

Fire Research Report

Determining Effective Fire Safety Strategies for Māori

Bay-Waikato Fire Region

August 2000

Tenā tatau katoa, ngā waihotanga ā ō tatau tūpuna.

The ultimate intention of this research is to reduce the incidence and consequence of fire. For this to be achieved we need to understand why death by fire was more common for Māori than for all other races in the Bay-Waikato Fire Region. Three hundred face to face interviews with Māori in the region (central North Island) were conducted. The interviews were conducted to assess the level of awareness of fire safety behaviour, examine how Māori would respond in an emergency, understand the lifestyle variables that may contribute to the higher incidence of fire death among Māori, assess communication options and determine how to best reach at-risk Māori.

This research also provided valuable feedback to the Bay-Waikato Fire Region regarding its current and future direction when assessing programmes for effective fire safety strategies for Māori in the region. We were also able to compare our quantitative results in this research with a recently completed baseline survey of the general public in the region.

I hope that you are able to utilise the findings in this inaugural study into Māori and their association with the modern day fire.

Mā te Atua kotou e manaaki e tiaki hoki.

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New Zealand Fire Service Bay-Waikato Region Maori Fire Study

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1 KEY POINT SUMMARY

- Three hundred (300) face-to-face interviews were conducted with Maori from the Bay/Waikato Region from 26 July 1999 to 18 October 1999.

1.1 Fire Safety

- In total, half (53%) kept matches and lighters within reach of children, three percent (3%) were not sure and five percent (5%) felt the question was applicable. Two-fifths (39%) kept them out of reach of children.
- When Maori Fire Study results were compared to baseline data it was found that fewer Maori Fire Study participants (-11%) reported keeping lighters or matches out of reach of children.
- Use of open-flame light sources was high among rural participants, with eighty two percent (82%) reported having used these in the year prior to interviewing.
- The study revealed relatively low awareness of the kitchen fire hazard when compared to baseline results. While many (80%) baseline participants chose the kitchen as the room in which a fire was most likely to start, only one-tenth (11%) of Maori Fire Study participants did so. This difference may have been influenced by the pictorial representations used in the Maori Fire Study.
- Over one-quarter (27%) reported having had a cooking fire in the past.
- When asked what action they would take in event of an oil or fat fire the Maori Fire Study participants gave both more fire safe and more unsafe answers than baseline participants had done.
- Notable unsafe actions reported were putting salt on the flames (29%), carrying the pan outside (26%) and dousing with water (9%).

1.2 Dealing With Emergencies

1.2.1 Smoke Alarms

- Two-fifths (43%) of participants had a smoke alarm or alarms installed. This is significantly fewer (-37%) than reported in the baseline study.

- Smoke alarm ownership was especially low among rural (33%) participants.
- When those who had smoke alarms described their motivations for purchase it was found slightly more Maori Fire Study (+7%) participants reported advice from friends or relatives and slightly fewer (-12%) said the media influenced their decision than baseline participants had done.
- The majority of those who did not have a smoke alarm (65%) said they had not “managed to get around to” purchase. Fifteen percent (15%) were renting and saw the smoke alarm as the landlords responsibility.
- Over one-tenth (13%) saw smoke alarms as unimportant.
- Those who did have smoke alarms were more likely to have two alarms (+15%) and less likely to have one (-16%) than baseline participants.
- Maori Fire Study participants (31%) and baseline participants (33%) were equally likely to report annoying false alarms.
- One-fifth (20%) of those with smoke alarms regularly maintained their alarms.

1.3 Escape Plans

- One-third (32%) said their household had an escape plan in case of fire. This is lower (-14%) than the baseline study.
- Most (90%) of these included making a quick exit and calling the fire service (92%) in their description of these plans. Only fifteen percent (15%) included having a safe meeting place and one-tenth (11%) staying calm.
- Nine-tenths (88%) had a working telephone in the home and the majority of those without a telephone felt they had access to one in an emergency.

1.4 Safety Awareness

1.4.1 Kitchen

- When asked to identify fire-safe elements from a kitchen scene, most (94%) noticed a fire extinguisher and considered it fire safe. One-tenth (11%) felt the expell-air was safe and eight percent (8%) felt the cordless jug was fire safe.

- The most commonly reported fire-risks in the picture were tea towels hanging on the oven door (60%), lack of adult supervision (49%), having children cook (38%) and the pot handle "sticking out" (42%).
- Over one-quarter (27%) noted the beer bottle, one-fifth (18%) noted the position of the oil and almost as many (17%) the position of the fire extinguisher. Seventeen percent (17%) focused on the children playing in the kitchen.
- Two-fifths (40%) reported this was a familiar scene:
 - Half (51%) of these said children cooking was familiar. This is twenty percent (20%) of all participants.
 - A further fourteen percent (14%) said the whole scene was familiar, while eight percent (8%) said it was familiar, except the image of someone reading in the kitchen was familiar. This is twenty percent (20%) of all participants.
 - A further fourteen percent (14%) said the whole scene was familiar, while eight percent (8%) said it was familiar, except the image of someone reading in the kitchen.
- The majority (58%) said the scene was unfamiliar. One-third of these (31%) said their children did not cook and one-fifth (20%) had no children living at home.

1.5 Bedroom

- When asked to identify fire-safe elements from a bedroom scene the majority (57%) felt nothing was especially safe and four percent (4%) felt it all looked safe.
- When identifying risks most (95%) gave comments related to the candle and over three-quarters (78%) were concerned with the lighter being within reach of children. Two-thirds (67%) commented on the childrens' location in relation to the candle.
- Forty five percent (45%) of participants said they identified with this scene. Over half (54%) said it was a normal situation, including the candles and lighter. This is one-quarter (24%) of the participants overall. One-third (31%) felt it was familiar but said they did not use candles.
- Over half (54%) said the scene was not familiar. Sixteen percent (16%) of these said they did not use candles in the bedroom and one-tenth (9%) said they did not use candles at all.

1.6 Promotions

1.6.1 Recall of Messages/Advertising

- Participants preferred 'Plan to get out alive' (66%) to 'Protect what you value' (34%).
- Most participants chose 'Plan to get out alive' initially because of the colour. Many described this as 'attractive' and 'eye catching'. Nine-tenths (90%) of those who recalled 'Plan to get out alive' said the brochure mentioned how to plan and practice an escape plan. Many appreciated the length of 'Plan to get out alive' saying it was 'short' and 'easy to understand'. Cartoons appealed to many.
- Almost all who initially chose 'Protect what you value' did so because of the child on the front cover. Many identified the child on the cover as 'Maori', 'real' and 'possibly one of their own children'. Almost two-thirds (65%) thought 'Protect what you value' informed readers on electrical safety and a similar proportion (65%) identified safety with matches and lighters. The majority of participants felt the te reo element of 'Protect what you value' was the most appealing. Many found 'Protect what you value' clear and easy to understand.
- Over three-quarters (77%) of participants recalled seeing or hearing Fire Service publicity material on free television. Urban (76%) and rural (78%) participants were equally likely to report free television messages.

1.6.2 Preferred Message Delivery Point

- Four-fifths (83%) thought the Marae was the best place to speak to Maori about fire safety issues. This was significantly higher than any other response to this question and consistently high for both urban (83%) and rural (82%) participants.
- Those who thought the Marae would be an appropriate meeting place often said this is the place where Maori meet to discuss important issues. Further, Maori would be more comfortable in their 'own surroundings' and therefore more likely to listen and contribute to discussions.
- Three-quarters (76%) had attended a Marae in the six months prior to interviewing.
- Most (90%) said they relied on word of mouth to be kept informed of what was happening in their area.

- Seventy percent (70%) said they liked listening to radio. This was more common among urban (75%) than rural (63%) participants.
- While a wide range of stations were reported, three of the four most popularly reported stations were Maori Stations.

1.6.3 Te Reo Rangatira

1.6.3.1 Speaking

- Participants were asked if they could speak, read or understand Maori.
- One-fifth (17%) were not able to speak te reo at all.
- Forty six percent (46%) reported to be able to speak te reo a little bit. More urban (50%) than rural (40%) participants felt they spoke a little te reo.
- One-quarter (26%) were able to speak enough te reo to get by. More rural (31%) than urban (23%) felt they could speak te reo enough to get by.
- One-tenth (11%) were able to speak te reo fluently. Of these nine percent (9%) are urban and fifteen percent (15%) rural.

