

FIREFIGHTERS' ATTITUDES TOWARD FIRE PREVENTION ACTIVITIES

STRATEGIC ANALYSIS OF COMMUNITY RISK REDUCTION

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ABSTRACT

The problem was a disproportionate ratio between the number of firefighters who participated in fire prevention activities (FPAct) and the pace of the exploding population.

The purpose was to research and measure if negative attitudes contributed to the limited number of firefighters' participation in FPAct.

Descriptive research was conducted to answer four questions:

1. What kind of attitudes do paid-on-call firefighters have towards FPAct?
2. When does this attitude about fire prevention emerge?
3. Who or what influences firefighters' attitudes towards fire prevention?
4. How can the fire service get firefighters more involved in FPAct?

The procedure involved searching for information about firefighters' attitudes towards FPAct. An interview was conducted to get baseline information. A survey measured the attitudes of firefighters.

The results showed attitudes are learned as a result of past experience by observing other people's attitudes and by being openly taught to hold certain attitudes (Schiff, 1970). When people are in a group in which they belong or want to belong, they will be strongly influenced by the group (Abelson, 1959).

The survey showed that when a firefighter became aware of FPAct, it was a positive influence, and when he joined a fire department he may already had a set attitude. The first year was a very influential period of their career. The Fire Marshal, Public Fire Educator, Fire Chief, and Fire Inspector were the leaders that influenced and led fire prevention efforts.

Scheduling and time availability were clearly the deterrents in getting the firefighters more involved in FPAct.

Recommendations were made to provide training in fire prevention by experts in the field. Scheduling of FPAct should include hours other than daytime, and fire prevention should be promoted at suppression related activities. The fire chief needs to aggressively promote and justify the need for full time fire prevention educators.

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INTRODUCTION

"One of the most important aspects of a viable fire prevention program is having a fire service work force that is committed to the importance of fire prevention" (Sager, 1991, p. 5).

As this City of mine grows like fire sweeps a hillside on a hot windy afternoon, one may contemplate if fire prevention priorities will ever catch up or have the same commitment to weighty fire suppression activities.

In order to survive in today's society, organizations, companies, and individuals must change and grow. Fire departments have long been rooted in the soil of tradition and the mind set of "if it ain't broke, don't fix it." This thought pattern in the fire service must change in order for it to thrive and survive (Vatter, 1996, p. 1).

Al Madsen, City Administrator for the City of Maple Grove writes a quarterly newsletter wherein he best explains the awesome development that has taken place in this City over the past 16 years:

Along with the growing commercial and industrial base is our residential development. As of the end of April, the City's population exceeded 50,000 people. Depending on one's viewpoint, this may be good or bad. When I began with the City in 1983, the population was less than 20,000. I am sure there are many residents who clearly remember when we had only a few thousand. Times sure do change! At the end of 1998 I thought development activity in 1999 would tend to slow a little bit. I estimated the City would probably be doing around 600 to 650 residential units in 1999 after the 837 in 1998. However, through the first four months of 1999, I have been proven wrong. Development activity for residential, commercial, and industrial in the City is 30 percent ahead of last year's pace. As of the end of April we had issued almost 300 single-family building permits with a value of \$44 million and 15 commercial/industrial permits with a value of \$25 million. The real construction season has only started (Madsen, 1999).

If you calculate the growth that Madsen speaks about, you find that there was an average of approximately 1,500 new residents a year. While the City grew each year, the paid-on-call fire department grew along with it. "In 1983 there were approximately 35 firefighters; today there are approximately 90 firefighters" (Anderson, 1999).

The problem is that the fire prevention programs were improved and somewhat expanded, but the number of firefighters who participate in fire prevention activities (FPAct) has not expanded to keep pace with the growth. Therefore, you have a very small number of firefighters trying to carry out FPAct in a City of over 50,000 people without many more firefighters helping to accomplish this than there were in 1983.

The purpose is to research and measure if negative attitudes contribute to the limited number of firefighters that actively participate in FPAct. Ultimately, with this information, one can determine how to get more firefighters actively involved in FPAct.

The research method chosen for this applied research project was descriptive. A survey was used to get feedback about the firefighters' attitudes from the author's fire department as well as the geographical area.

The answers to the following four questions were pursued:

1. What kind of attitudes do paid-on-call firefighters have toward fire prevention activities?
2. When does this attitude about fire prevention emerge?
3. Who or what influences firefighters' attitudes towards fire prevention?
4. How can the fire service get firefighters more involved in fire prevention activities?

BACKGROUND AND SIGNIFICANCE

Historically we vigorously support and defend the suppression side of this business and disregard fire prevention and public education. The attitude of our chief officers towards fire prevention and public education is a direct reflection on this Country's fire problem (Hoffman, 1992).

President Richard Nixon appointed a commission, the National Commission on Fire Prevention and Control, in 1972 to examine the United States' fire problem. In 1973, a distinguished report called *America Burning* was presented to President Nixon. In this report, 90 recommendations were made. One of these recommendations was, "The commission recommends that local governments make fire prevention at least equal to suppression in the planning of fire department priorities" (p. 18).

Looking back over the last 16 years at the Maple Grove Fire Department, using 1983 as the same starting point as Madsen, it was discovered that the number of firefighters that were actively involved in fire prevention activities has not increased with the growth of the fire department. In 1983, out of 35 firefighters, approximately 4 to 5 or 11 to 14% were actively involved in fire prevention activities. In 1999, out of 90 firefighters, approximately 10 to 15 or 11 to 17% of the firefighters are actively involved in fire prevention activities (Anderson, 1999).

One would wonder why this is the case. John Hoffman (1992) researched the attitude of the fire service towards fire prevention and public fire education. He found that,

...historically the fire service never really made a commitment to fire prevention. Because the fire service is literally entrenched in tradition, it is extremely difficult to implement changes in our organization. The mind set and focus of the fire service revolves around suppression activities. Suppression is thought to be the main reason why we exist as a fire service. What fire service leaders need to realize is that the fire service is undergoing major changes. Greater demands are being placed on us which will radically change most departments. We now deal with complex problems, among them emergency medical service, certification, consolidation, hazardous materials, and emergency preparedness, just to name a few. In order to make a significant impact on the fire problem in this Country we must regroup and concentrate our efforts on fire prevention and public education activities (pp. 14-15).

In the course, *Strategic Analysis of Community Risk Reduction*, the historical perspective of fire prevention, analysis, coalition building, interventions, the executive fire officers' influence and public risk challenges facing the fire service were studied. This research is relevant to the *Strategic Analysis of Community Risk Reduction* because it relates to analysis and executive fire officers' influence of firefighters' attitude toward fire prevention activities. It is evident that the attitude of the firefighters towards fire prevention staffing will have a significant impact on the future of the public's fire risk in the City of Maple Grove.

A survey was conducted to understand the climate of the local firefighters' attitude. The expectation from the survey is to find out about firefighters' attitudes toward fire prevention, and ultimately, to try to find out how we can get firefighters more involved in fire prevention activities. Because the survey included seven other local fire departments, it gives the survey results a broader perspective. It may also be significant in helping to understand the involvement of firefighters in fire prevention activities in those departments as well.

LITERATURE REVIEW

The literature review used in the preparation of this research paper included published Executive Fire Officer Applied Research Projects (EFO ARP), journal articles, periodicals, books, local city newsletters, and an interview.

In Myra Schiff's Working Paper (1970) on theoretical aspects of attitudes and perception, she researched individuals' attitude towards the environment. She reports that because of the proliferation of studies on attitudes and perceptions, there inevitably results in a proliferation of meanings. It was the purpose of her paper to define and discuss theoretical aspects of perceptions and attitudes. Schiff teamed her research with that of Donald Campbell, who wrote *Social Attitudes and Other Acquired Behavior Dispositions*, to define attitude.

In general usage, the word has come to mean an individual's feelings towards and beliefs about the object of the attitude, or what Campbell terms "the view of the world." However, the only way to measure an individual's view of the world is through his behavior, including verbal behavior. Furthermore, for those interested

in environmental quality the concern is not only with what the individual thinks, but also what he will do. One's attitude toward an object or class of objects will in fact determine how the individual will react to that object when he encounters it. Thus, an attitude must have a behavior component, or what Campbell calls a "disposition to respond." An attitude then is an organized set of feeling and beliefs that will influence an individual's behavior (Schiff, 1970, pp. 5-6).

Schiff's (1970) research showed that,

... attitudes develop as a result of past experience. Attitudes are learned, and they may be acquired in the same way as anything else is learned--through classical and instrumental conditioning, through concept formation, through observing other people's attitudes and through being openly taught to hold certain attitudes. A single unpleasant experience with a social object may, through generalization, yield a negative attitude toward all similar objects, as when an individual who has had an unpleasant experience in a certain large city comes to dislike all large cities, even if he has not been to any others. A person may develop a negative attitude towards detergents by being taught, in school, through media or by face-to-face contact with others, that they are bad (pp. 10-11).

The book, *Persuasion, How Opinions and Attitudes are Changed* (1959), was reviewed. This book reports on the investigation of opinion and attitude change. It weighs the factors responsible for the success or failure to persuade people, therefore the structuring or formulating of attitudes and opinions.

Experiments were conducted to find out what kinds of control a group exercise had over its members' opinions and to find which members of the group were the easiest to persuade. Four different studies were done to document the kinds of control a group exercises over its members' opinions. In each experiment, it was found that it definitely could. These experiments ranged from matching a line a few inches long against three other lines of differing length. In this experiment, when seven of eight people made a wild deviation from fact, the last individual, who was not aware that it was set up, made the same judgment about the line in a situation that was apparently obvious and easy to guess the length of the line.

In another experiment, 90 students were faced with different degrees of thirst. They were fed varying numbers of crackers, some treated with a hot sauce, and then were asked to wait in a hall until the next part of the taste experiment was prepared. In the hall where they waited there was a drinking fountain with a sign over it that read, "Do not use this fountain." When the students saw someone else violate the sign, they were more likely to drink from the fountain themselves than the subjects who observed others who conformed.

In all of the experiments, the behavior of the subjects were definitely affected by the different social conditions of the experiment. The experiments showed that a person's opinions and attitudes are strongly influenced by the groups to which he belongs and wants to belong (Abelson, 1959, pp. 19-23).

The research conducted by Abelson (1959) was fascinating. The following describes his findings:

One study showed that when people think there is a difference between their opinions and the opinions of a group they are with, they will tend to change their opinions in the direction of group consensus if they are asked to express a point of view (p. 35).

Why should people be influenced at all by the judgments of others? For one thing, each day we rely on the judgments of other people, and have come to accept some of them as satisfactory evidence to guide our own behavior. The wife looks out the window and predicts rain, so we take a raincoat to the office. A fellow commuter doesn't like the way our car engine sounds, and we take his advice to consult a mechanic. The more novel and ambiguous a situation, such as line matching and dot counting tasks used in the experiments, the more likely are we to put increased weight on the opinions of others (p. 33).

The following quote by Abelson (1959) makes the reader stop and ponder the distinction between opinions and attitude.

