treatment and a 41% decrease in hazards from baseline for the employee inspection phase. An advanced analysis of variance was computed indicating significant mean differences ($p < .01$) between baseline and employee inspection for both Shifts One and Two.

The coefficient of correlation using a Pearson product-moment correlation between the ratings of photographs on a safety dimension with the ratings of photographs on an attractiveness dimension was $r = .76$ ($n = 10$; $p < .05$). The mean rating for the seven-step scale was 3.38 for the safety measure and was 3.03 for the attractiveness measure.

CHAPTER IV

DISCUSSION

The results of this study support the conclusion that when employees are trained and directly involved with the organization's safety program, the number of unsafe conditions, as a whole, tends to decrease significantly.

Whereas in the past most research dealing with safety in business and industry tended to focus on supervisory and management involvement, the data from this study indicates the desirability of involving the hourly employees as well. The reduction in safety hazards for both Shifts One and Two decreased the most during the employee inspection phase but informal observation also led the experimenter to believe that the employees chosen to conduct the safety inspection felt more responsible for the safety of the store as opposed to those not directly involved. Throughout the course of the study the experimenter frequently talked with the two assistant managers of the store. The assistant managers told the experimenter on several different occasions that the employees directly involved with the safety hazard inspections were concerned that their respective work areas be clear of any unnecessary clutter. In addition, according to the managers, those employees were reported to have gone out of their work areas to remove a potential safety hazard found in another portion of the store. It should be noted, however, that this effect generalized somewhat to a few employees not chosen to conduct the safety inspection. For example, one employee who was not directly involved in the safety inspections removed her materials cart from the store's floor when she was not on the floor to use it. Previous to the intervention phase, this behavior was not observed in that employee.

The cost and maintenance of this safety program is minimal. The safety inspections took about 10-15 minutes to conduct and could easily be implemented in the everyday routine of the hourly employee. Once the safety conditions checklist was constructed and the hazards were operationally defined, training time for the employees to learn of this system consisted of only a few minutes. The salient feature of this training process is its accent on actually observing hazards. The actual training which took place was done when conducting the safety inspection as opposed to the more traditional approach of viewing videotapes and being verbally instructed as to what an unsafe condition is. Using the inspection method employees got a first hand look at safety hazards which resulted from unsafe performance.

The results of this study also support the conclusion that a publicly posted safety performance chart has a negligible effect on reducing safety hazards for this particular setting. During the informational posting phase, Shift One had a mean frequency of hazards of 16.5 and Shift Two had a mean of 13.67, both slightly lower than baseline (19.56 and 19.38, respectively). While informational posting for Shift One had an initial effect in reducing hazards, this effect wasn't stable for the duration of the treatment phase. The informational posting variable for Shift Two maintained the low number of hazards for a brief period but this number soon began to increase.

After noticing the effects of informational posting on safety hazard reduction in this study (see Figure 1), one might argue that informational posting has an initial effect in decreasing or maintaining the number of safety hazards providing that no knowledge of hazards had previously existed. In this setting employees had no knowledge with respect to the number of hazards so it seems logical to assume that reduction in hazards would initially decrease once this information was provided. In the absence of a good information system, employees tend to develop their own system with self-made standards. Invariably their information and standards do not mesh with the organization's information and standards. Hence, when accurate information is relayed to the employee, performance (e.g., reduction in hazards) tends to be improved.

The lack of providing any consequences for the employee's safety performance may be an explanation for the relative superiority of employee inspection over informational posting. For example, employees might notice that their performance is getting worse, yet if management fails to intervene and appropriately consequate this performance, the employees will do nothing to solve the problem. In essence, by remaining quiet the management is not following through on their behavior in any way. In the present study, management virtually played no role during the data collection period. With the exception of introducing the study via a written memo, management said nothing to the employees during the remainder of the study. The preceding argument underlines the hypothesis that in order for informational posting to be maximally effective it must be combined with one or more variables, such as praise, incentives, etc.