1.6.3.2 Reading

- One-fifth (16%) reported no reading abilities in te reo. More (19%) were urban than rural (12%) participants said they could read te reo.
- Most (33%) reported being able to read a little bit of te reo. There were minimal differences between urban (32%) and rural (35%) participants.
- One-fifth (19%) reported being able to read enough te reo to get by. More rural (28%) than urban (19%) said they would do this.
- Twenty eight percent (28%) of participants are able to read te reo fluently. More urban (29%) than rural (25%) said they read te reo fluently.

1.6.3.3 Comprehension

- Thirteen percent (13%) of participants reported no understanding of te reo.

- The majority (38%) were able to understand te reo a little bit. This included one-third (33%) rural and two-fifths (41%) of urban participants.
- One-third (27%) had enough understanding to get by. More rural (34%) than urban (23%) participants described themselves this way.
- One-fifth (21%) were able to understand te reo fluently. The same number of urban (21%) and rural (21%) participants described fluent comprehension.

1.7 Lifestyle

- Half (57%) of participants had children in their home who attended a pre-school, primary or secondary education facility.
- Two-thirds (67%) of these households had children who attended Primary or Intermediate, one-fifth (40%) had children who attended Secondary school, fourteen percent (14%) had children who attended Kohanga, twelve percent (12%) had children who attended Kindergarten and five percent (5%) had children who attended creche.
- Four-fifths (83%) noted the educational facility communicated via letters sent home with individual children and three-fifths (62%) received newsletters. Interviewers noted that many parents and caregivers commented they did not receive these letters or newsletters as children failed to deliver them.
- Eighty seven percent (87%) of participants suggested individual letters sent home with children as an effective method of informing parents and caregivers.
- Three-fifths (61%) of those with children in their home recalled their children talking about fire safety messages.
- Almost half (46%) of those with children in their home felt they could remember hearing fire safety messages when at their child or children's school or education facility.

2 INTRODUCTION AND METHODOLOGY

2.1 Background

One of the significant findings of the Porirua Fire Investigation Report was the over-representation of Maori people in the Fire Death Statistics.

Although ethnic origin of deceased is not recorded in Fire Incident Reporting systems, it was possible to determine ethnic origin for the calendar years 1996 and 1997 by obtaining statements from the Investigating Officers in each case.

Maori - 15% of our population - suffered 31% and 52% respectively of death by fire in residential properties.

Similarly, the Porirua Report highlighted the ineffectiveness of previous methods of delivery of Fire Safety Education to non-European ethnic groups. The Report also identified the need to develop new methods of delivery and new resource material aimed at specific at-risk ethnic groups.

In the Bay/Waikato Region almost one-quarter (23%) of the population is Maori, and several household units are single parent families, many of whom will be Maori. The Bay-Waikato Region has twice the national average of Maori residents.

Maori have also been identified as a particular risk group in the Region with Maori fire deaths accounting for over 90% of the 14 fire deaths experienced in the Bay of Plenty area in 1995/96 and 1996/97 years. Maori people are highly represented in the lower socio-economic group.

2.2 Past Research

The Bay-Waikato Fire Region is aware that there has been research into Maori health and safety carried out in the past, but no research specifically related to Fire Safety. Documents examined prior to this research deal with Maori health, safety or injury research but do not specifically deal with fires, injury and death. It is clear from these references that fire is an important health issue for Maori, especially Tamariki, (children). This is well summarised in the Nga Tatauranga Injury to Maori report.

"For Tamakiki the priorities for death reduction remain motor vehicle traffic crashes, drownings, and deaths to fire and flames. For non fatal events, falls and thermal injuries are priorities".

This research aims to contribute to knowledge so that:

1. The Fire Service gain a better understanding of how to promote and educate Fire Safety more effectively amongst those at risk.
2. Those at risk may increase their knowledge of Fire Safety.

2.3 Aims and Objectives

The aim of this project was to understand why death by fire is more common for Maori than for Pakeha in the Bay-Waikato Region. Specific objectives are summarised in the table below.

Aims & Objectives	How Achieved
<ul style="list-style-type: none">• Find out the level of awareness of fire safety behaviour.• Examine how Maori would respond in an emergency.	<i>Closed questions and responses to scenarios including repetition of questions used in the Baseline studies.</i>
<ul style="list-style-type: none">▪ Understand the life-style variables that might contribute to the higher instance of fire death among Maori.▪ Understand the attitude variables that might contribute to the higher instance of fire death among Maori.	<i>Open-ended questions about their lives, values and circumstances.</i>
<ul style="list-style-type: none">▪ Assess communication options.▪ Determine how to best reach at-risk Maori.	<i>Open and closed questions about participation in community activities and use of media.</i> <i>Response to showcards of safety advertising used by NZFS.</i>

2.4 Project Structure

- This is thought to be the first study of its kind and is likely to be beneficial in the promotion and education of Fire Safety in New Zealand, and especially in those regions with a high Maori population.
- It was performed in a region where New Zealand has appointed its first Maori Liaison Officer - another innovation towards effective Fire Safety education and promotion.
- It was carried out co-operatively by New Zealand Fire Service and Te Papa Takaro O Te Arawa, a Maori community organisation under close guidance and supervision from a professional market research company. This unique project team offers innovative solutions to an inherently difficult research problem.

2.5 Research Method

- The project questionnaire, which is attached as appendix one, was developed in consultation with New Zealand Fire Service staff and was trialed before being finalised.
- Te Papa Takaro O Te Arawa co-ordinated interviewers from the Maori community to conduct the interviews.
- Many interviewers had experience in Te Reo Maori and all were specifically trained by Key Research & Marketing.
- Interviewing began on Monday 26 July and ended on Monday 18 October.
- Prior to interviewing in each district residents were advised of interviewer arrival in the form of a letter from the New Zealand Fire Service.
- Participants were selected using Statistics New Zealand data to identify meshblocks with a high percent of Maori, then using cluster sampling.
- Rural and urban Maori were interviewed in approximately equal proportions so that differences in responses could be assessed.
- The interviews were conducted between 9am and 5pm, seven days. It was necessary to include weekends to avoid over-representation of those who were not in paid employment.

- Interviewers made three attempts to contact the majority of households before these were replaced in the sample. Being face-to-face interviews, this was not always possible due to long travelling distances in rural areas.
- Participants were screened to ensure they were Maori. A ten dollar koha was given after the interview to reward participation.

2.6 Analysis and Reporting

The survey results were coded and analysed by computer. Accuracy in data-entry was assured through internal logic checks. Important points to note are:

- All percentages have been rounded to the nearest whole number.
- Some questions allow participants to give multiple answers. In these instances the results will not add up to one hundred percent (100%).
- Where questions used in the 1999 baseline study were the same as, or very similar to those used in this study, the research team has calculated the difference between the results of the baseline and Maori Fire Studies.
- The 1999 baseline study was a random telephone study with a sample of 303 conducted in the Bay – Waikato Region in June 1999.

2.7 Margin of Error

The maximum statistical margin of error for a randomly selected sample of three hundred (300) at the 95% confidence level is $\pm 5.7\%$. The maximum margin of error at the 95% confidence level for sub-samples is larger as indicated by the table below.

2.7.1.1 Margin of error

Number	Margin of Error
300	5.66%
250	6.20%
200	6.93%
150	8.00%
100	9.80%
60	12.65%

2.8 Researcher Comment

- The challenges inherent in an ethnically-based survey, covering a large rural and urban area are immense.
- Key Research and Te Papa Takaro O Te Arawa Trust made every effort to ensure the survey sample was random, but encountered situations where it was necessary to use 'word of mouth' information to exclude non-Maori households, or identify nearby Maori.

3 FIRE SAFETY BEHAVIOUR

3.1 Candle, Gas and Spirit Lantern

- Four fifths (82%) reported having used a candle, gas or spirit lantern in their homes during the last year. Some were quick to assure interviewers candles were only used when the power was out, which seemed to happen frequently especially in rural areas.
- Reported use of these open-flame light sources was higher among rural (92%) than urban (75%) participants.

Has anyone used a candle, gas or spirit lantern in your home in the last year?	Number (n=300)	Percent Urban	Percent Rural	Percent Total
Yes	246	75%	92%	82%
No	53	24%	8%	18%
Not Sure	1	1%	0%	0%
Total	300	100%	100%	100%

3.2 Lighters and Matches

3.2.1 Maori Fire Study Results

Participants were asked if there were any lighters or matches in their houses at the time of the interview.

- Ninety four percent (94%) reported there were lighters or matches in their houses at the time of the interview.
- Slightly more rural (97%) than urban (92%) Maori reported having lighters or matches.