One writer makes this distinction: opinions require thought, attitudes do not. When existing attitudes do not cover a new situation, the response to the problem is an opinion. Thus attitudes cover wider ground than opinions. A common characteristic ascribed to attitudes is their emotional tone. Some people distinguish this way: you can have an opinion and feel neutral about it, but attitudes are always accompanied by some positive or negative feeling (p. 102).

As a result of his research and experiments, Abelson (1959) summarizes three of the reasons why a person may have a particular set of attitudes:

(1) Factual--the attitudes help give meaning to many otherwise bits of information. These attitudes should be especially susceptible to change by exposing the individual to new facts so that he can see things in a different light. (2) Social--having the attitudes make it possible for a man to feel himself acceptable to the groups of people with whom he wants to associate. He may never actually be part of these desirable groups, but he feels closer to them by having something in common with them. Buying a certain brand of whiskey may be the only link that an individual has with men of distinction, but he may regard it as better than no link at all. Likewise, our feelings of kinship with certain social groups often underlie our attitudes towards the United Nations, scandal magazines, and so on. Attempts at changing socially derived attitudes should be most successful when they are made with reference to the acceptability of the new attitudes to the groups that are important to the audience. (3) Personal--the attitudes provide a rationalization for an individual's shortcomings, and make it possible for him to face the world and himself. The employee who craves recognition for his achievements but doesn't receive it often cannot admit to

himself that perhaps his achievements are not worthy of recognition. It may be much more satisfying for him to believe that other people are not intelligent enough to appreciate his worth. This kind of attitude is ego-defensive in function (p. 61).

A newly adopted attitude remains with its host as long as it continues to provide satisfaction for him. It is probably fair to say that an attitude is adopted in the first place because it takes care of some need, such as making a person acceptable to the people he works with (p. 45).

Through his research and experiments, Abelson (1959) explains how behaviors can be related to our attitudes, and the way in which you attempt to change someone's attitude is different depending on the motivational causes of their behavior.

Because much of our behavior can be related to our attitudes, attitudes themselves are sometimes mistaken for the fundamental causes of behavior. ...Identical attitudes may have different motivational bases. Successful propaganda comes from knowing what is behind the attitude. For example, we might find three people who all say they are against private ownership of industry. One of them feels that way because he has only been exposed to one side of the story and has nothing else to base his opinion on. The way to change this man's opinion may be to expose him to facts, take him to visit some factories, meet some workers and supervisors. A second person is against private ownership because that is the prevailing norm or social climate in the circles in which he finds himself. His attitudes are caused by his being a part of a group and conforming to its standards. You can not change this fellow just by showing him the facts. The facts must be presented in an atmosphere which suggest a social reward for changing his behavior. A third person may have negative attitudes toward private industry because by making business the scapegoat for all of his troubles, he can unload his pent-up feelings of bitterness and disappointment at the world for not giving him a better break. Attitudes often exist because they give people somebody or something to blame, instead of having to blame themselves for their own failures and shortcomings. Trying to change this third person with facts may actually do more harm than good. The more evidence shows him how wrong he is, the more he looks for good reasons to support his beliefs. This kind of person can sometimes be influenced by helping him understand why he has a particular attitude. Once he realizes that his attitudes are protective devices for his personality, he may not hang on to them as tenaciously as before and may begin to see things in their proper perspective (p. 60).

A study was done by William Sager (1991) to find out if there was a correlation between initial fire prevention orientation or fire prevention training on the fire prevention attitudes of firefighters. He found that there was no correlation. He reported, "They do not conclusively contraindicate the effect of initial orientation or fire prevention training on the attitudes of firefighters toward fire prevention" (p. 24).

Buckman (1995) tied behavior and attitude together, somewhat on the same order as Abelson. In order to change people's behavior, their attitudes must be changed.

Sometimes it's hard to convince people that the world they experience is a reflection of their attitude. They take the attitude that if only people would be nice to them, then they would be nice in return. They're like the person sitting in front of the cold stove waiting for the heat. Until he puts in the fuel, there won't be any heat. It's up to him to act first. It has to start somewhere. Let it begin with us (p. 12).

Schiff's (1970) research indicated that attitudes are developed through observing other people's attitudes. Stittleburg's (1993) research also concurred,

Leaders should always be aware of their impact of the attitudes of others. It's unrealistic, for example, to expect members to have a positive approach to safety, or to use turnout gear and SCBA properly, if their leaders consistently fail to protect themselves properly. Similarly, if leaders are indifferent to or have negative feelings about fire prevention projects, it's unlikely that others in the organization will be positive (p. 83).

Stittleburg (1993) expands on how leaders set the tone for members by explaining,

Leading by example requires more than talk. Leaders must practice what they preach. If we believe in fire safety and public education, we must practice them. If we want to emphasize the importance of home fire drills, we must conduct them in our own homes. If we want to preach the need for residential smoke detectors and fire extinguishers, we must be ready to say that we have them in our homes and that we check them routinely to ensure that they are operational.

Fire department leaders must be conscious of their influence on the members of their organizations at all times. People will perform as desired and react positively to direction only when their leaders demonstrate by example the importance of what is being requested of them (p. 83).

McCormack (1993) explains that we are responsible for our own lives and that includes our attitude.

First, the future is us: it's you and I. And, believe it or not, it's here now. Consequently, if it is us--you and I--the future is a matter of attitudes which are directly dependent on our values, our belief system, if you will. Think about it. Success or failure as a human being is not a matter of fate, or luck or many other myths. It's a matter of learning and following a common sense set of rules or guidelines. In fact, much of learning occurs instinctively (p. 5).

In the most simplistic way, McCormack (1993) assesses the future as we step forward, "We are responsible for our own lives. As soon as we change, our surroundings will change.

Great Attitude--Great Results; Poor Attitude--Poor Results" (p. 5). Finally, he sums it up by saying,

It's difficult to convince people that the future they will experience is a reflection of their attitudes. And an attitude is a direct reflection of the person inside. Remember, our environment--present or future--is a mirror of our attitude and expectations. If we feel our future could stand some improvement, we can bring about that improvement with our attitude (p. 6).

Through research done with the Executive Officer Program, Hutchens (1996) looked at the Internal Customers of the Fire Service. Although her research did not directly target attitudes, the information has a direct correlation. She found that,

The major findings of this study are that personal recognition, a sense of involvement, and a feeling of community support are important to the members of the fire service. They wish to have competent leadership and they want to be able to enjoy what they do (p. 2).

Hutchens (1996) learned that,

Employees who feel their extra efforts are not taken for granted are far more likely to go above and beyond the call of duty when the need arises than those who feel their hard work is simply expected and not appreciated (p. 13).

In her research, Hutchens (1996) discovered that, "People who whine can be very valuable sources of information. The person who whines may be the only one who brings problems to the forefront while others who perceive the problem will be disgruntled and critical behind the scene" (p. 14).

Another viewpoint of attitude was found in *Managing Fire Services*, Chapter 3 by Jack Snook (1988). He believed that,

...the daily "climate" of the organization was based on the attitude the organization portrays when dealing with a "customer" (citizen) and when dealing with other individuals within their work groups. He reported that as a result of an assumption or belief about a particular state of affairs, attitude is developed. An attitude can be as specific as an opinion about a person or directive, or can be as general as views regarding politics, a community, or society in general. Four specific factors that influence attitudes were listed:

1. Values developed throughout life
2. The social position of the individual relative to his or her position in the organizational hierarchy.
3. The experiences of the individual and group as it relates to the issues at hand

4. The current "organizational atmosphere" surrounding the issues (p. 67).

In concurrence with Hutchens (1996), Snook (1988) pointed out,

Some attitudes can be directly influenced by supervisors. This concept is compatible with an individual's desire to please those for and with whom they work. In the case of new recruits, they will look to formal and informal leaders for their "cues" and "behavior expectations" (p. 67).

Buckman (1995) sums it up best,

We all want good results from life, in our home, in our work, and in all our contacts with other people. The most important single factor that guarantees good results, day in, day out, all the months and years of our lives, is a healthy attitude. Attitude is a magic word (p. 12).

PROCEDURES

The initial research for this EFO ARP began at the Learning Resource Center (LRC) in Emmitsburg, MD, to look for articles in journals, reports, books, and periodicals to learn about attitude and the attitudes of firefighters relating to fire prevention.

Using the LRC's online card catalog continued the literature search. A local senior high school library was used to borrow materials through interlibrary loan. A local city newsletter was also used. A short interview was conducted with Maple Grove Fire Chief Scott Anderson to find out how many firefighters were on the department in 1983, and of those, how many were actively involved in FPAct. The same statistics for 1999 were also obtained.

A survey was used to find out the firefighters' attitude about fire prevention in the Maple Grove Fire Department. To gain a broader perspective of firefighters' attitudes of fire prevention, the same survey was sent to seven other neighboring fire departments. The fire chief of each of the departments was contacted by telephone to gain permission to send the survey to their paid-on-call firefighters. The request was to send the survey directly to the firefighters' homes. Because of data privacy laws and department policies and procedures, the surveys could not all be sent to the firefighters' homes. Some were given directly to the firefighters at drill, some were put in their mail slots at the fire station, one department attached the mailing labels and mailed them themselves, and some were mailed directly by the author.

The surveys were completely anonymous except for the color of paper the survey was printed on. The color indicated the department to which it was sent. A self-addressed stamped envelope was included with each survey to return it. In accordance with the information found in the book, *Employee Attitude Surveys* (Stoner, 1992), the surveys were tested on a group of employees from different levels in the organization. The full time fire inspectors and secretary in Maple Grove were the test subjects. Feedback was gathered on any confusion over the meaning of the questions as well as the overall interpretation of the questions.

Special Notations

Gender specific references made in this Applied Research Project are not intended to limit the statement to the reference made. Unless noted otherwise, "he" can readily be substituted for "she" and vice versa.

A significant number of answers were given in the Other category or answers were qualified by the firefighters who participated in the survey. These are listed after each table. To provide a smoother means to read these, a bullet precedes the answer or a remark that qualified an answer.

The research questions and survey questions were both numbered. According to *The Publication Manual of the American Psychological Association, 4th Edition* (APA), "The general rule governing APA style on the use of numbers is to use figures to express numbers 10 and above and words to express numbers below 10" (p. 99). To help the reader readily identify them, the author chose to use figures to express the numbers of the survey questions and words to express the numbers of the research questions.

The limitations found in the researched materials were that direct information about firefighters' attitude towards fire prevention was limited. The research available discussed attitudes more on a broad basis or the attitude of the fire service overall. Another limitation was the inability to mail the survey directly to the firefighters' homes. It was felt that if they received them at home, they could respond in a less distracting atmosphere, the survey would hold more importance, and would be answered without any influence from fellow firefighters. After the surveys were returned and were being tallied, a mistake was found on question four. One of the answers that firefighters could choose was listed as Public Fire Officer when it should have been Public Fire Educator. The overall number of surveys returned was also considered a limitation of the survey. It was hoped that at least 50 percent of the surveys would be returned, but only 50 percent of the cities surveyed had at least this participation level.