The high, significant correlation ($r = .76$; p .05) between the number of hazards found in the store and the general attractiveness of the store itself supports the conclusion that a store with relatively few hazards is also a store of an attractive nature (all other things being equal). While this conclusion has been alluded to before (Sulzer-Azaroff, 1980), the empirical nature of the present study's investigation underscores it.

The practical significance between safety (in terms of hazards) and attractiveness is one of productivity and merchandising. Further research needs to be done to ascertain the effect of an attractive store on productivity of increased sales. It is assumed that people find an attractive store a more desirable place to shop and consequently will make more return trips and stay in the store a longer period of time.

The productivity aspect of an attractive store is involved with employee performance and morale. For example, in a specific department when all materials are put away after their use and the department is clear of all safety hazards, the person responsible for that department is praised and given high marks in regards to that aspect of performance. Subsequently, the high performance appraisal leads to a satisfied employee which begins the cycle all over again. Once again it is wise to point out that the preceding assumptions need to be researched before any general statements can be made as to the true nature of their relationships.

While the results of this study apply to a particular setting (a retail drug store), they may be generalized to a larger population. The peculiarities involved with a retail drug store certainly are not the same as in a manufacturing setting but what is at stake is the issue of human performance in the area of safety. Safety hazards may differ from setting to setting but a safety program involving employee inspections is applicable to almost any setting. There is no reason for the experimenter to believe that the employees in this study differ systematically from employees from other areas in business and industry. Hence a simple, cost-effective safety program involving employees at all levels of the organization might produce the safety performance desired by any business.

There were a couple of problems in the process of collecting data in the present study, however. As was noted earlier, the number of hazards recorded for Shifts One and Two was quite low during the initial stages of their respective baselines (see Figure 1). There was reason to believe that this was due in part to measurement error since those hazards, in terms of frequency, did not seem to be representative of the rest of the baseline period. Except for the first two days of data collection, the rest of the baseline period for both shifts adequately reflected the safety problem.

Secondly, the informational treatment phase for Shift Two appeared to indicate increasing hazards as that phase continued. It would have been wise to continue that treatment a little longer to obtain a better picture as to whether or not that trend would continue. Due to restrictions in this applied setting, however, this was not possible.

The primary dependent variable in this study was, of course, the frequency of safety hazards. Since accidents due to unsafe behaviors or conditions occur too infrequently to use as a dependent measure, it is assumed that by reducing the number of hazards you also reduce the likelihood of accidents occurring. While accidents were not experimentally measured in this study, informal data indicated two consumer accidents and two employee accidents during baseline and no reported accidents during intervention.

As was alluded to before, further research needs to be done to ascertain the effect of a hazard-free store on productivity and overall employee performance. The results of the present study lead one to believe that a safe store is an attractive store. What needs to be answered now is whether or not an attractive store is more productive than an unattractive store. Also, investigation into the other components of a feedback system need to be isolated to determine the single effect they have on safety performance. Such components include individualized feedback, self-reported feedback, supervisory feedback, etc.

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APPENDIX A--Safety Conditions Checklist

Observer:______________
Date:_________________
Time started:________ Time ended:_____

SUMMARY
Number of hazards
First shift__________
Second shift_________

Safety Conditions Checklist

	Yes?	Location	Time
1. Liquid spill/wet floor			
2. Unattended boxes obstructing aisle			
3. Unattended ladders obstructing aisle			
4. Loose paper or cardboard in walking areas			
5. Store products obstructing walking areas			
6. Unattended employee carts obstructing walking areas			
7. Unattended shopping carts in walking areas			
8. Shelving or building materials obstructing aisle			
9. Permanent store fixtures and/or structures unsafe			
10. Soda-pop bottles and/or liquor bottles out of their cartons			
11. Materials on shelf leaning at more than a 15^{o} angle			

APPENDIX B--Operational Definitions

OPERATIONAL DEFINITIONS OF UNSAFE CONDITIONS
(numbers correspond with checklist)

1. Any liquid accumulated on the floor of the store with a diameter of five inches or more; depth can be of any amount.

2. Cardboard boxes of any size located within the boundaries of any aisle in the store; boxes must not have any working employee within ten feet and may or may not have anything in them; if boxes are stacked, the box touching the floor will count as the only hazard.