Are there any lighters or matches in your house right now?	Number (n=300)	Percent Urban	Percent Rural	Percent Total
Yes	281	92%	97%	94%
No	19	8%	3%	6%
Total	300	100%	100%	100%

3.2.2 Comparison to Baseline Data

- There was no significant difference between responses of Maori Fire Study and baseline participants (+2%).

Are there any lighters or matches in your house right now?	Number (n=300)	Percent	Base (n=303)	Cmp with Base
Yes	281	94%	92%	2%
No	19	6%	8%	-2%
Total	300	100%	100%	

3.2.3 Children's Access to Lighters and Matches

3.2.3.1 Maori Fire Study Results

All participants were asked if children under the age of twelve years old would be able to access lighters or matches in their houses at the time of the interview. Although six percent (6%) indicated there were no matches or lighters in their homes, only five percent (5%) recorded a not applicable response. This suggests a variance of five people (5) who changed their mind from the original question.

- Over half (53%) of participants reported children under the age of twelve years would be able to reach those matches or lighters.
- Two-fifths (39%) said children could not reach lighters or matches.
- Five percent (5%) felt the question was not applicable as they did not have children under twelve staying at home or visiting.

Would children under the age of twelve be able to reach lighters or matches?	Number (n=300)	Percent
Yes	158	53%
No	118	39%
Not Sure	9	3%
Not Applicable	15	5%
Total	300	100%

3.2.3.2 Comparison to Baseline Data

- When results of the Maori Fire Study were compared with baseline data, it was found that significantly more Maori Fire Study participants (+27%) reported having matches or lighters within reach of children. However, it should be noted

that Maori Fire Study participants were less likely to consider the question not applicable (-19%).

- Fewer (-11%) participants in the Maori Fire Study reported having lighters or matches out of reach of children.

Would children under the age of twelve be able to reach lighters or matches?	Number (n=300)	Percent	Base (n=303)	Cmp with Base
Yes	158	53%	26%	27%
No	118	39%	50%	-11%
Not Sure	9	3%	0%	3%
Not Applicable	15	5%	24%	-19%
Total	300	100%	100%	

3.3 Fire Risk Perceptions

All participants were shown a collage of rooms and asked where they thought a house fire was most likely to start. The pictures included in the collage are shown in this section then discussed in the pages which follow.

3.3.1.1 Lounge



3.3.1.2 Hallway



3.3.1.3 Kitchen



3.3.1.4 Bedroom



3.3.2 Maori Fire Study Results

- Half (50%) suggested a fire was most likely to start in the living area. Interviews reported this figure may have been influenced by the open fire being visible in the picture. Many also pointed out the cane basket was close to the fire. Others took a more electrical approach suggesting televisions and other appliances continually left on could cause a fire.
- One-tenth (11%) thought fire was most likely to start in the kitchen.
- One-tenth (12%) suggested fire was most likely to start in a child's bedroom, whilst one percent (1%) thought the fire was most likely to start in the adults bedroom.
- Those who thought the fire would start in the hallway (1%) focused on this area due to the meter box being located here.
- One-quarter (24%) of participants were not sure. Most of these participants were not able to give one clear answer, suggesting that fires can start anywhere depending on the cause – especially if electrical.

In which part of the house do you think a fire is most likely to start?	Number (n=300)	Percent
Living areas	151	50%
Not sure	72	24%
Childs bedroom	37	12%
Kitchen	34	11%
Hallway	3	1%
Adults bedroom	3	1%
Total	300	100%

3.3.2.1 Comparison to Baseline Data

- This question was similar to that in the baseline study, except that the baseline study did not use visual cues.
- When results of Maori Fire Study were compared to baseline it was found that:
 - Significantly fewer participants in the Maori Fire Service (-69%) thought the kitchen was most likely place for a fire to start.
 - One-third (+34%) more thought a fire was most likely to start in a living area.
 - One-quarter more (+24%) were not sure.

In which part of the house do you think a fire is most likely to start?	Number (n=300)	Percent	Base (n=303)	Cmp with Base
Living areas	151	50%	16%	34%
Not sure	72	24%	0%	24%
Childs bedroom *	37	12%	N/A	N/A
Kitchen	34	11%	80%	-69%
Hallway	3	1%	1%	0%
Adults bedroom *	3	1%	N/A	N/A
Total	300	100%		

(Note: these are not directly comparable as participants in the baseline were asked only about bedrooms, not adult's and children's bedrooms separately).

3.4 Cooking Related Fires

3.4.1 Personal Experience of a Kitchen Fire

- Participants were asked if they had experience of a cooking related fire. One-third (27%) reported having had a cooking fire.
- More urban (31%) than rural (23%) participants reported having had a cooking fire.

Have you lived in a house that's had a cooking fire	Number (n=300)	Percent Urban	Percent Rural	Total
Yes	82	31%	23%	27%
No	218	69%	77%	73%
Total	300	100%	100%	100%

Those who had a cooking fire reported the fire started when cooking foods such as steak and eggs or having a boil-up.

- Twenty (20) specifically mentioned they were cooking with fat, while eight (8) were cooking with oil.
- Nine (9) reported the fire started due to inattention such as falling asleep, forgetting, watching television and answering the telephone.
- Seven (7) participants were having a boil-up such as cooking pork bones at the time.
- Five (5) mentioned the fire started when the person cooking was drunk.
- In four (4) instances water had boiled dry, and was the cause of the fire.
- One person revealed it was a child who was cooking when the fire started.
- Others linked the cause of the fire to their elements being turned up too high.

3.4.2 Knowledge of Action with Kitchen Fires

All three hundred (300) participants were asked if they knew what action to take should there be an oil or fat fire in the kitchen.

- Three-fifths (57%) thought they should smother the flame with a cloth.
- Forty five percent (45%) favoured turning off the power source and forty percent (40%) would use a fire extinguisher. The latter response is likely to have been influenced by the fact that a fire extinguisher was visible in pictures presented earlier in the interviewing.
- Almost one-third (29%) reported they would use salt and one quarter (26%) said they would carry the pan outside.
- One-tenth (10%) suggested they would douse the flames with water.

- One percent (1%) either had no idea what to do or suggested something else.

What should you do if oil or fat catches on fire?	Number (n=300)	Percent
Smother flames with a cloth	171	57%
Turn off the power source	135	45%
Use a fire extinguisher	120	40%
Use a lid, tray etc to smother it	111	37%
Put salt on the flames	86	29%
Carry the pan outside	79	26%
Douse the flames with water	28	9%
No idea what to do	4	1%
Other	2	1%

3.4.2.1 Comparison to Baseline Data

- Participants in the Maori Fire Study reported more actions than baseline participants had done. This is likely be due to the fact the Maori Fire Study was a face-to-face study.
- The table which follows shows that Maori Fire participants reported more safe actions and more unsafe actions than baseline participants had done.

What should you do if oil or fat catches on fire?	Number (n=300)	Percent	Base (n=303)	Cmp with Base
Smother flames with a cloth	171	57%	47%	10%
Turn off the power source	135	45%	13%	32%
Use a fire extinguisher	120	40%	4%	36%
Use a lid, tray etc to smother it	111	37%	36%	1%
Put salt on the flames	86	29%	10%	19%
Carry the pan outside	79	26%	3%	23%
Douse the flames with water	28	9%	1%	8%
No idea what to do	4	1%	5%	-4%
Other	2	1%	3%	-2%
Use baking soda	N/A	N/A	5%	N/A
Use sand	N/A	N/A	2%	N/A

3.4.3 Participant Cooking Habits

Participants were asked what foods they like to cook with oil or fat. This question was included because there have been some theories put forward that the link between Maori and fire may be related to dietary factors.

- One-third (29%) responded they use oil or fat to fry eggs.

- Fifteen percent (15%) fried bread, and a similar proportion (14%) cooked roasts and steak, while thirteen percent (13%) fried chips.
- One-tenth (10%) used oil and fat for a variety of meats and nine percent (9%) used oil or fat for fish.
- Bacon (5%) and chops (4%) were infrequently mentioned.

What other foods do you like to cook with fat or oil?	Number (n=300)	Percent
Eggs	87	29%
Fried Bread	46	15%
Roasts	43	14%
Steak	43	14%
Chips	40	13%
Meat	31	10%
Fish	26	9%
Bacon	16	5%
Chops	12	4%

4 PREPARATION FOR DEALING WITH EMERGENCIES

4.1 Smoke Alarms

4.1.1 Ownership of Smoke Alarms

- Participants were asked if they had a smoke alarm in their house.
 - Two-fifths (43%) replied they had a smoke alarm installed.
 - A small number owned smoke alarms but had not installed them. These were recorded as having no smoke alarms.
 - Significantly more urban (50%) than rural (33%) participants reported having a smoke alarm.