The surveys were sent to 425 firefighters in 8 different fire departments. A total of 210 surveys were returned or 49.4 percent. An interesting note is that the highest percentage returned from any one fire department was 73.6 percent. These surveys were hand delivered at drill, and the firefighters were given time during drill to answer the survey. The second highest percentage was 61.5 percent, which were mailed to the firefighters' homes, and the lowest percentage returned was 25.9 percent, where the surveys were placed in the firefighter' mail drop at the fire station.

The following survey dissemination table shows the city, identified by a number, of the firefighter to whom the survey was sent, how the surveys were sent, the number of firefighters in that surveyed department, the number of surveys returned, and the percentage of the number returned. The only city that will be identified in this research project will be City 8, which is the Maple Grove Fire Department, the author's fire department.

Survey Dissemination Table

	Manner Sent	Number Sent	Number Returned	Percentage
City 1	Hand delivered at drill	26	10	38.5%
City 2	Mailed to firefighter's home	65	40	61.5%
City 3	Placed in firefighter's station mail drop	53	22	41.5%
City 4	Mailed to firefighter's home	41	21	51.2%
City 5	Mailed to firefighter's home	50	30	60%
City 6	Placed in firefighter's station mail drop	67	18	25.9%
City 7	Hand delivered at drill	38	28	73.6%
City 8	Placed in firefighter's station mail drop	85	41	48.2%
Total		425	210	49.4%

One-third of the surveys returned were from firefighters who had 1 to 5 years of service in the fire service. The next largest group who returned the surveys was 21.9 percent who had 6 to 10 years in the fire service. Those who had 11 to 15 years accounted for 17.6 percent, those with 16 to 20 years accounted for 13.8 percent, those with 21 to 25 years accounted for 10 percent, and those with over 26 years accounted for 2 percent. Those firefighters with less than 1 year on service accounted for 1.4 percent.

The surveys returned from Maple Grove firefighters with 1 to 5 years accounted for 48.7 percent. This was significantly higher than the overall response from all departments combined. Those firefighters with 6 to 10 years and 11 to 15 years of service both accounted for 19.5 percent, firefighters with 16 to 20 years accounted for 4.8 percent, and those with 21 to 25 accounted for 2.4 percent. Firefighters with less than one year accounted for 4.8 percent. The firefighters who responded represented a broad audience who served from less than 1 year to over 26 years of service.

The following table denotes the years of service of all firefighters who responded to the survey:

Table I

**Please indicate below the number of years* of service you have in the fire department.
(*Answers were recorded in whole years and were not rounded up.)**

	< 1	1-5 Years	6-10 Years	11-15 Years	16-20 Years	21-25 Years	>26
City 1	--	3	--	1	4	2	--
City 2	1	17	5	8	6	3	--
City 3	--	6	9	--	2	5	--
City 4	--	4	5	5	2	2	3
City 5	--	7	8	6	5	2	2
City 6	--	4	7	3	2	2	--
City 7	--	9	3	6	6	4	--
City 8	2	20	8	8	2	1	--
Total	3	70	45	37	29	21	5

A sample of the survey cover letter can be found in Appendix A and a sample of the survey can be found in Appendix B.

RESULTS

The results of the research project came from the comprehensive examination of the data from published Executive Fire Officer Applied Research Projects (EFO ARP), journal articles, periodicals, books, a local city newsletter, an interview, and a survey.

Question One

What kind of attitudes do paid-on-call firefighters have toward fire prevention activities?

According to Hoffman (1992),

The chief officers in fire departments are an obstacle towards implementing any changes towards concentrating efforts towards prevention. The mindset and focus of the fire service revolves around suppression activities (pp. 14-15).

Sager (1991) showed that, "there was no correlation between initial fire prevention orientation or fire prevention training on the fire prevention attitudes of firefighters" (p. 24).

Question 3 (found on Table III) of the survey asked firefighters when they first became aware of fire prevention activities if it had a positive or negative influence on them. The response was very positive. Those who experienced a positive influence were 74.8 percent, with .09 percent or 2 of 210 firefighters experienced a negative influence, 16.7 percent found the influence to be neutral, and 7.6 percent didn't remember. Firefighters in Maple Grove responded somewhat lower than the overall group of firefighters with 68.2 percent experiencing a positive influence, 2.4 percent or one firefighter out of 41 experiencing a negative influence, 19.5 percent found the influence to be neutral, and 9.7 percent didn't remember.

Table III

When you first became aware of fire prevention activities, did it have a positive or a negative influence on you? (Please check the appropriate box.)

	Positive	Negative	Neutral	Don't Remember
City 1	8	1	--	1
City 2	31	--	8	1
City 3	15	--	5	2
City 4	19	--	2	--
City 5	21	--	4	5
City 6	15	--	2	1
City 7	20	--	6	2
City 8	28	1	8	4
Total	157	2	35	16

Question 9 (found on Table IX) of the survey asked firefighters if they thought fire prevention activities should be required or mandatory. Less than 1/3, or 27.6 percent of the overall group of firefighters answered yes and the majority or 54.8 percent answered no. Those who had no opinion accounted for 14.8 percent, and 3.3 percent of the firefighters qualified their answer with a comment.

The majority or 68.3 percent of the Maple Grove firefighters also thought that fire prevention activities should not be required or mandatory. The percentage was 13.5 percent higher than the average of all firefighters. Those who felt fire prevention activities should be mandatory accounted for 27.6 percent, with 14.8 percent who had no opinion and 3.3 percent qualified their answer with a comment.

A note worth mentioning was that 57 percent of City 4 firefighters and 40 percent of City 1 firefighters felt that fire prevention activities should be required or mandatory. City 7 had 39 percent of the firefighters responding yes, and City 2 had 30 percent that answered yes that fire prevention activities should be required or mandatory. All of the comments that qualified the firefighter's answers are included below with Table IX.

Table IX

Do you think fire prevention activities should be required or be mandatory? (Please check the appropriate box.)

	Left Blank	Yes	No	No Opinion	Qualified Answer
City 1	--	4	6	--	--
City 2	*	12	23	4	4
City 3	1	5	10	6	--
City 4	*	12	6	2	--
City 5	1	5	22	2	1
City 6	--	3	10	5	--
City 7	1	11	10	6	1
City 8	*	6	28	6	1
Total	3	58	115	31	7

***Note--**One firefighter from City 2, one firefighter from City 4, and one firefighter from City 8 each checked both yes and no to this question--these answers were not included in the statistics.

Qualified answers to Table IX included:

- No--some people are not good with adults and kids
- No--you wouldn't get the right people doing it if it was required
- Tough question for some firefighters
- Yes and circled required
- Yes and underlined required
- Yes--encouraged
- Yes--does not mean that an individual has to teach

Question 10 of the survey asked firefighters how much of their time was being spent in FPAct vs. suppression related activities. Firefighters had the opportunity to choose a percentage or to write in a different answer.

The highest percentage from all firefighters responding, or 23.2 percent, was only 5 percent being spent in FPAct. Another 16.6 percent spent only 1 percent of their time in FPAct, another 17 percent said they spent 10 percent doing FPAct, and 10.9 percent spent 25 percent of their time doing FPAct.

The highest percentage of Maple Grove firefighters responding, or 22.5 percent, was 1 percent and 2 percent respectively for time being spent in FPAct. Three other categories, 5 percent, 25 percent, and 50 percent all showed a response of 12.5 percent respectively of the firefighters time spent doing FPAct.

The breakdown of all answers are shown in Table X below:

Table X

How much of your time (percentage) is now spent in fire prevention activities vs. suppression related activities. (Please check the appropriate box or fill in your answer after Other.)

	Left Blank	1%	2%	3%	5%	10%	25%	50%	Other	Qualified Answer
City 1	1	2	1	--	2	3	--	--	1	--
City 2	--	6	3	6	5	9	8	2	1	2
City 3	--	6	--	--	6	2	4	2	2	--
City 4	--	4	4	1	6	2	1	1	2	--
City 5	1	4	1	2	9	6	4	2	1	--
City 6	--	1	4	1	3	5	2	--	2	--
City 7	--	3	--	3	13	5	--	1	3	1
City 8	1	9	9	--	5	4	5	5	3	--
Total	3	35	22	13	49	36	24	13	15	3

Other answers to Table X included:

- Six firefighters answered zero or none.
- Three firefighters answered "?"
- Two firefighters answered 100%
- 20%
- 75%
- Don't know
- Fire prevention is an ongoing education. All efforts should be maintained to educate the public.

Qualified answers to Table X included:

- Suppression is not very much
- Constantly on and off the clock
- Unknown

Survey question 11 asked firefighters if they would like to be more involved in FPAct. The response was almost split with 48.5 percent saying yes and 46.6 percent saying no. Five percent of the firefighters qualified their answer with a comment.

Maple Grove firefighters showed a wider split with 36.6 percent answering that they would like to be more involved in FPAct and 53.6 percent responded with no.

Table XI shows the breakdown of responses below:

Table XI

Would you like to be more involved in fire prevention activities? (Please check the appropriate box.)

	Left Blank	Yes	No	Qualified Answer
City 1	--	9	1	1
City 2	--	19	21	3
City 3	--	13	9	1
City 4	1	14	7	2
City 5	1	15	14	--
City 6	--	10	8	--
City 7	--	11	17	--
City 8	*	15	25	3
Total	2	106	102	9

Note--One firefighter from City 8 checked both yes and no--this answer was not included in the statistics.

Qualified answers to Table XI included:

- No--already involved enough
- No--I have done a lot!
- No--not at this time
- No--time limitations--not able to
- No--Time!
- Yes--if I had the time

- Yes--if I have the time, not sure of how big of a commitment it would be
- Yes--if time permitted
- Yes--prevention is good

Survey question 14 asked firefighters if they thought that fire prevention needed more emphasis in their fire department. The overall response showed that 47 percent felt that fire prevention needed more emphasis in their departments while 51.9 percent said no. The majority, or 53.7 percent, of the Maple Grove firefighters felt that fire prevention needed more emphasis and 43.9 percent said no. Three other departments showed a majority of the firefighters felt that fire prevention needed more emphasis in their departments. These were City 1 with 70 percent, City 3 with 54.5 percent, and City 4 with 66.7 percent.

Table XIV shows the breakdown of responses below:

Table XIV

Do you think that fire prevention needs more emphasis in your fire department? (Please check the appropriate box.)

	Left Blank	Yes	No	Qualified Answer
City 1	--	7	3	1
City 2	--	15	25	1
City 3	1	12	9	--
City 4	--	14	7	1
City 5	--	13	17	--
City 6	--	8	10	--
City 7	--	8	20	--
City 8	1	22	18	--
Total	2	99	109	3

Qualified answers to Table XIV included:

- No--I think all fire departments have an emphasis on prevention
- Yes!
- I think we do very well anyway

When firefighters were asked in survey question 18 if they believed that fire prevention was the responsibility of every member of the fire service organization, 82.9 percent responded yes. There were 9 percent that answered no and 6.6 percent that had no opinion. Maple Grove firefighters had a lower response of 68 percent that answered yes, 14.6 percent that said no, and 12 percent had no opinion.