3. Ladders must be located within the boundaries of any aisle in the store, may be of any size, but have no working employee within five feet of the ladder.

4. Any paper or cardboard measuring at least four inches by four inches touching the floor of the store in any area.

5. Any product sold by Osco Drug occupying any portion of the floor of the store directly observable by the consumers and/or employees (if not sure of product's origin, check for "Osco" price tag).

6. Any cart used by Osco Drug employees located within the boundaries of any aisle in store without a working employee within ten feet.

7. Any cart used by Osco Drug consumers located any where in the store without a working employee or customer within ten feet.

8. Any building materials used by Osco Drug employees (e.g., shelves, tools, pegs, baskets, etc.) located any where within the

boundaries of the store's aisles and without a working employee within ten feet.

9. Includes any portion of the store for any reason but must be verified by at least two members of management.

10. Any soda-pop or liquor bottles out of their carton and left on the display racks; count only once. If, for example, you find five bottles out of their cartons you count only as one hazard; "yes-not" type of hazard not frequency.

11. Store products on any shelf 3.5 feet or higher above ground displayed in such a way as to have the products leaning at more than an approximate 15 degree angle.

NOTE: Aisle boundaries are defined as the product shelves on either side of the walking area and enclosed by either the North-South wall or the East-West wall.

APPENDIX C--Safety Ratings Scale

CONDITIONS WITHIN STORE

Very unsafe ___:___:___:___:___:___:___: Very Safe
1 2 3 4 5 6 7

1. ___:___:___:___:___:___:___:
2. ___:___:___:___:___:___:___:
3. ___:___:___:___:___:___:___:
4. ___:___:___:___:___:___:___:
5. ___:___:___:___:___:___:___:
6. ___:___:___:___:___:___:___:
7. ___:___:___:___:___:___:___:
8. ___:___:___:___:___:___:___:
9. ___:___:___:___:___:___:___:
10. ___:___:___:___:___:___:___:
11. ___:___:___:___:___:___:___:
12. ___:___:___:___:___:___:___:
13. ___:___:___:___:___:___:___:
14. ___:___:___:___:___:___:___:
15. ___:___:___:___:___:___:___:
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29. ___:___:___:___:___:___:___:
30. ___:___:___:___:___:___:___:

APPENDIX D--Attractiveness Ratings Scale

CONDITIONS WITHIN THE STORE

Very unattractive ___:___:___:___:___:___:___: Very attractive

1. ___:___:___:___:___:___:___:
2. ___:___:___:___:___:___:___:
3. ___:___:___:___:___:___:___:
4. ___:___:___:___:___:___:___:
5. ___:___:___:___:___:___:___:
6. ___:___:___:___:___:___:___:
7. ___:___:___:___:___:___:___:
8. ___:___:___:___:___:___:___:
9. ___:___:___:___:___:___:___:
10. ___:___:___:___:___:___:___:
11. ___:___:___:___:___:___:___:
12. ___:___:___:___:___:___:___:
13. ___:___:___:___:___:___:___:
14. ___:___:___:___:___:___:___:
15. ___:___:___:___:___:___:___:
16. ___:___:___:___:___:___:___:
17. ___:___:___:___:___:___:___:
18. ___:___:___:___:___:___:___:
19. ___:___:___:___:___:___:___:
20. ___:___:___:___:___:___:___:
21. ___:___:___:___:___:___:___:
22. ___:___:___:___:___:___:___:
23. ___:___:___:___:___:___:___:
24. ___:___:___:___:___:___:___:
25. ___:___:___:___:___:___:___:
26. ___:___:___:___:___:___:___:
27. ___:___:___:___:___:___:___:
28. ___:___:___:___:___:___:___:
29. ___:___:___:___:___:___:___:
30. ___:___:___:___:___:___:___:

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