Do you have a smoke alarm in your house?	Number (n=300)	Percent Urban	Percent Rural	Total
Yes	128	50%	33%	43%
No	172	50%	67%	57%
Total	300	100%	100%	100%

4.1.1.1 Comparison to Baseline Data

- When Maori Fire Study results were compared to baseline data it was found that significantly fewer Maori Fire Study participants (-37%) reported having a smoke alarm installed than baseline study participants had.

Do you have a smoke alarm in your house?	Number (n=300)	Percent	Base (n=303)	Cmp with Base
Yes	128	43%	80%	-37%
No	172	57%	20%	37%
Total	300	100%	100%	

4.1.1.2 Factors Which Influenced Purchase

- Those who had smoke alarms were asked to comment on the influences underlying the decision to purchase them.
 - Common sense was an influential factor for one-third (30%) of those who had smoke alarms.

- The next most popular response was advice from friends and relatives (15%), then fire service promotions (13%).
- Thirteen percent (13%) identified they lived in Housing New Zealand Homes, whilst eleven percent (11%) occupied houses that had alarms installed when they arrived.
- A minority (6%) received their smoke alarm as a gift.
- Five percent (5%) had experience of fire, personally or knew of someone who did and commented this was influential in their decision to purchase a smoke alarm.
- A small proportion recorded influence or advice from an insurance company (4%), retailer promotion (2%), media reports (2%) and fire service schools programme (1%).
- Four percent (4%) were unable to describe factors influencing their decision to install smoke alarms.

Who or what made you get a smoke alarm?	Number (n=128)	Percent
Common sense	39	30%
Advice from friends or relatives	19	15%
Fire Service promotion	17	13%
Housing New Zealand home	17	13%
Alarms were already installed	14	11%
Received as a gift	8	6%
Experience of fire (personally or others)	7	5%
Advice from insurance company	5	4%
Don't know	5	4%
Retailer promotion	3	2%
Media reports (not Fire Service)	3	2%
Fire service schools programme	1	1%

4.1.1.3 Comparison with Baseline Data

- When Maori Fire Study results were compared with baseline data the significant differences were:
 - More Maori Fire Study participants reported advice from friends or relatives influenced their decision (+7%).
 - Fewer Maori Fire Study participants (-12%) said media reports influenced their decision.

Who or what made you get a smoke alarm?	Number (n=128)	Percent	Base (n=242)	Cmp with Base
Common sense	39	30%	N/A	N/A
Advice from friends or relatives	19	15%	8%	7%
Fire Service promotion	17	13%	16%	-3%
Housing New Zealand home	17	13%	N/A	N/A
Alarms were already installed	14	11%	15%	-4%
Received as a gift	8	6%	7%	-1%
Experience of fire (personally or others)	7	5%	3%	2%
Advice from insurance company	5	4%	0%	4%
Don't know	5	4%	2%	2%
Retailer promotion	3	2%	2%	0%
Media reports (not Fire Service)	3	2%	14%	-12%
Fire service schools programme	1	1%	0%	1%
Other	0	0%	38%	N/A

4.1.1.4 Factors Which Stopped Purchase

Those who did not have a smoke alarm asked what had stopped them from getting a smoke alarm.

- Of the one hundred and seventy two (172) participants who did not have a smoke alarm, the majority (65%) simply "hadn't managed to get around to" purchasing one. Those who made extra comments such as importance or cost have also been allocated into those areas.
- Fifteen percent (15%) of those without smoke alarms were renting their houses and saw the smoke alarm as the landlords responsibility. Some commented they had approached the landlords, with no result.
- Thirteen percent (13%) saw smoke alarms as unimportant. Some of these respondents commented there were no children in their house. Others had the attitude that they were safety conscious, therefore the event is unlikely to happen in their houses.
- The same number (8%) were concerned with the costs involved.
- Seven percent (7%) were deterred by lack of knowledge about smoke alarms and three percent (3%) did not know where to purchase them.
- Interviewers reported a heightened awareness of smoke alarms as a direct result of the questions in the survey. A small percentage indicated they would put the ten dollar koha towards purchasing a smoke alarm.

- Some (8%) were unable to comment on why they hadn't purchased a smoke alarm.

What's stopped you from getting a smoke alarm?	Number (n=172)	Percent
Haven't gotten around to it	111	65%
Renting house	25	15%
Don't see them as being important	23	13%
Don't know	14	8%
The cost	13	8%
Don't know much about them	12	7%
Don't know where to get them	5	3%
Not answered	5	3%
Other	4	2%
Don't think they are effective	2	1%
Heard/think they go off all the time	2	1%
The physical appearance of alarm	1	1%

4.1.2 Number

Those with smoke alarms were asked how many they had within their house.

- Twenty seven percent (27%) recorded one smoke alarm.
- Two-fifths (43%) had two smoke alarms.
- Eleven percent (11%) recorded three smoke alarms.
- Six percent (6%) had four smoke alarms.
- Thirteen percent (13%) recorded more than four.

How many smoke alarms do you have installed in your house?	Number (n=128)	Percent
One	35	27%
Two	55	43%
Three	14	11%
Four	8	6%
More than four	16	13%
Total	128	100%

4.1.2.1 Comparison to Baseline Data

- When responses of those with smoke alarms in the Maori Fire Study were compared with those with smoke alarms in the baseline study it was found that:

- More Maori Fire Study smoke alarm owners (+15%) had two smoke alarms.
- Fewer Maori Fire Study smoke alarm owners (-16%) had one smoke alarm.

How many smoke alarms do you have installed in your house?	Number (n=128)	Percent	Base (n=242)	Cmp with Base
One	35	27%	43%	-16%
Two	55	43%	28%	15%
Three	14	11%	12%	-1%
Four	8	6%	5%	1%
More than four	16	13%	2%	11%
Total	128	100%	100%	

4.1.3 Location

Those with smoke alarms were asked to describe the location of their installed smoke alarms.

- Four-fifths (80%) had their smoke alarm/s installed in their hallway or corridor.
- Two-fifths (42%) chose to place their smoke alarm/s in their living area or lounge, whilst one-third (36%) chose the bedrooms.
- One-quarter (25%) placed their smoke alarm/s in the kitchen and five percent (5%) in the garage.

Where are your smoke alarms installed?	Number (n=128)	Percent
Hallway/Corridor	103	80%
Living area/Lounge	54	42%
Bedrooms	46	36%
Kitchen	32	25%
Garage	6	5%
One on each level	N/A	N/A
Other	N/A	N/A

4.1.4 Knowledge of Maintenance

General maintenance of the smoke alarms was queried. This revealed:

- Four-fifths (80%) of those with smoke alarms felt they knew how to check the alarms were still in working order and the same proportion (80%) knew how to change the battery in the alarm.

- Three-quarters (75%) knew how to turn off a false alarm, other than removing the battery.
- Three-fifths (61%) knew what signal the alarm sends when the battery is failing.
- Two-fifths (38%) knew where to place the units to avoid false alarms.

Do you or someone in your household know the following?	Number (N=128)	Percent
How to change the battery in the alarm?	103	80%
How to test the alarm is still in working order?	102	80%
What signal the alarm sends out when the battery is failing?	78	61%
How to turn off false alarms (other than removing battery)?	96	75%
Where to place the units to avoid false alarms?	49	38%

4.1.5 False Alarms

- One-third (31%) of smoke alarm owners reported the 'alarms went off all the time and annoyed them'.
- This is a similar result (-2%) to that obtained in the baseline study.

Does your alarm go off all the time and annoy you?	Number (n=128)	Percent	Base (n=242)	Cmp with Base
Yes	40	31%	33%	-2%
No	79	62%	66%	-4%
Not Sure	9	7%	1%	6%
Total	128	100%	100%	0%

4.1.6 Alarm Position

- Sixty one percent (61%) knew what sound the alarms sends off when the batteries are failing.
- Five percent (5%) suggested alarm/s were in a position they personally could not get to.
- One-fifth (20%) removed batteries to stop annoying alarms. It should be noted that one-tenth (12%) were Housing New Zealand tenants whose batteries cannot be removed, therefore those are coded as 'not applicable'.