The breakdown of responses is shown in Table XVIII below:

Table XVIII

Do you believe that fire prevention is the responsibility of every member of a fire service organization? (Please check the appropriate box.)

	Left Blank	Yes	No	No Opinion	Qualified Answer
City 1	--	10	--	--	--
City 2	--	33	6	1	4
City 3	--	19	1	2	--
City 4	--	18	2	1	--
City 5	--	27	1	2	--
City 6	--	15	2	1	--
City 7	1	24	1	2	--
City 8	1	28	6	5	2
Total	2	174	19	14	6

Note. One firefighter from City 8 checked both yes and no--this answer was not included in the statistics.

Qualified answers to Table XVIII included:

- Absolutely. Especially the night responders.
- I participate, however, it is not my responsibility, as I have no authority. In order to be responsible for it, I must have the **authority** to direct it.
- Some people aren't "public people" but can help out in other ways.
- To some degree--does not have to be formal fire prevention program to do some good. Maybe a child tour of the truck, a wave or a smile I guess just to leave an impression that we are there to help the public to learn more.
- Yes--it makes our jobs **easier** at the **end!**
- Yes, in varying degrees.

Survey question 19 asked firefighters to estimate what percentage of the firefighters in their fire departments are actively involved in FPAct. The overall response was somewhat scattered across the spectrum of given answers. The response of 10 to 15 percent of the firefighters are actively involved in FPAct in their department was answered overall by 29 percent of the firefighters. This was the highest response given to any category. Maple Grove firefighters also chose this response most often with 46.3 percent that felt 10 to 15 percent of the firefighters are actively involved in FPAct. Three departments showed that over 10 percent responded that the firefighters spent 90 to 100 percent of their time actively involved in FPAct. The overall response in this category was 4.7 percent.

The breakdown of responses is shown in Table XIX below:

Table XIX

What percentage of firefighters in your fire department would you estimate are actively involved in fire prevention activities? (Please check the appropriate box.)

	Left Blank	1-5%	10-15%	20-25%	30-40%	50-60%	70-80%	90-100%	Qualified Answer
City 1	--	4	2	2	1	--	--	1	1
City 2	--	9	7	17	3	2	1	1	3
City 3	--	2	9	6	1	2	1	1	1
City 4	--	11	4	3	2	--	1	--	--
City 5	--	4	5	6	7	4	--	4	--
City 6	--	7	7	2	1	1	--	--	--
City 7	1	6	8	5	1	2	2	3	--
City 8	2	8	19	9	3	--	--	--	--
Total	3	51	61	50	19	11	5	10	5

Other answers to Table XIX included:

- 10 to 15 percent willingly and 50 to 60 percent mandatory.
- 20 to 25 percent in any job organization, etc... it's the 80/20 rule – 20 percent of the people do 80 percent of the work! That will never, ever change.
- I think fire prevention is always part of our thought process.
- List of activities during the year: Safety camp (2 days); open house (city wide buildings); school fire drills (October fire prevention week tours); fire extinguisher demos; neighborhood watch meetings; senior citizen awareness program; fire drills at commercial buildings; national night out; public safety awareness program (5th grade students).

- Willingly 10 to 15 percent and 60 to 70 percent mandatory.

Other Comments:

- The distinction you were trying to draw between suppression and prevention was not clear at first. Good luck.
- As an owner of commercial independent property, I have had reservations about dollars spent for fire protection--prevention vs. risk. I have not been shown the cost savings. I realize that it is nice to be able to fight fires from the sprinkler connection, but you still have risks at any fire scene. As an owner of 42 rental properties ages 1910 - 1999 with 1/2 of them sprinklered and God knows what else for fire prevention. In the past 15 years I have had three fires, two in nonsprinklered and one sprinklered buildings. I am sure that fast response time was a factor in all three fires, but the sprinklered building fire was the most costly with the most water damage. The sprinklered building cost the tenants more because of costs in building the building and every year we pay out thousands of dollars in maintenance and repair of malfunctioning sprinkler systems and property damage caused by them. Thank you.

Firefighters were asked how they compared their fire department overall with neighboring departments considering all facets of the department, such as suppression, rescue, training, equipment and equipment maintenance, code enforcement, and fire prevention/fire education, etc., in survey question 17. The purpose for this question was to see if the overall attitude towards the firefighter's department was a positive one and if this had any direct correlation to their attitude about fire prevention.

One of the best around showed a response of 36.2 percent, and above average showed a response of 40.5 percent. These two categories accounted for 76.7 percent of the responses of all firefighters, which portrayed a general overall good attitude of the firefighters who responded to the survey. Maple Grove firefighters responded somewhat lower than the overall response. One of the best around showed a response of 31.7 percent and above average showed a response of 39 percent, which accounted for 70.7 percent of the firefighters. Again, this portrayed a general overall good attitude of the Maple Grove firefighters who responded to the survey.

A breakdown of the responses to survey question 17 is shown below in Table XVII:

Table XVII

Overall, how do you compare your fire department with other neighboring departments considering all facets of the department such as suppression, rescue, training, equipment and equipment maintenance, code enforcement, and fire prevention/fire education, etc.? (Please check the appropriate box.)

	Left Blank	One of The Best Around	Above Average	Average	Slightly Below Average	Below Average	Qualified Answer
City 1	--	1	3	4	1	1	--
City 2	*	13	21	4	--	1	1
City 3	--	6	10	5	--	1	--
City 4	--	6	8	6	1	--	1
City 5	--	15	11	4	--	--	--
City 6	--	4	9	4	1	--	--
City 7	1	18	7	2	--	--	--
City 8	2	13	16	8	1	1	2
Total	3	76	85	37	4	4	4

***Note.** One firefighter from City 2 gave two answers--this answer was not included in the statistics.

Qualified answers to Table XVII included:

- Maintenance, morale, retention of firefighters slightly below average
- My department is the best around
- Not sure what other departments are like
- The fire chief is busy being a politician and does not care about the department

Question Two

When does this attitude about fire prevention emerge?

Schiff's (1970) research showed that,

... attitudes develop as a result of past experience. Attitudes are learned, and they may be acquired in the same way as anything else is learned--through classical and instrumental conditioning, through concept formation, through observing other people's attitudes and through being openly taught to hold certain attitudes. A single unpleasant experience with a social object may, through generalization, yield a negative attitude toward all similar objects, as when an individual who has had an unpleasant experience in a certain large city comes to dislike all large cities, even if he has not been to any others. A person may develop a negative attitude towards detergents by being taught, in school, through media or by face-to-face contact with others, that they are bad (pp. 10-11).

Sager (1991) found in his research that there was no correlation between initial fire prevention orientation or fire prevention training on the fire prevention attitudes of firefighters. This research is contrary to all other information that was found during the literature review. Schiff's (1970) research indicated that attitudes are learned and are developed through observing other people's attitudes. Stittleburg's (1993) research also concurred that leaders can impact the attitudes of their members and should be conscious of their influence at all times.

McCormack (1993) reported that attitudes are directly dependent on our values and our belief system. These are learned and much of the learning occurs instinctively.

Snook (1988) believed that attitude is developed as a result of an assumption or belief about a person, directive, or a view regarding politics, a community or society in general. In concurrence with Hutchens (1996), Snook (1988) pointed out,

Some attitudes can be directly influenced by supervisors. This concept is compatible with an individual's desire to please those for and with whom they work. In the case of new recruits, they will look to formal and informal leaders for their "cues" and "behavior expectations" (p. 65).

Question 2 of the survey asked firefighters when they first became aware of the fire prevention efforts of their fire department. In the overall response, 35.6 percent of the firefighters answered that they were aware of the fire prevention efforts of their fire department before they joined the department. Maple Grove had a 25 percent response to this same answer. The next highest response was 29.5 percent of the firefighters became aware after they became a firefighter. Within this 29.5 percent, 51.6 percent of the firefighters indicated that 6 months after they became a firefighter they became aware of the fire prevention efforts of their department. Another 24.2 percent said after one month and 12.5 percent said after 12 months.

Maple Grove firefighters had the highest majority with 45 percent reporting that they became aware of fire prevention efforts of their fire department after they became a firefighter.

Of this 45 percent, 44.4 percent responded to after 6 months of becoming a firefighter, 38.9 percent after one month, and 5.5 percent after 12 months.

A breakdown of the responses to survey question 2 is shown below in Table II:

Table II

**When did you first become aware of the fire prevention efforts of your fire department?
(Please check the appropriate box or fill in your answer after Other.)**

	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	Total
Before joining fire department	7	13	9	6	9	6	14	10	74
When interviewed	1	3	3	5	8	2	2	5	29
Rookie school	1	4	2	3	3	3	3	4	23
During your orientation	--	4	2	--	1	3	2	1	17
Other (see list below)	--	4	--	2	1	1	1	2	11
More than one answer	--	1	--	--	1	--	1	--	3
After you became a firefighter	Time		1 month		6 months		12 months		Other
	City 1		--		1		--		--
	City 2		1		7		2		2
	City 3		1		3		2		--
	City 4		2		2		1		2
	City 5		1		7		1		--
	City 6		1		3		--		--
	City 7		3		3		1		--
	City 8		7		8		1		3
	Total		16		34		8		7

Note--Table II question choices were shortened in order to fit in the table. Refer to Appendix B to get entire sentence.

Other comments for Table II included:

- In the 1960's when they brought the truck to elementary school.
- A long time ago.
- From my brother who was a New Hope fireman.
- After the city hired "(name of person)."
- ? Not much emphasis on fire prevention, just putting fires out.
- County fair smoke house.
- Fifth grade.
- Young--as a child.
- Father was on the department.
- As a fire explorer.
- When the fire prevention program got organized.

Other comments for "after you became a firefighter" for Table II included:

- One firefighter answered 10 years
- Two firefighters answered 2 years
- Two firefighters did not answer how many months
- One firefighter answered 2-3 years
- Three--5 years after becoming a firefighter.

Question Three

Who or what influences firefighters' attitudes towards fire prevention?

Schiff's (1979) research, as noted earlier, showed that attitudes are learned. Attitudes may be learned through observing other people's attitudes and by being taught to hold certain attitudes. An unpleasant experience may result in a negative attitude.

Abelson (1959) conducted experiments with groups to determine what kind of control a group has over its member's opinions. In each experiment it was found that the group definitely could control the member's opinion or attitude. A member in a group conformed to others in the group even when the subject or judgment they were making was obvious and apparent. Another example was the taste experiment with thirst. When the member observed others violating a sign, they were more likely to also violate the sign and conform with the group.

These experiments showed that a person's opinions and attitudes are strongly influenced by the group that he belongs to and wants to belong.