Has someone in your household?	Yes	
	Number (N=128)	Percent
Had difficulty getting to an alarm because of its position?	7	5%
What signal the alarm sends out when the battery is failing?	78	61%
Removed the batteries to stop annoying alarms?	26	20%

4.1.7 Maintenance Activities

- Approximately half of those with a smoke alarm (48%) did and half (48%) did not regularly maintain their smoke alarms.
- Of the one hundred and twenty eight participants who had smoke alarms, only one-quarter (23%) reported cleaning the alarms.
- One-fifth (20%) of those with a smoke alarm reported changing the battery in the alarms. Assumptions should not be made regarding the remaining participants who reported they had not changed their batteries as the time frame and alarm working condition is unclear.

Does a member of your household	Yes	
	Number (N=128)	Percent
Check the alarms are in working order	61	48%
Regularly vacuum the smoke alarm to clean it.	29	23%
Replace the battery in the smoke alarm.	61	48%

4.2 Escape Plans

4.2.1 Participants who have a Household Escape Plan

- All participants were asked if they had a household escape plan. One-third (32%) reported they did, two-thirds (64%) reported they did not and four percent (4%) were unsure.

Has your household worked out an escape plan in case of fire?	Number (n=300)	Percent Urban	Percent Rural	Total
Yes	96	33%	31%	32%
No	193	63%	67%	64%
Not Sure	11	5%	2%	4%
Total	300	100%	100%	100%

4.2.1.1 Comparison with Baseline Data

- When results of the Maori Fire Study were compared with baseline data it was found that fourteen percent (-14%) fewer participants in the Maori study had worked out an escape plan.

Has your household worked out an escape plan in case of fire?	Number (n=300)	Percent	Base (n=303)	Cmp with Base
Yes	96	32%	46%	-14%
No	193	64%	52%	12%
Not Sure	11	4%	2%	2%
Total	300	100%	100%	

4.2.2 Escape Plan Descriptions

Those one-third of participants (32%) who indicated they had an escape plan were asked to describe their plan of action.

- Most (90%) mentioned exiting quickly either through windows or doors.
- Almost all (92%) included calling the fire brigade from neighbouring telephones or a mobile phone which they intended to collect on the way out.
- Few mentioned other elements of an escape plan. Meeting places such as 'driveways' or 'mailboxes' were organised for some (15%). Eleven (11%) responses included the need to 'not panic' and 'stay calm'.
- A small number included strategies for attempting to contain the fire in their responses. Four percent (4%) mentioned the need to turn off the power source to the house. A few (3%) suggested they would attempt to put the fire out whilst waiting for the fire brigade by using their hoses. One (1%) suggested using dampened soil as an alternative.
- Two percent (2%) mentioned specific plans of who was responsible for children, elderly or animals.

4.2.2.1 Awareness of Role

- Eighty five percent (85%) of those who had an escape plan were sure all members of their households were aware of their role in the escape plan. Thirteen percent (13%) were unsure of the household awareness.

Are all member of the household aware of their role in the escape plan?	Number (n=96)	Percent
Yes	82	85%
No	2	2%
Not Sure	12	13%
Total	96	100%

4.3 Telephone

4.3.1 Availability

- Almost nine-tenths (88%) reported having a working telephone in their homes. One-tenth (12%) did not, this figure includes those who use mobile phones only.

Does this household have a working telephone?	Number (n=300)	Percent
Yes	265	88%
No	35	12%
Total	300	100%

4.3.2 Plan of Action

- Participants without telephones in their homes were asked to comment on their plan of action in an emergency.
- Thirteen (13) reported using their neighbours phone, while twelve (12) had access to a mobile phone.
- Eight (8) did not answer, one (1) used a telephone box and one had someone phone for them (1).

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What do you do if you need to ring someone in an emergency	Number (n=35)
Use the neighbors phone	13
Use a mobile phone	12
Use the public telephone box	1
Other	1
Did not answer	8
Total	35

5 SAFETY AWARENESS

To measure the level of safety awareness participants were shown two pictures, the first a kitchen scenario, the second a bedroom scenario.

Through using pictures, interviewers were able to accommodate participants visual and aural abilities. The rationale extends to providing a non-threatening approach to the interview and helping to capture participant interest. Interviewers reported many participants looked carefully at the pictures to 'find the tricks', however once assured there were not any took the task within their stride.

It is important to note that some participants gave the 'adolescent' adult status, whilst others did not. This directly impacts on perceptions of the adequacy of supervision.

5.1 Kitchen Scenario

All participants were shown this kitchen scene and asked to comment on what they thought was fire safe, a fire risk, familiar and unfamiliar.



5.1.1 Fire Safe Perceptions

- The majority (94%) identified the fire extinguisher as safe. Interviewers reported a large majority of participants commented that they did not own or know how to

use a fire extinguisher and were drawn to the extinguisher because of the visual cue.

- One-tenth (11%) thought the expell-air over the elements or the cordless jug (8%) were fire safe.
- Seven percent (7%) thought the benches were sufficiently clear and five percent (5%) considered the children were supervised and therefore being fire safe.
- Four percent (4%) considered the position of appliances (4%), access to the doorway and taps (4%) or nothing (4%) was fire safe.
- Three percent (3%) thought the children cooking, and tea towels on the oven door (3%) were safe. Two percent (2%) thought the whole scene looked safe and one percent (1%) focused on the safety aspect of the clear floor.

5.1.2 Fire Risk Perceptions

- All participants were asked to examine the same kitchen scene to determine what looked like a fire risk.
 - Three-fifths of participants (60%) determined tea towels hanging on the oven door to be a fire risk.
 - Almost half (49%) thought the 'adult' in the picture was not supervising, whilst two-fifths (38%) interpreted the children cooking as a fire risk. Interviewers reported the majority of those who reported the children cooking as a fire risk also thought the adult was not supervising.
 - Two-fifths (42%) identified the handle "sticking out" as a fire risk in the kitchen.
 - Comments regarding the beer bottle (27%) included responses such as someone had been drinking and the bottle is within reach of the children.
 - One-fifth (18%) considered the oil next to the elements as fire risk as it was in the wrong position. Comments included the possibility of the oil heating, igniting and accidental spillage.
 - Seventeen percent (17%) focused on the children playing in the kitchen as a fire risk or the fire extinguisher being in the wrong place (17%). Comments for the fire extinguisher included poor access across the stove without incurring burn.

Others suggested the fire extinguisher in its current position could heat up and explode.

- Six percent (6%) considered no smoke alarms in the kitchen as a fire risk.
- Four percent (4%) included comments that nothing was a fire risk and one percent (1%) thought there was nothing wrong.
- Four percent (4%) saw the jug cord plugged in and two percent (2%) saw all electrical appliances as a fire risk.

What looks like a fire risk in the kitchen photograph?	Number (n=300)	Percent
Tea towel hanging on the oven door	180	60%
The adult is not supervising	147	49%
Pot handle is sticking out	126	42%
Children cooking	114	38%
Comments regarding the beer bottle	82	27%
Oil is next to the element	54	18%
A child is playing in the kitchen	52	17%
Fire extinguisher is in the wrong place	50	17%
There are no smoke alarms	17	6%
Nothing	12	4%
The jug cord is still plugged in	12	4%
All electrical appliances	5	2%
Can't see anything wrong	3	1%
Don't know	7	4%

5.1.3 Familiarity of Scenario

- Participants were asked if the kitchen scene was familiar or unfamiliar to their household.
- Two-fifths (40%) of participants reported this was a familiar scene, whilst three-fifths (58%) reported this was not familiar. Two percent (2%) were unsure. More urban (49%) than rural (39%) participants saw their family in this picture.

Do participants see their family in the kitchen scene?	Number (n=300)	Percent Urban	Percent Rural	Total
Yes	134	49%	39%	45%
No	162	50%	59%	54%
Not Sure	4	1%	2%	1%
Total	300	100%	100%	100%

5.1.3.1 *What is familiar*

- Half (51%) of those who identified with the kitchen scene reported children cooking in the kitchen was familiar. This is twenty percent (20%) of all participants.
- Fourteen percent (14%) of respondents reported the whole scene was familiar, they hung their tea towels over the oven door and that children play in the kitchen.
- One-tenth reported everything was normal except for the reading (8%).
- The beer bottle on the bench was reported to be familiar to five percent (5%) and the clutter in the kitchen to three percent (3%).
- One (1) person reported having a fire extinguisher in their kitchen.