Abelson (1959) summarizes three of the reasons as a result of his research and experiments why a person may have a particular set of attitudes:

- (1) Factual--the attitudes help give meaning to many otherwise bits of information. These attitudes should be especially susceptible to change by exposing the individual to new facts so that he can see things in a different light.
- (2) Social--having the attitudes make it possible for a man to feel himself acceptable to the groups of people with whom he wants to associate. He may never actually be part of these desirable groups, but he feels closer to them by having something in common with them....
- (3) Personal--the attitudes provide a rationalization for an individual's shortcomings, and make it possible for him to face the world and himself. The employee who craves recognition for his achievements but doesn't receive it often cannot admit to himself that perhaps his achievements are not worthy of recognition. It may be much more satisfying for him to believe that other people are not intelligent enough to appreciate his worth. This kind of attitude is ego-defensive in function (p. 61).

Based on Abelson's (1959) experiments and research, a firefighter's attitude may be influenced by other firefighter's attitudes, which, as Abelson wrote "... would make him acceptable to the people he works with" (p. 45).

Four specific factors that influence firefighters' attitudes were listed by Snook (1988):

1. Values developed throughout life.
2. The social position of the individual relative to his or her position in the organizational hierarchy.
3. The experiences of the individual and group as it relates to the issues at hand.
4. The current "organizational atmosphere" surrounding the issues (p. 67).

As mentioned earlier, Hutchens (1996) pointed out that some attitudes can be directly influenced by supervisors. New recruits may look to their supervisors or a group as pointed out in Abelson's (1959) experiments as their attitude is formed.

Question 3 in the survey asked firefighters when they first became aware of FPAct if it had a positive or negative influence on them. As a follow up, survey question 4 asked who was the person(s) who influenced their attitude about FPAct. The firefighters were invited to check as many answers as were appropriate or to write in who influenced them. The firefighters who responded with more than one answer accounted for 8.5 percent, answers that were written in under Other accounted for 21.9 percent of the answers, and 3 percent of the firefighters did not answer or left this question blank.

Overall, firefighters responded with the highest percentage of 21.4 percent by writing in a comment or person who influenced their attitude about FPAct. Maple Grove firefighters who wrote a comment or person accounted for 26.8 percent. These are listed after Table IV below. After the Other category, 19 percent of the firefighters overall responded that the Fire Marshal influenced their attitude about FPAct, followed by 18 percent answering fire inspector, followed by 14 percent answering Fire Officer. In Maple Grove, 24.3 percent responded that a Fire Officer influenced them, followed by 24.3 percent who said Public Fire Officer, and 17 percent who said Fire Marshal.

A breakdown of the responses to survey question 3 and the written in responses to Other is shown below in Table IV:

Table IV

In response to number 3 above, who was the person(s) that influenced your attitude about fire prevention activities? (Please check the appropriate box or boxes or fill in your answer after Other.)

	Left Blank	More than 1 answer	Instructor	Fire Chief	Fire Officer	Public Fire Officer	Fire Inspector	Fire Marshal	Other
City 1	1	1	1	4	2	2	--	1	1
City 2	2	4	3	6	5	4	9	2	15
City 3	1	1	2	3	--	--	4	9	4
City 4	--	3	2	8	1	--	1	7	6
City 5	1	1	2	3	6	2	15	2	3
City 6	--	3	3	6	4	2	5	1	1
City 7	1	2	1	6	2	--	2	15	5
City 8	1	3	4	6	10	9	2	7	11
Total	7	18	18	42	30	19	38	40	46

Other answers to Table IV included:

- Another firefighter before I got on the department
- City manager
- Crime/Safety specialist
- Dad, fire chief
- Father (this answer was given twice)
- Fire chief from previous department

- Fire officers
- Fire prevention coordinator
- Fire prevention parade when I was a small child
- Firefighter who was my neighbor
- Firefighters (this answer was given 10 times)
- Firefighters doing the activities
- Friend
- Hometown fire department, no one specific
- Media
- My father was the above positions with the fire department and he influenced me the most (fire officer and inspector)
- My normal job is a safety consultant
- Myself (this answer was given three times)
- Named a Fire Marshal
- Neighbor growing up was a firefighter
- Officers involved in my training at the department
- Other (this answer was given twice)
- Other firefighters doing public education
- Other firemen
- Parents
- Public education coordinator (named)
- Public education personnel
- Public education specialist

- Public fire officer initially
- Self influenced
- Something I wanted to do
- The department's attitude as a whole
- The guy on the truck, I was 11 years old so I don't know what position he filled!

Firefighters were asked if they felt that FPAAct were considered to be a positive and important function in their fire department in survey question 5. An overwhelming 92.4 percent of the firefighters overall felt that FPAAct were considered to be positive and important functions. In Maple Grove, 92.7 percent of the firefighters felt that FPAAct were considered to be positive and important functions.

A breakdown of the responses to survey question 5 is shown below in Table V:

Table V

Do you feel fire prevention activities are considered to be a positive and important function in your fire department? (Please check the appropriate box.)

	Left Blank	Yes	No	No Opinion
City 1	--	8	2	--
City 2	--	39	--	1
City 3	--	22	--	--
City 4	--	19	2	--
City 5	1	28	1	--
City 6	--	16	2	--
City 7	--	24	1	3
City 8	--	38	--	3
Total	1	194	8	7

Two firefighters added the following comments to Table V:

- Seems to be more of a chore every year--it's the select few that seem to carry the weight.
- Somewhat

Question Four

How can the fire service get firefighters more involved in fire prevention activities?

Through his research and experiments, Abelson (1959) suggested ways in which you can attempt to change someone's attitude depending on the motivational causes of their behavior. When a person bases his opinion on one side of a story, the way to change his opinion is to give him facts. When a person's attitude is based on conforming to the group he is a part of you cannot change his attitude by only showing him the facts. The facts must be presented in a manner in which he will get a social reward for changing his behavior. If a person uses the reason for his attitude as a scapegoat for all of his troubles, he can unload his stored up feelings of bitterness and disappointment at the world for not giving him a break. Attitudes often exist because they give a person someone else to blame instead of themselves for their own failures and shortcomings. This kind of person can best be influenced by helping him to understand why he had that attitude. Once he realizes that his attitude is a protective device for his personality, he may begin to see things in the proper perspective.

Buckman (1995) wrote that to change someone's attitude you had to change their behavior. People need to realize that the world they experience is a reflection of their attitude. It is up to them to act first.

In survey question 7, the firefighters were asked who the person(s) in their fire department who would be the main contact that would ask or encourage them to get involved in FPAct, or who is someone they could go to to get involved in FPAct. The firefighters could give more than one answer or could write in an answer under the Other category.

In the overall response, 20 percent of the firefighters answered with more than one answer and 7.6 percent wrote in an answer under Other, 19.5 percent of the Maple Grove firefighters answered with more than one response, and 7.3 percent wrote in an answer under Other.

From the answers given, the Fire Marshal received the highest percentage response or 40 percent from the firefighters overall, and Public Fire Educator received the highest percentage response or 65.9 percent from the Maple Grove firefighters. The next highest category overall was 22.3 percent answering the Fire Chief, followed by 22 percent answering the Fire Inspector.

The Maple Grove firefighters next highest category was 39 percent answering the Fire Marshal followed by 17 percent answering the Fire Chief.

A breakdown of the responses to survey question 7 and answers in response to Other are shown below in Table VII:

Table VII

Who is the person(s) in your fire department who would be the main contact that would ask or encourage you to get involved in fire prevention activities or who is someone you could go to, to get involved in fire prevention activities? (Please check the appropriate box or boxes or fill in your answer after Other.)

	More than 1 answer	Fire Chief	Other Officer	Public Fire Educator	Firefighter	Fire Marshal	Fire Inspector	Other
City 1	3	9	2	--	2	2	--	--
City 2	13	8	16	22	7	--	3	12
City 3	4	3	1	--	2	18	5	--
City 4	6	9	--	--	--	17	1	1
City 5	1	3	1	5	--	4	21	--
City 6	6	6	3	--	1	--	16	--
City 7	2	2	--	1	--	27	--	--
City 8	8	7	4	27	3	16	1	3
Total	43	47	27	55	15	84	47	16

Note. One firefighter left this question blank.

Other answers to Table VII included:

- Administrative officer (this answer given two times)
- City employee whose duties as public educator include all public relations for the City

- Crime/Safety specialist
- Don't know
- Fellow firefighters
- Fire administrator
- Fire prevention committee
- Fire prevention is not a big thing in our department
- Named an individual
- Named two people
- Public education (named two people)
- Public education specialist
- Public safety education specialist
- Public safety program coordinator
- Self-initiated

Question 8 of the survey asked firefighters if they were required to participate in FPAct. The responses were split in every department except Maple Grove Fire Department, which responded 100 percent with no. The overall response by the firefighters was 83.8 percent answering no and 1.4 percent answering yes. Two firefighters left this answer blank.

A breakdown of the responses and qualified answers to survey question 8 are shown below in Table VIII:

Table VIII

Are you required to participate in fire prevention activities? (Please check the appropriate box.)

	Left Blank	Yes	No	Qualified Answer
City 1	--	1	9	--
City 2	*	9	30	1
City 3	--	2	20	--
City 4	--	4	17	--
City 5	1	2	27	--
City 6	--	3	15	--
City 7	1	10	17	1
City 8	--	--	41	--
Total	2	31	176	2

Note. One firefighter from City 2 checked both yes and no – this answer was not included in the statistics.

Qualified answers to Table VIII included:

- Yes, on duty crew shifts
- Yes, strongly encouraged

Firefighters were asked in survey question 6 if they had ever been personally requested to be involved in fire prevention efforts of any kind. A large majority of the firefighters or 87.6 percent answered yes and 11.4 percent answered no. Two firefighters left this answer blank. Firefighters in Maple Grove had somewhat less of a majority than the overall response with 77.5 percent answering yes and 21.9 percent answering no.

The fire department in City 6 had a 100 percent response to yes. Two other fire departments had a 96.7 percent. The reason that they did not receive a 100 percent response was because one firefighter answered no and another left the answer blank. (These were Cities 5 and 7.)

A breakdown of the responses to survey question 6 are shown below in Table VI:

Table VI

Have you ever personally been requested to be involved in fire prevention efforts of any kind? (Please check the appropriate box.)

	Left Blank	Yes	No
City 1	--	8	2
City 2	--	35	5
City 3	--	20	2
City 4	--	16	5
City 5	1	29	--
City 6	--	18	--
City 7	--	27	1
City 8	1	31	9
Total	2	184	24

In survey question 12, the firefighter was asked what incentives would encourage him to be involved in FPAct. The firefighter could check as many answers as were appropriate to him or could write in an answer under the Other category. Two percent of the firefighters overall left this answer blank, 59 percent gave more than one answer, and 11.4 percent wrote in an answer under Other.

Maple Grove firefighters who left the answer blank accounted for 4.9 percent, 48.8 percent gave more than one answer, and 26.8 percent wrote in an answer under the Other category.

The answer that was chosen by the majority of the firefighters overall was, "I feel it is my responsibility as a firefighter in my community." This was answered by 55 percent of the firefighters. Maple Grove firefighters chose the same answer at 48.8 percent.