Is the kitchen picture a familiar scene in your home?	Yes	
	Number (n=121)	Percent
Children cook	62	51%
The whole scene is familiar	17	14%
Tea towels hang over the oven door	17	14%
Children play in the kitchen	17	14%
Everything is normal except for reading	10	8%
Beer bottle on the bench is familiar	6	5%
The clutter of the kitchen	4	3%
I have a fire extinguisher in my kitchen	1	1%

5.1.3.2 *What is Unfamiliar*

- Of the fifty eight percent (58%) who did not identify with the kitchen scene, one-third (31%) reported their children did not cook.
- One-fifth (20%) did not identify with the scene as they had no children living in the house.
- Four percent (4%) reiterated they did not read in the kitchen.
- Two percent (2%) said children do not play in the kitchen (2%), the beer bottle is unfamiliar (2%), the oil location was unfamiliar (2%) or were unable to comment (2%).

Is the kitchen picture a familiar scene in your home?	No	
	Number (n=173)	Percent
Children don't cook	54	31%
There are not children living here	34	20%
We don't read in the kitchen	7	4%
Children don't play in the kitchen	4	2%
Beer bottle is unfamiliar	4	2%
I don't keep the oil beside the element	4	2%
Unsure	3	2%

5.2 Bedroom.

The format of the kitchen questions were repeated with a bedroom scenario. All participants were asked to look at this bedroom scene and give suggestions on what looked fire safe, a fire risk, familiar or unfamiliar.



5.2.1 Perceptions of Fire Safety

- Over half (53%) could see nothing that would be especially fire safe in the bedroom picture.
- One-fifth (22%) of the participants considered the room in a tidy condition and therefore fire safe. As with the kitchen picture, participants view of adult status has an influence on answers.
- Six percent (6%) regarded the candle as safe. Reasons included the presence and supervision of an older 'child'.

- One-tenth (11%) felt having the three children together enhanced fire 'safeness'.
- Five percent (5%) felt the bed covers tucked in would make them more fire resistant.
- Four percent (4%) thought everything looked fire safe.
- Three percent (3%) suggested the pot plants, radio, walls and wooden floors (3%) – as seemingly fire resistant objects.
- Seven percent (7%) felt they did not know and were unable to comment.

What looks fire safe in the bedroom picture?	Number (n=300)	Percent
Nothing	158	53%
The room is tidy	66	22%
Three children are together	34	11%
Comments regarding the candle	19	6%
Bed is made - covers tucked in	14	5%
Everything looks safe	12	4%
Wooden floors	8	3%
Pot plants, radio, walls.	8	3%
Don't know	22	7%

5.2.2 Perceptions of Fire Risk

- Participants were then asked to comment on the fire risks they could see in the bedroom scene.
 - Most (95%) gave comments regarding the candle, such as its location, as the main fire risk.
 - Others (78%) were concerned with the hazards of the lighter being within reach of children.
 - Two-thirds (67%) commented on the child or childrens location to the candle as a fire hazard. Reasons varied from thinking the candle might fall onto the children below and that the children had their backs to it.
 - One-tenth (10%) considered the children in the picture unsupervised and therefore not safe. Again, the perception that one of the children was an adult had bearing on results. The same number (10%) thought the bedding and tablecloth were fire risks.

- Seven percent (7%) thought the radio was a fire risk. This came from the perception that where there is 'electricity' involved, there is the risk of fire.
- Four percent (4%) thought the room was too compact.
- Perfumes and cosmetics (2%) were chosen as a fire risk mainly because of their perceived sensitivity to heat and flammable composition.
- Two percent (2%) also either thought everything looked like a fire risk or that the newspaper was flammable and therefore a fire risk (2%).
- One percent (1%) thought the 'caregiver' reading on the bed may fall asleep or gave answers that were unclear for coding purposes (1%).

What looks like a fire risk in the bedroom picture?	Number (n=300)	Percent
Comments regarding the candle	286	95%
Lighter is within reach	233	78%
Child location to the candle	202	67%
Bledding and tablecloth	30	10%
Unsupervised children	29	10%
The radio	21	7%
The room is compact	12	4%
Perfumes and other cosmetics	7	2%
Everything looks like a fire risk	5	2%
The newspaper	5	2%
Could fall asleep if reading on the bed	2	1%
Answer is unclear/uncodeable	4	1%

5.2.3 Familiarity of Scenario

- Participants were asked if they identified with the bedroom scene. Forty five percent (45%) said they identified with the scene and fifty five percent (55%) did not identify with the scene.
- More urban Maori (49%) reported this scene to be familiar than rural Maori did (39%).

Do participants see their family in the bedroom scene?	Number (n=300)	Percent Urban	Percent Rural	Total
Yes	134	49%	39%	45%
No	162	50%	59%	54%
Not Sure	4	1%	2%	1%
Total	300	100%	100%	100%

5.2.3.1 What is Familiar?

- Of those one hundred and thirty four participants (134) who saw the bedroom scene as familiar, over half (54%) reported the scene was a normal situation. This included the candles and the lighter. This is one quarter (24%) of the participants overall.
- One-third (31%) felt the situation was familiar, but commented they did not use candles.
- One-tenth (10%) would have the candles present but commented the candle would be in a different position. These people did not find the candles unfamiliar, only the position of the candle.

Is the bedroom picture a familiar scene in your home?	Yes	
	Number (n=134)	Percent
It is a normal situation	73	54%
Familiar, but without the candles	42	31%
Use candles in a different position	13	10%

5.2.3.2 What is Unfamiliar?

- Sixteen percent (16%) of those who thought the bedroom scene was unfamiliar reported they would not allow candles in their bedroom. A further one-tenth (9%) suggested they did not use candles anywhere in the house. Many of these reported their preference for using torches.
- Those who did not have children at home (13%) found this situation unfamiliar.
- Six percent (6%) suggested children in their household either did not have time, or chose not to "lay around" in their bedrooms.
- Four percent (4%) reported that when candles were used, they were supervised by adults.

Is the bedroom picture a familiar scene in your home?	No	
	Number (n=162)	Percent
Candles or lighters are not allowed in bedrooms	26	16%
There are no children in the home	21	13%
We don't use candles anywhere in the house	14	9%
Children don't lay around in the bedrooms	10	6%
Candle use is supervised by adults	7	4%

6 FIRE SAFETY PROMOTIONS

All participants were asked questions related to their knowledge of fire safety promotions. Brochures were used as a tool to gain an understanding of what appealed to Maori. They were also asked about other fire safety issues.

6.1 Recall of Fire Safety Messages

6.1.1 Maori Fire Study Results

All participants were asked if they had heard specific fire safety messages prior to the interview.

- Almost all (99%) participants had heard the safety tip 'Dial 111 in an emergency'.
- Most (88%) had heard 'Smoke Alarms Saves Lives'.
- Most recalled 'Matches are tools not toys' (86%).
- Over three-quarters (78%) recalled 'Stop, Drop and Roll', similar proportions to 'Escape Plans' (74%).
- The awareness of the fire safety message 'Crawl low under smoke' was familiar to two-thirds (67%) of participants.
- Recall of messages did not vary significantly between urban and rural participants.

Which of these fire safety tips have you heard BEFORE this interview?	Number (n=300)	Percent Urban	Percent Rural	Total
Dial 111 in an emergency	296	98%	99%	99%
Get out. Stay out	281	94%	93%	94%
Smoke Alarms Saves Lives	263	86%	87%	88%
Matches are tools not toys	249	82%	84%	83%
Stop, drop and roll	233	78%	77%	78%
Escape plans	223	73%	76%	74%
Crawl low under smoke	201	67%	67%	67%

6.1.2 Comparison to Baseline Data

- When the Maori Fire Study results were compared to baseline data it was found that:
 - Fewer Maori Fire Study participants recalled and 'crawl low under smoke' (-30%), 'Smoke Alarms Save Lives' (-8%), and 'escape plans' (-7%).
 - More Maori Fire Study participants recalled 'Get out. Stay out' (+12%).

Which of these fire safety tips have you heard BEFORE this interview?	Number (n=300)	Percent	Base (n=303)	Cmp with Base
Dial 111 in an emergency	296	99%	99%	0%
Get out. Stay out	281	94%	81%	12%
Smoke Alarms Save Lives	263	88%	96%	-8%
Matches are tools not toys	249	83%	86%	-3%
Stop, drop and roll	233	78%	81%	-3%
Escape plans	223	74%	81%	-7%
Crawl low under smoke	201	67%	97%	-30%

6.2 Advertising

6.2.1 Recall

- Over three-quarters (77%) of participants recalled seeing or hearing Fire Service publicity material on free television. Urban (76%) and rural (78%) participants were equally likely to report free television messages.
- Nine percent (9%) recalled publicity on Sky. This included seven percent (7%) of urban and eleven percent (11%) of rural participants. More rural (70%) than urban (53%) participants recalled newspaper publicity.
- Three-fifths (60%) recalled publicity materials.
- Fifty five percent (55%) recalled seeing brochures prior to the interview. More rural (63%) than urban (50%) participants recalled brochures.
- One-third (34%) recalled hearing fire safety promotional messages on the radio. More urban (37%) than rural (30%) participants recalled these.

Where have you seen or heard Fire Service Publicity material?	Number (n=300)	Percent Urban	Percent Rural	Total
Television (1,2-3)	230	76%	78%	77%
Newspapers	180	53%	70%	60%
Brochures	165	50%	63%	55%
On the radio	102	37%	30%	34%
Television (sky)	26	7%	11%	9%

6.3 Brochures

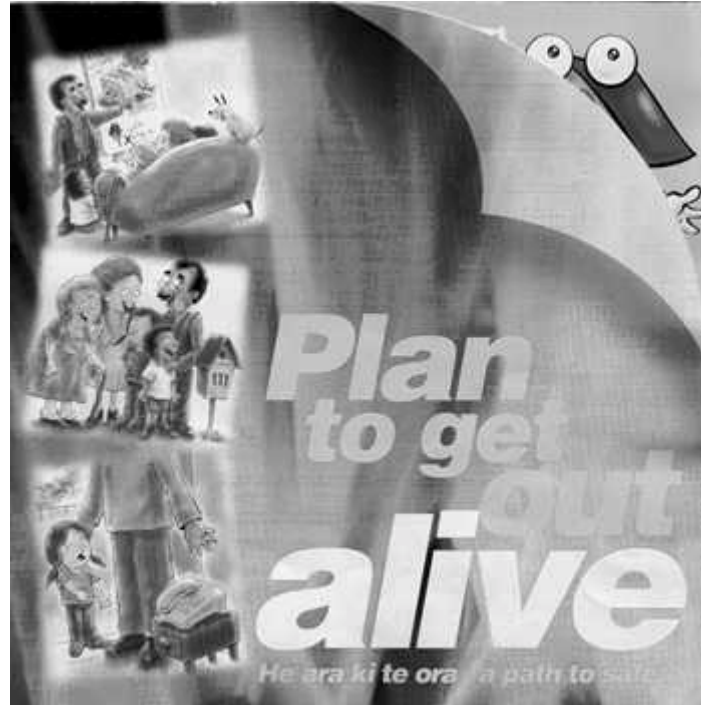
All participants were shown three brochures. These brochures were 'Plan to get out alive' and 'Protect what you value', and 'Protect what you value' written in te reo.

Participants were shown the covers of these brochures and asked which they would most likely pick up and read. The two 'Protect what you value brochures' have been categorised as one, and commented upon separately further on in the report.

- More participants chose 'Plan to get out alive' (66%) than 'Protect what you value' (34%).
- More urban participants (70%) preferred 'Plan to get out alive' than did rural Participants (59%).

Which brochure would you most likely pick up and read?	Number (n=300)	Percent Urban	Percent Rural	Total
Plan to get out alive.	197	70%	59%	66%
Protect what you value.	101	29%	41%	34%
Not Sure	2	1%	0%	1%
Total	300	100%	100%	100%

6.3.1 Brochure – 'Plan To Get Out Alive'



6.3.1.1 Initial Reactions

- Almost all of the participants chose 'Plan to get out alive' initially because of the colour. Many described this as 'attractive' and 'eye catching'.
- Cartoon characters appealed to many.
- The title appealed to some, specifically planning before the event takes place and being prepared. Others thought the title was straight to the point in "telling you what you should do".
- Some chose 'Plan to get out alive' as it visually looked thinner with fewer pages and presumably easier to read.

6.3.1.2 Main messages

Those who were initially attracted to 'Plan to get out alive' were asked to read the brochure, and then comment on the main messages they retained.

- Nine-tenths (90%) of those who recalled the brochure mentioned how to plan and practice an escape plan.

- Three-fifths (60%) commented on information regarding location of smoke alarms and half (50%) mentioned how often you should test smoke alarms.

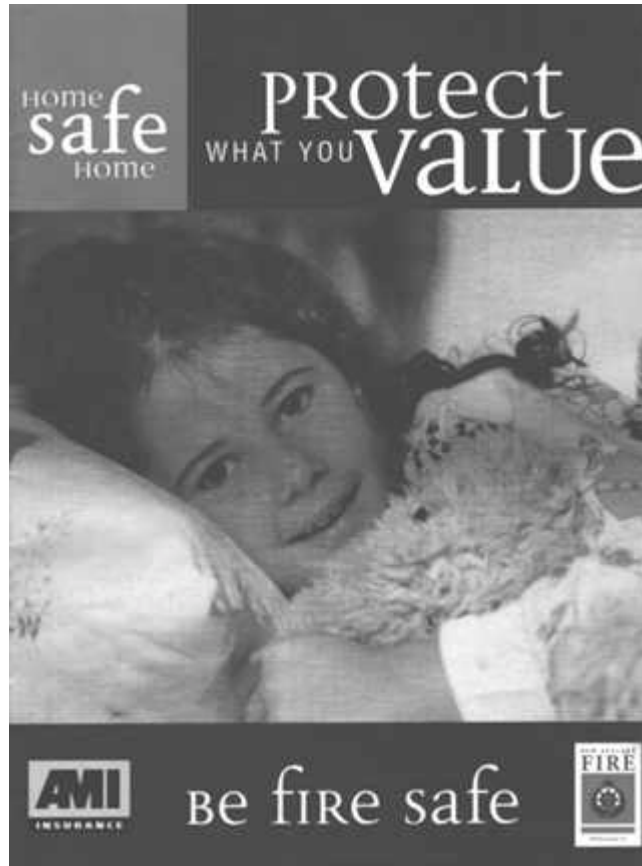
What are the main messages in PLAN TO GET OUT ALIVE?	Number (n=197)	Percent
How to plan & practice an escape plan	180	90%
Where to put smoke alarms	119	60%
How often you should test smoke alarms	100	50%
Other	4	2%

6.3.1.3 Likes and Dislikes

Participants were asked to comment specifically on what they liked or disliked about 'Plan to get out alive'.

- Many appreciated the length of 'Plan to get out alive' saying its was "short" and "easy to understand".
- Cartoons appealed to many, as did the colour.
- Others reported 'Plan to get out alive' was informative when giving ideas on how to prepare an escape plan.
- The family oriented presentation appealed to many, acknowledging the suitability for children within the family.
- The dislikes included comments that 'Plan to get out alive' was "too wordy", while others said it was "too short".
- Six (6) commented that 'Plan to get out alive' should be available in te reo just as 'Protect what you value' is.
- Some suggested the cartoons took the "edge of seriousness" off the message.
- One suggested the brochure did not cater for multi-level houses in the escape plans.

6.3.2 Brochure – Protect What You Value



6.3.2.1 Initial Reactions

- Almost all participants who chose 'Protect what you value' as their preferred brochure did so because of the child on the front cover. Many identified the child on the cover as "Maori", "real" and "possibly one of their own children".
- Others chose 'Protect what you value' as it looked thicker, the assumption being it was more informative.
- This brochure was seen as more "grown up and serious" by others.
- For twenty two (22) participants the brochure being written in te reo was an influential factor.

6.3.2.2 Main Messages

Those who preferred 'Protect what you value' were asked what main messages they saw in 'Protect what you value'.

- Almost two-thirds (65%) thought the brochure informed readers on electrical safety and a similar proportion (65%) identified safety with matches and lighters.
- Three-fifths (62%) described safety with cooking and cooking fires as main messages.
- Three-fifths (61%) read about where to place smoke alarms and half (51%) read about how to maintain smoke alarms.
- Almost three-fifths (58%) felt it included a message about smoking in bed being dangerous.
- Half (50%) mentioned disposing of fire ashes and slightly fewer (46%) recalled procedures on planning and practising an escape plan.

What are the main messages in PROTECT WHAT YOU VALUE?	Number (n=101)	Percent
Electrical safety (heaters/powerpoints)	66	65%
Safety with matches and lighters	65	64%
Safety with cooking and cooking fires	63	62%
Where to put smoke alarms	62	61%
Smoking in bed is dangerous	59	58%
How you should maintain smoke alarms	52	51%
How to dispose of fire ashes	51	50%
How to plan and practice an escape	46	46%
Other	6	6%

6.3.2.3 Likes and Dislikes

- The majority (18) of those who preferred 'Protect what you value' felt the te reo element was the most appealing.
- Many found 'Protect what you value' clear and easy to understand.
- Others were attracted to the illustrations, specifically commenting that they were good visual cues that supported the information.
- The small proportion who reported dislikes suggested 'Protect what you value' was 'too wordy' and the 'illustrations needed brightening up'.