The next answer with the highest percentage overall was 49 percent who chose the answer, "I want to help my community," followed by 41.9 percent answering, "I enjoy it," and 37.6 percent answering, "I want to be sure that I have done something to prevent unnecessary loss of lives in my community."

Maple Grove firefighters' next answer with the highest percentage at 41.4 percent was, "I enjoy it," followed by 39 percent who answered, "I want to help my community," and 36.6 percent answering, "I want to be sure that I have done something to prevent unnecessary loss of lives in my community."

Looking at the breakdown of all cities, the answer, "I feel it is my responsibility as a firefighter in my community" was chosen by the highest percentage of firefighters in five of eight fire departments.

A breakdown of the responses to survey question 12 and answers in response to Other are shown below in Table XII:

Table XII

What are the incentives that encourage you to be involved in fire prevention activities now? (Please check the appropriate box or fill in your answer after Other.)

	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	Total
Left Blank	--	1	2	--	--	--	--	2	5
More than 1 answer	7	26	11	9	24	13	14	20	124
Help community	7	18	12	8	18	9	15	16	103
I enjoyed it	2	18	9	5	19	9	9	17	88
Pay	--	7	6	5	6	8	5	9	46
Like the people	1	13	10	5	12	5	7	11	64
Prevent loss	4	9	12	5	14	12	8	15	79
My responsibility	7	22	12	8	21	9	17	20	116
Other	--	4	3	4	1	--	1	11	24

Note--Table XII question choices were shortened in order to fit in table. Refer to Appendix B to get entire sentence.

Other comments to Table XII included:

- At this time, I do not have the time
- But sometimes there isn't enough hours in the day
- Can't work days
- Experience
- Fire prevention at my children's schools
- I believe it teaches young kids not to be scared of us when we come to their house during a fire.
- I like to be proactive
- I like working with kids
- I love kids
- It's a good way to decrease calls
- Job related interest
- Kids is what it's all about
- N/A
- None (this answer was given three times)
- Not very involved
- Other
- Participate with grade school child in fire awareness curriculum
- Requested by my children's school teachers
- Sets an example for my kids

- Talking to kids
- The time commitment is a problem
- We don't do much with prevention

In survey question 13, the firefighters were asked what incentives would encourage them to be **more** involved in prevention activities. The firefighter could check as many answers as were appropriate to him or could write in an answer under the Other category.

Firefighters overall that left this answer blank accounted for 5 percent and Maple Grove firefighters accounted for 4.9 percent. Firefighters overall that provided more than one answer accounted for 48 percent and 11 percent gave an answer under the Other category. The percentage of Maple Grove firefighters that provided more than one answer accounted for 41.5 percent and 17 percent provided an answer under the Other category.

The answer that received the highest percentage from firefighters overall, clearly was, "Sense of accomplishment that you are making an impact." The majority of Maple Grove firefighters, or 51.2 percent, also chose this answer. In fact, every fire department had this answer as the incentive that would encourage them to be **more** involved in prevention activities.

Five of the 8 fire departments' firefighters chose, "To become more educated" as the second answer that received the highest percentage. Two of these five fire departments tied with the answer "Money/Benefits." The other two fire departments that firefighters chose as the answer that received the highest percentage was "Money/Benefits."

"Mandatory participation," was the least chosen answer overall at 6 percent, and "To become eligible for promotion," was chosen by 9.5 percent of the firefighters overall. Maple Grove firefighters chose Mandatory participation with 2.4 percent and tied at 14.6 percent with, "To become eligible for promotion," and "Trade fire prevention activities for mandatory suppression activities."

The results for survey question 13 and answers in response to the category, Other are shown below in Table XIII:

Table XIII

What incentives would encourage you to be more involved in prevention activities? (Please check the appropriate box or boxes or fill in your answer after Other.)

	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	Total
Left Blank	1	2	1	--	2	--	3	2	11
More than 1 answer	5	24	11	9	14	10	12	17	102
Money/Benefits	1	7	5	7	5	7	10	12	54
Trade activities	--	6	3	2	3	4	4	6	28
Recognition	2	7	5	2	9	6	5	7	43
Mandatory	1	1	2	3	1	1	3	1	13
Camaraderie	--	8	9	2	6	3	5	7	40
More educated	4	15	7	7	6	3	6	12	60
Eligible for promotion	--	2	2	1	4	3	2	6	20
Making an impact	6	27	15	8	22	9	13	21	101
Other	3	4	3	2	1	4	--	7	24

Note--Table XIII question choices were shortened in order to fit in table. Refer to Appendix B to get entire sentence.

Other answers to Table XIII included:

- "?"
- At this time I do not have the time
- Available time is very important. If I had more time to devote to the department I would probably do more.

- Can't work days
- Don't really have time for it anymore
- Full time job
- Have more time to give
- I don't think I could be more involved--I do it every chance I get--I love it.
- If the fire codes had more common sense to it
- Just knowing that prevention saves \$ and property
- More full time fire prevention positions
- More time
- Need more than just a few firefighters to be involved
- No comment
- None (this answer given twice)
- None--lack of time!--Become a full time department
- Nothing could make me do this
- Time to do so
- To be held at a more convenient time. It's hard when one works during the day and that's about the only time things are scheduled for.
- To help other people
- To see the impact of fire prevention
- Variety of times day and evening--availability
- You shouldn't need incentives; it's part of your responsibility.

Firefighters were asked what the deterrents are that keep them from being involved in FPAct in survey question 15. The firefighter could check as many answers as were appropriate to him or could write in an answer under the Other category. The firefighters that chose the

Other category to write in answers accounted for 34.7 percent. Maple Grove firefighters that chose the Other category accounted for 29.3 percent. Firefighters overall that left this answer blank accounted for 6 percent and Maple Grove firefighters accounted for 12.2 percent. Firefighters overall that provided more than one answer accounted for 13 percent. The percentage of Maple Grove firefighters that provided more than one answer accounted for 17 percent.

The answer that accounted for highest percentage overall was, "Fire prevention activities do not fit into my schedule." This answer received 50 percent, and 53.7 percent of the Maple Grove firefighters chose this answer. In fact, every fire department except one showed, "Fire prevention activities do not fit into my schedule" having the highest percentage. The one department that did not show it as having the highest percentage had it as a two-way tie with "Fire department budget."

Of the answers that were provided in the Other category, 39 of 73, or 53.4 percent, related to time and scheduling as being deterrents in some way.

The results for survey question 15 and answers in response to the category, Other are shown below in Table XV:

Table XV

What are the deterrents that keep you from being involved in fire prevention related activities? (Please check the appropriate box or boxes or fill in your answer after Other.)

	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	Total
Left Blank	--	1	1	--	1	--	5	5	13
More than 1 answer	1	5	4	1	6	3	1	7	28
Fire department budget	3	2	6	3	2	1	1	1	19
Non support	--	--	1	1	1	--	--	3	6
Not aware efforts	2	--	--	3	1	--	--	4	10
Schedule	3	24	9	8	15	10	15	22	106
Don't like people	1	2	2	--	--	4	1	6	4
Don't want reputation	--	--	2	--	--	--	1	1	4
Other	3	17	7	7	15	6	6	12	73

Note--Table XV question choices were shortened in order to fit in table. Refer to Appendix B to get entire sentence.

Other answers to Table XV included:

- 95 percent of fire prevention is a day activity
- Additional time requirement
- Being paid on call, time is at a premium
- Between calls, training, work details and a private life, there's almost too much to do already.
- Busy schedule
- Conflicts in schedule
- Daycare availability
- Don't ask for help
- Don't like doing it
- Don't like some of the people who are involved in fire prevention--not trained well to educate others
- Fire chief
- Fire department only does it Fire Prevention Week--go to schools--big open house
- Fire prevention activities do not always fit into my schedule
- Fire prevention activities do not fit into my schedule and keep me from being **more** involved in fire prevention activities
- Getting time off work
- I am involved
- I enjoyed fire prevention when it was a voluntary program, I do not like it being mandatory
- I'm involved enough now
- It gets to be boring fast
- It's a good way to decrease calls

- It's really fun to do but don't have the time
- Just time commitment
- Lack of consistent training--what is done and what isn't
- Lack of time (this answer given twice)
- Limited city prevention programs
- Maxed out for fire department time
- Must be done by people working the shifts
- My full time job and family
- My personal time (lack of it)
- N/A (this answer given twice)
- Night available--mostly daytime activities
- No comment
- No deterrents here
- No limitations
- No time
- No time, not interested
- None--I can put more hours into it than I have to give
- None--no time
- None (this answer given seven times)
- Not all, but some officers do not support education and that effects participation in that district
- Not aware enough
- Not comfortable around children

- Not convinced it has an impact on the age groups I've dealt with
- Not valued over all by members and officers
- Our department is heavily involved in fire prevention. Many of the veteran firefighters burn out and don't want to commit to fire prevention and training. Not enough time.
- Our fire department does not have deterrents that prevent us from being involved in fire prevention on a department level or a personal level.
- Problems in the past with participants
- Retiring soon
- Sometimes fire prevention activities do not fit into my schedule (This answer given twice)
- There are no departmental deterrents
- There are no deterrents in the department
- Time (this answer given four times)
- Time available away from the family
- Time constraints
- Time limitations
- Time restraints
- Time! (this answer given twice)
- Too much time
- Work hours at permanent job conflict
- Working a lot of hours on my full time job

In survey question 16, firefighters were asked if they were familiar with the report, *America Burning*, and the recommendations that were made for a fire-safe America.

In the overall responses from firefighters, 71 percent said they were not familiar with the report and 27.1 percent said they were. The Maple Grove firefighters who answered no to this question accounted for 71.4 percent of the responses and 24.4 percent said yes.

The purpose for this question was to find out how comprehensive the firefighter's background in fire prevention was.

Table XVI

Are you familiar with the report, "*America Burning*" and the recommendations that were made for a fire-safe America? (Please check the appropriate box.)

	Left Blank	Yes	No	Qualified Answer
City 1	--	1	9	--
City 2	--	6	34	1
City 3	--	5	17	--
City 4	--	8	13	--
City 5	--	11	19	1
City 6	1	6	11	--
City 7	--	10	18	--
City 8	1	10	29	*
Total	2	57	150	2

Note--One firefighter from City 8 checked both yes and no – this answer was not included in the statistics.

Qualified answers to Table XVI included:

- No--never see this type of information
- Yes--"old report"

DISCUSSION

Information presented by Schiff (1970) explained that attitudes develop as a result of past experience by observing other people's attitudes and through being openly taught to hold certain attitudes. The definition presented by Schiff, "An attitude then is an organized set of feelings and beliefs which will influence an individual's behavior" (p. 6), correlated very closely with Abelson (1959). He conducted experiments to find out what kind of control a group has over an individual within the group. The correlation between Schiff (1970) and Abelson (1959) was in the experiments that found that the individual in the group observed other peoples' attitudes and conformed to the group or were strongly influenced by the group to which the individual belongs or wants to belong.

Buckman (1995) tied behavior and attitude together somewhat on the same order as Schiff (1970) and Abelson (1959). Schiff said, "The only way to measure an individual's view of the world is through his behavior, including verbal behavior." (p. 6) Buckman (1995) said that the world people experience is a reflection of their own attitude. And in order to change someone's behavior, his or her attitude must be changed. Abelson (1959) said that behavior can be related to our attitudes, and sometimes attitude is mistaken for the fundamental cause of behavior because of the motivational basis.

This discussion helps to understand how a firefighter's attitude is formed and how it can be changed in a broad sense. But as the literature review showed, there was no information that directly measured firefighters' attitudes.

The results of the survey, however, gave very specific data on this. Question one of this research project asked what kind of attitudes do paid-on-call firefighters have toward FPAct? Question 3 of the survey showed that when firefighters first became aware of FPAct, it was a positive influence. The Maple Grove firefighters also showed a positive response. But when the firefighters were asked if FPAct should be required or mandatory, the overall response, 54 percent, as well as the Maple Grove firefighters alone, 68.7 percent, responded negatively.

An interesting note worth mentioning was that 57 percent of City 4 firefighters, 40 percent of City 1 firefighters, and 39 percent of City 7 firefighters felt that fire prevention activities should be required or mandatory.

Firefighters overall (92.4 percent) and from Maple Grove (92.7 percent) overwhelming felt that FPAct were considered to be a positive and important function in their fire departments.

Question 10 of the survey asked firefighters how much of their time was being spent in FPAct. The highest percentage, or 23.2 percent, of the firefighters overall responded that they spent 5 percent of their time doing FPAct. Another 16.6 percent spent only 1 percent of their time in FPAct. This shows that overall in eight fire departments, less than 40 percent of the firefighters spent only 1 to 2 percent of their time in FPAct. Looking a little further into the results, 27.9 percent said they spent 10 to 25 percent of their time doing FPAct.

The highest percentage, or 22.5 percent, was a two-way tie with Maple Grove firefighters responding that they spend 1 percent and 2 percent respectively of their time doing FPAct. This shows that 45 percent of the Maple Grove firefighters spend only 1 to 2 percent of their time in FPAct. Another 51 percent of the firefighters said that they spend 5 to 50 percent of their time doing FPAct.

Survey question 11 asked firefighters if they would like to be more involved in FPAct. A positive response to this question was interpreted to be a positive attitude towards FPAct. The overall response was almost split with 48.5 percent saying yes and 46.6 percent saying no.

Another 5 percent of the firefighters qualified their answers with a comment. Of these comments, 72.7 percent indicated that available time was a problem for them.

Maple Grove firefighters showed a wider split with 53.6 percent responding with no and only 36.6 percent saying that they would like to be more involved in FPAct.

When firefighters were asked if they thought fire prevention needed more emphasis in their fire department, the overall response was 47 percent felt it did, while 51 percent said no. The majority, or 53.7 percent, of the Maple Grove firefighters felt that FPAct needed more emphasis and 43.9 percent said no.

When firefighters were asked if they felt fire prevention was the responsibility of every member of the fire service organization, an overwhelming 80 percent said yes! Maple Grove firefighters responded with only 68 percent that said yes. When they were asked to estimate what percentage of the firefighters in their fire department were actively involved in FPAct, the overall response of 10 to 15 percent of the firefighters that were actively involved was answered by 28 percent of the firefighters and 46.3 percent of the Maple Grove firefighters said the same.

When you compare the responses to the different survey questions such as should FPAct be mandatory, how much time are you spending in FPAct now, and would you like to be more involved in FPAct, the results showed a majority with a negative response and spending little time in FPAct vs. suppression activities. However, in response to the questions that asked if FPAct needed more emphasis in their departments and if fire prevention was the responsibility of every member of the fire service organization, the responses of the majority of the firefighters was positive.

The overall attitude in regards to their fire department considering all facets of the department, firefighters overall and in Maple Grove were positive.

If it is the intention of the fire service to have a work force that is committed to the importance of fire prevention, as Sager (1991) said, then the results of this survey does not totally portray that firefighters are committed.

Question two was used to find out when the firefighter's attitude about fire prevention emerges.

Schiff (1970) pointed out that, attitudes are developed as a result of past experience and are learned through observing other people's attitudes and being openly taught to hold certain attitudes. Stittleburg (1993) and Snook (1988) concurred when they reported that leaders and supervisors could directly influence an individual's attitude. McCormack (1993) reported that attitudes are dependent on our values and belief system. These are learned and much of the learning occurs instinctively. Sager (1991) found in his research that there was no correlation between initial fire prevention orientation or fire prevention training on the fire prevention attitudes of firefighters.

Sager's (1991) research was contrary to all other information that was found during the literature review. If attitudes are learned and are developed through observing other people's attitudes (Schiff, 1970) and if a supervisor or leader can directly influence an individual's attitude (Stittleburg, 1993, and Snook, 1988), then it would make sense that a firefighter's attitude would be influenced and would emerge during initial fire prevention orientation or training.

Firefighters were asked in the survey when they first became aware of the fire prevention efforts in their fire department. In the overall response, 35.2 percent of the overall firefighters and 25 percent of the Maple Grove firefighters answered that they were aware of the efforts before they joined the fire department. Overall, the firefighters (30.4 percent) responded that after they became a firefighter with the majority saying between 1 and 12 months, they became aware of the fire prevention efforts of their departments. Maple Grove firefighters (45 percent) reported that they became aware of the fire prevention effort of their department between 1 and 12 months.

This clearly shows that when a firefighter joins the fire department he may already have a set attitude about fire prevention. The research and the survey results both point out that a significant number, or almost one-third of the firefighters overall and 45 percent in Maple Grove, during their first year as a firefighter are in a very impressionable period of their career.

Question three of the research attempted to find out who or what influences a firefighter's attitude towards fire prevention.

Again, it was learned that attitudes are learned and that an unpleasant experience may influence an individual's attitude (Schiff, 1979). Abelson's (1959) experiments with groups to determine what kind of control a group has over its members' opinions were significant. Because firefighters work closely in groups, certainly a correlation between Abelson's experiments and firefighters can be made. In addition, Abelson goes on to explain the way a person may have a set of attitudes which can help a fire service leader understand how firefighters' attitudes are influenced. Snook (1988) listed four specific factors that influence firefighters' attitudes that again can be valuable information to a fire service leader.

Hutchens (1996) clearly pointed out the importance that a supervisor holds in influencing a firefighter's attitude.

This information, together with that found in research question one, shows that the first 12 months appear to be a very influential time for firefighters. The supervisor, or the group he wishes to belong, can have a lot of influence on the individual.

Question four of the research asked how the fire service can get firefighters more involved in fire prevention activities. The information gained through Abelson's (1959) research and experiments suggested ways in which you could attempt to change someone's attitude depending on the motivational causes of their behavior. The information was specific and user friendly, whereas Buckman (1995) wrote that to change someone's attitude you had to change their behavior. In order to do this they need to realize that the world they experience is a reflection of the attitude and it's up to them to act first. This information was worth noting, but from a usefulness standpoint not as valuable as Abelson's (1959) research and experiments.

In survey question 7, the firefighters were asked who the person(s) in their fire department who would be the main contact that would ask or encourage them to get involved in FPAct or who they could contact to get involved in FPAct. The Fire Marshal received the highest percentage response, or 40 percent, from the firefighters overall and 65.9 percent of the Maple Grove firefighters chose Public Fire Educator. The next highest category overall was the Fire Chief with 22.3 percent, followed by 22 percent choosing Fire Inspector. The Maple Grove firefighters next highest category was 39 percent choosing the Fire Marshal, followed by 17 percent choosing the Fire Chief. Clearly these individuals--the Fire Marshal, the Public Fire Educator, the Fire Chief, and the Fire Inspector in these paid-on-call fire departments--are the leaders that can influence and lead the fire prevention efforts in their respective departments.

When firefighters were asked if they were required to participate in FPAct, 82.8 percent of the overall response for the firefighters was no. Maple Grove firefighters responded with a convincing 100 percent saying no. One would expect a yes or no answer to this question, however, Maple Grove was the only department where 100 percent of the firefighters surveyed responded with a no answer.

Firefighters were asked if they had ever personally been requested to be involved in fire prevention efforts of any kind. Overall response was 87.6 percent of the firefighters was yes to this question and 77.5 percent of the Maple Grove firefighters responded yes. This response really means that overall there was 11.4 percent, or 25 of 210 firefighters, and 21.9 percent, or 9 of 41, Maple Grove firefighters that had never personally been requested to be involved in FPAct. From Table I of the survey, the firefighters who responded who had 1 to 10 years on a fire department accounted for 54.9 percent, or 115 of 210 firefighters, and Maple Grove firefighters accounted for 68.2 percent or 28 of 41 firefighters. When you consider that the majority of the firefighters had been on a fire department 1 to 10 years, and 11.4 percent of the firefighters had never been personally requested to be involved in FPAct, one could conclude that a very important resource, the firefighter, has not even been tapped yet.

Firefighters were asked in the survey what are the incentives that encourage them to be involved in FPAct now. The firefighters were allowed to check all of the answers they felt were appropriate. The answer that was chosen by the highest percentage of firefighters overall and Maple Grove firefighters was, "I feel it is my responsibility as a firefighter in my community."

This correlates well with the survey question 18 where 80 percent of the firefighters overall, and 68 percent of the Maple Grove firefighters, felt that fire prevention was the responsibility of every member of the fire service organization.

The answer with the next highest percentage overall was, "I want to help my community," followed by "I enjoy it," and "I want to be sure that I have done something to prevent unnecessary loss of lives in my community." Maple Grove firefighters' next answer with the highest percentage was "I enjoy it," followed by "I want to help my community," and "I want to be sure that I have done something to prevent unnecessary loss of lives in my community."

Firefighters also had the opportunity to write in comments in the Other category. Many of these ranged from comments about lack of time, FPAct being conducted during daytime hours to comments about being proactive, love kids, setting example for kids, and like working with kids.

One could interpret these results as firefighters feel a responsibility to their community and want to help, they enjoy doing it, but they also realize that in order to prevent unnecessary loss of lives in the community, someone must teach fire prevention.

The firefighters were then asked what incentives would encourage them to be **more** involved in FPAct. Overall, 5 percent of the firefighters left this blank, and 4.9 percent of the Maple Grove firefighters left it blank. This is a pretty significant message that says that there is nothing that would encourage them to be **more** involved. Another 11 percent overall, and 11.4 percent of the Maple Grove firefighters, provided a comment under the Other category. A notable 48 percent of the firefighters overall and 41.5 percent of the firefighters from Maple Grove provided more than one answer.

Firefighters overall at 48.1 percent, and Maple Grove firefighters at 51.2 percent chose, "Sense of accomplishment that you are making an impact." The next highest chosen answer overall was "To become more educated," at 28.5 percent, followed by "Money/Benefits," at 25.7 percent. Maple Grove firefighters had a two-way tie for the next highest answer chosen. These were, "To become more educated," and "Money/Benefits."

In the comments that were provided, time and availability accounted for 58.3 percent overall. Squeezing in more time for FPAct and having day available time when most of the FPAct are done were the leading comments.

Clearly, the firefighters showed a very positive attitude towards fire prevention by wanting or sensing that they are making an impact in the community by the fire prevention that they are providing. To become more educated in fire prevention was also a positive response. Had money/benefits been the first place response, there would have been reason to be concerned about the firefighters' attitudes.

The comments that were provided regarding time and availability also showed a very positive response from the firefighters. Overall, 58.3 percent of the firefighters provided answers

under the Other category, which clearly indicates that time and availability are the predominant factors why firefighters are not spending more time doing FPAct.

When firefighters were asked in the survey what the deterrents were that kept them from being involved in FPAct, the answer of the majority clearly was that FPAct do not fit into my schedule. In the answers that were written in under the Other category, 53.4 percent related to time and scheduling as being a deterrent in some way. Once again, time and scheduling clearly stand out.

One final question to discuss that was asked in the survey was if the firefighters were familiar with the report, *America Burning*, and the recommendations that were made for a fire-safe America. The purpose for this question was to find out how comprehensive the firefighter's background in fire prevention was. If a majority of the firefighters had prior knowledge about the report, you could conclude that they had a comprehensive background in fire prevention that was probably achieved during their initial firefighter school.

The implications of the study results for the Maple Grove Fire Department are generally positive. For the most part, the firefighters portrayed a positive attitude, but indicated a frustration in the scheduling of FPAct. The firefighters showed that they feel a responsibility to their community and want to help, they enjoy doing it, but they also realize that in order to prevent unnecessary loss of lives in the community, someone must teach fire prevention. If these activities are also offered in the evenings and on weekends, it appears from the survey results that more firefighters will have the ability to be involved.

In summation, where survey question 11 asked if they wanted to be more involved in FPAct compared with survey questions 12, 13, and 15 which dealt with incentives and deterrents, you find a direct correlation to time, scheduling, and a sense of responsibility.

RECOMMENDATIONS

As the literature review and results showed, attitudes can be learned. Leaders in the fire service or the chief officers in the Maple Grove Fire Department have the ability to impact the attitudes of their members. They should be conscious of this at all times. A recommendation was made to the fire chief to provide in-house educational opportunities to the chief officers of the department to broaden their background in fire prevention and promote a good attitude towards fire prevention. The educational opportunities should be from presenters who are considered experts in their field. This would in turn be advocated to the firefighters.

Because of the impressive results of the survey that showed that paid-on-call firefighters are most deterred from participating in FPAct because of scheduling and the time necessary to be involved, three additional recommendations were made to the fire chief. The first was to point out the need to provide the opportunity for firefighters to be involved in FPAct outside of daytime hours only, and to aggressively promote and justify the need for full time fire prevention educators. These full time educators could and should continue to utilize the support of the firefighters.

In order to expand the efforts of the firefighters, it was encouraged to think outside of the box, so that firefighters could promote fire prevention at suppression related activities also. The results of this survey were sent to the seven fire chiefs who allowed their firefighters to be surveyed. It was hoped that they were able to draw the same conclusions for recommendations based on the research.

A recommendation to the future readers of this Applied Research Project is to continue the research to find out more about the attitudes of paid-on-call firefighters from other geographical locations. Also, it would be helpful to have specific information about the attitudes from career firefighters towards fire prevention as a comparison.

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Format changes have been made to facilitate reproduction. While these research projects have been selected as outstanding, other NFA EFOP and APA format, style, and procedural issues may exist.

Appendix A

June 30, 1999

Dear Firefighter:

I am a firefighter with the Maple Grove Fire Department and the Fire Marshal for the City of Maple Grove. I am currently enrolled in the Executive Fire Officer Program at the National Fire Academy. This is a four-year program. Each year I attend class for two weeks and then I am required to complete an applied research project within six months. Each research project must include new research in addition to a literature review. I will be using a survey to do this. The research project I have chosen this year is to analyze paid-on-call firefighters' attitudes regarding fire prevention.

Enclosed with this letter is a survey. I would appreciate it if you could take a few minutes of your time to complete it. The survey is completely confidential, as it does not ask for a name. Because of this, I urge you to be completely honest. The survey should take about five to ten minutes to complete. A self addressed, stamped envelope is provided for you to mail the survey back. Surveys must be returned by July 24, 1999 to be included in the compilation.

I want to take this opportunity to THANK YOU in advance for taking **your** time to answer the survey. If you would like a copy of the completed applied research project or the results of the survey when it is completed, please call me at 612.494.6091 and I will be happy to see that you receive one. A phone call rather than putting this information on the survey will assure your anonymity.

Sincerely yours,

Marilyn Arnlund

Enclosure

Format changes have been made to facilitate reproduction. While these research projects have been selected as outstanding, other NFA EFOP and APA format, style, and procedural issues may exist.

Appendix B

Survey for Executive Fire Officer Applied Research Project June 1999

Thank you for taking time to complete this survey. Please return it on or before July 24, 1999. When you are finished with the survey, a self addressed stamped envelope is provided for you to return it.

1. Please indicate below the number of years of service you have in the fire department.

2. When did you first become aware of the fire prevention efforts of your fire department?
(Please check the appropriate box or fill in your answer after Other.)
 Before you joined the fire department
 When you were interviewed to become a firefighter
 When you went through rookie school
 After you became a firefighter
Time- 1 month _____ 6 months _____ 12 months _____ Other _____
 During your orientation
 Other _____

3. When you first became aware of fire prevention activities, did it have a positive or a negative influence on you? (Please check the appropriate box)
 Positive Negative Neutral Don't remember

4. In response to number 3 above, who was the person(s) that influenced your attitude about fire prevention activities? (Please check the appropriate box or boxes or fill in your answer after Other.)
 Instructor Fire Chief Fire Officer Public Fire Officer
 Fire Inspector Fire Marshal
 Other _____

5. Do you feel fire prevention activities are considered to be a positive and important function in your fire department? (Please check the appropriate box)
- Yes No No opinion
6. Have you ever personally been requested to be involved in fire prevention efforts of any kind? (Please check the appropriate box)
- Yes No
7. Who is the person(s) in your fire department who would be the main contact that would ask or encourage you to get involved in fire prevention activities or who is someone you could go to, to get involved in fire prevention activities? (Please check the appropriate box or boxes or fill in your answer after Other.)
- Fire Chief Other Officer Public Fire Educator Firefighter
- Fire Marshal Fire Inspector
- Other _____
8. Are you **required** to participate in fire prevention activities? (Please check the appropriate box)
- Yes No
9. Do you think fire prevention activities should be required or be mandatory? (Please check the appropriate box)
- Yes No No Opinion
10. How much of your time (percentage) is now spent in fire prevention activities vs. suppression related activities. (Please check the appropriate box or fill in your answer after Other.)
- 1% 2% 3% 5% 10% 25% 50% Other _____
11. Would you like to be more involved in fire prevention activities? (Please check the appropriate box)
- Yes No

12. What are the incentives that encourage you to be involved in fire prevention related activities **now**? (Please check the appropriate box or boxes or fill in your answer after Other.)
- I want to help my community
 - I enjoy it
 - Pay
 - I like the people who I work with
 - I want to be sure that I have done something to prevent unnecessary loss of lives in my community
 - I feel it is my responsibility as a firefighter in my community
 - Other
13. What incentives would encourage you to be **more** involved in prevention activities? (Please check the appropriate box or boxes or fill in your answer after Other.)
- Money /Benefits
 - Trade fire prevention activities for mandatory suppression activities
 - Recognition
 - Mandatory participation
 - Camaraderie
 - To become more educated
 - To become eligible for promotion
 - Sense of accomplishment that you are making an impact
 - Other _____
14. Do you think that fire prevention needs more emphasis in your fire department? (Please check the appropriate box)
- Yes No

15. What are the deterrents that keep you from being involved in fire prevention related activities? (Please check the appropriate box **or** boxes or fill in your answer after Other.)
- Fire department budget
 - Upper management does not support fire prevention
 - Not aware of any fire prevention efforts in the fire department
 - Fire prevention activities do not fit into my schedule
 - Don't like the people who are involved in fire prevention
 - Don't want a reputation as favoring fire prevention over suppression
 - Other _____
16. Are you familiar with the report, "America Burning" and the recommendations that were made for a fire-safe America? (Please check the appropriate box)
- Yes No
17. Overall, how do you compare your fire department with other neighboring departments considering **all** facets of the department such as suppression, rescue, training, equipment and equipment maintenance, code enforcement, and fire prevention/fire education, etc.? (Please check the appropriate box)
- My department is one of the best around
 - My department is above average
 - My department is average
 - My department is slightly below average
 - My department is below average
18. Do you believe that fire prevention is the responsibility of every member of a fire service organization? (Please check the appropriate box.)
- Yes No No Opinion

19. What percentage of firefighters in your fire department would you estimate are actively involved in fire prevention activities? (Please check the appropriate box.)

1% - 5% 10% - 15% 20% - 25% 30% - 40%

50% - 60% 70% - 80% 90 - 100%

Thank you! If you would like to have a copy of the results of this survey mailed to you, please call me at 612.494.6091. If I am not in, please leave your name (*please spell it*) and your complete address on my answering machine.

By calling with your name and address rather than putting it on this survey, your anonymity will be assured.

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Appendix C



City of Maple Grove

Fire Prevention Bureau

MEMORANDUM

TO: Scott Anderson, Fire Chief

FROM: Marilyn Arnlund, Fire Marshal

DATE: November 20, 1999

SUBJECT: Survey Results

This memo is in response to the Applied Research Project that I completed for the Executive Fire Officer Program. As you will recall, the purpose of my project was to find out and measure if negative attitudes contribute to the limited numbers of firefighters that actively participate in fire prevention activities.

I am pleased to present you with the results of this project. The implications of this study are positive. Overall, the survey showed that our firefighters are generally positive toward fire prevention activities. The most impressive results of the survey showed that paid-on-call firefighters are most deterred from participating in fire prevention activities because of scheduling and the time necessary to be involved.

The results also showed that the leaders in the fire service, or the chief officers of the Maple Grove Fire Department have the ability to impact the attitude of their members. The survey showed that the first year is a very impressionable time in a firefighter's career. In light of this, I recommend that we provide in-house educational opportunities for our chief officers. I believe the presenters should be experts in their field. This would broaden their background in fire prevention and promote a good attitude towards fire prevention. A positive implication of this would be the chief officers advocating a positive fire prevention attitude to the firefighters.

The additional following recommendations are being presented based on the results of the survey:

1. Provide the firefighters with the opportunity to be actively involved in fire prevention activities in the evening and on weekends.
2. Aggressively promote and justify the need for full time public fire educators. These full time educators could and should continue to support the use of paid-on-call firefighters in fire prevention activities.

3. In order to expand the efforts of the firefighters, the public educators should be encouraged to think "outside the box" to promote fire prevention activities at suppression related activities.

Thank you for your support in this research project. I look forward to your comments and feelings on the results of the survey and research project.