6.3.2.4 Brochure Comparison Points

- In comparison, many who chose 'Plan to get out alive' linked the title to saving lives, and saw 'Protect what you value' as relating to material possessions.

- Many who chose 'Protect what you value' associated the word 'value' with human life due to the picture of the child on the front cover, whom most identified with.
- Some of those who chose "Protect what you value' did so as they found the colour on 'Plan to get out alive' distracting and difficult to read.

6.4 Options for Fire Safety Messages

6.4.1 Preferred Message Delivery Point

All were asked where the best place was to speak to Maori about fire safety issues.

- Four-fifths (83%) thought the Marae was the best place to speak to Maori about fire safety issues. This was significantly higher than any other response to this question and consistently high for both urban (83%) and rural (82%) participants.
- One-third (33%) mentioned a church or religious gathering. This was more commonly mentioned by urban (40%) than by rural participants (24%).
- One-quarter (26%) suggested a club or a hobby group. This was more commonly mentioned by urban (37%) than rural (11%) participants.
- Twelve percent (12%) of participants suggested a sporting match, an after match event (12%) or a public library (12%) would be more appropriate. These were slightly higher among urban (15%, 15%, 14%) than rural participants (8%, 9%, 8%).
- One-third (34%) thought somewhere not mentioned such as "pubs" would be the most appropriate place. This included two-fifths (37%) of urban and twenty eight percent (28%) of rural participants.
- In addition, sixteen percent (16%) mentioned they would like the fire safety messages getting across to the children to 'start early'. Some of those suggested a combined event for children and parents.
- Five percent (5%) particularly mentioned housie as a 'Maori' hobby.
- Four percent (4%) did not care where it was as long as it was local.

Where is the best place to speak to Maori about fire safety issues?	Number (n=300)	Percent Urban	Percent Rural	Total
A Marae	248	83%	82%	83%
A church or religious group	100	40%	24%	33%
A club or hobby group	78	37%	11%	26%
A sporting match	37	15%	8%	12%
A public library	37	15%	9%	12%
An after match event	35	14%	8%	12%
Somewhere else	101	37%	28%	34%

6.4.2 Reasons for Preferences

- Participants suggested these places as it was thought these would be where the majority of Maori congregate.
- Those who thought the Marae would be an appropriate meeting place often said that this is the place where Maori meet to discuss important issues. Further, Maori would be more comfortable in their 'own surroundings' and therefore more likely to listen and contribute to discussions.
- This is of particular importance for many who would not contribute in a threatening environment such as a town hall.
- Others suggested the fire safety message would be heard by a range of ages at the marae.
- A few suggested Maori were 'sporty' and large numbers are likely to attend a sporting match event. More specifically, rugby and netball were chosen as the main sports to focus on.
- After match events were targeted for their social aspects by some. These participants thought the friendly, relaxed atmosphere of an after match event would be more effective in getting the fire safety message across. These participants seem to want an informal discussion rather than a formal lecture or meeting.

6.4.3 How Best to Keep Informed

- Most (90%) participants relied on word of mouth to be kept informed of what is happening within the area.

- Three-fifths (60%) suggested their newspaper as a source of information. Interviewers reported that the majority of participants in this category relied on local rather than national newspapers.
- Community notice boards (12%) and publicity on the radio (12%) were reported to be of equal information value.
- Few chose the remaining categories of publicity events (1%) and visiting the information centre (1%). One percent (1%) were not sure.

What is the best way for you to find out what is happening in your area?	Number (n=300)	Percent
Word of mouth	270	90%
Newspapers	180	60%
Community notice boards	37	12%
Publicity on radio	35	12%
Brochures in the mail	22	7%
Publicity on television	8	3%
Not Sure	3	1%
At publicity events	2	1%
Visiting the information centre	2	1%

6.5 Radio

- Seventy percent (70%) of participants reported they liked listening to the radio. Twenty nine percent (29%) reported they did not like listening to the radio and one percent (1%) did not answer the question.
- More urban (75%) participants said they liked listening to the radio than did rural (63%).

Do you like listening to the radio?	Number (n=300)	Percent Urban	Percent Rural	Total
Yes	211	75%	63%	70%
No	87	24%	36%	29%
Not Sure	2	1%	1%	1%
Total	300	100%	100%	100%

6.5.1 Radio Stations

- When those who liked listening to radio were asked which station they liked listening to it was found that:
 - Three of the four most popularly reported stations were Maori stations.

- One-quarter (26%) recorded listening to radio Tainui, sixteen percent (16%) to Whakatane 1XX, thirteen percent (13%) to Te Arawa 89.0 and eleven percent (11%) to Sun, (previously Tumeke).
- A wide range of other responses were given. These suggest preference for localised stations.

Which radio station do you like listening to?	Number (n=211)	Percent
Tainui	55	26%
Whakatane 1XX	33	16%
Te Arawa 89.0	28	13%
Sun (old Tumeke)	23	11%
Coastline FM	14	7%
Mai FM	12	6%
Moana FM	11	5%
Bay Rock	10	5%
Radio Pacific	8	4%
The Edge	8	4%
IZH FM	8	4%
Tuwharetoa	7	3%
The Rock	7	3%
Hauraki	6	3%
Nga Iwi FM	6	3%
Radio Rhema	5	2%
93.5 Kiss FM	5	2%
Raukawa	5	2%
Tauranga BOP FM	4	2%
National	3	1%
Classic Rock	3	1%
Chill	3	1%
Solid Gold	2	1%
Fish station	1	0%

6.5.2 Tune in Times

- Eighty six percent (86%) of those who listen to the radio chose to do so before 10.00am.
- Over half (59%) listened between 10.00am and 12 midday.
- Under half (45%) listened between 12 noon and 3.00pm.
- Half (19%) chose to listen between 3.00pm and 5.00pm.
- Under half (44%) chose to listen between 5.00pm and 7.00pm.

- Seventy percent (70%) recorded listening after 7.00pm.
- Interviewers reported that although the radio was on during these times, many had them tuned for background noise rather than to listen to.

Morning (before breakfast)	181	86%
Between 10 and 12 midday	125	59%
After midday between 12 and 3	95	45%
Between 3 and 5pm	103	49%
Between 5 and 7pm	92	44%
At night after 7pm	145	69%

6.6 Te Reo Abilities

6.6.1 Speaking

- Participants were asked if they could speak, read or understand Maori.
 - One-fifth (17%) were not able to speak te reo at all.
 - Forty six percent (46%) reported to be able to speak te reo a little bit. More urban (50%) than rural (40%) participants felt they spoke a little te reo.
 - One-quarter (26%) were able to speak enough te reo to get by. More rural (31%) than urban (23%) felt they could speak te reo enough to get by.
 - One-tenth (11%) were able to speak te reo fluently. Of these nine percent (9%) are urban and fifteen percent (15%) rural.

Speak	Number	Percent Urban	Percent Rural	Total
Not at all	51	19%	15%	17%
A little bit	137	50%	40%	46%
Enough to get by	78	23%	31%	26%
Fluently	34	9%	15%	11%
Total	300	100%	100%	100%

6.6.2 Reading

- One-fifth (16%) reported no reading abilities in te reo. More (19%) were urban than rural (12%) participants said they could read te reo.

- Most (33%) reported being able to read a little bit of te reo. There were minimal differences between urban (32%) and rural (35%) participants.
- One-fifth (19%) reported being able to read enough te reo to get by. More rural (28%) than urban (19%) said they would do this.
- Twenty eight percent (28%) of participants are able to read te reo fluently. More urban (29%) than rural (25%) said they read te reo fluently.

Read	Number	Percent Urban	Percent Rural	Total
Not at all	51	19%	12%	16%
A little bit	137	32%	35%	33%
Enough to get by	78	19%	28%	22%
Fluently	34	29%	25%	28%
Total	300	100%	100%	100%

6.6.3 Comprehension

- Thirteen percent (13%) of participants reported no understanding of te reo.
- The majority (38%) were able to understand te reo a little bit. This included one-third (33%) rural and two-fifths (41%) of urban participants.
- One-third (27%) had enough understanding to get by. More rural (34%) than urban (23%) participants described themselves this way.
- One-fifth (21%) were able to understand te reo fluently. The same number of urban (21%) and rural (21%) participants described fluent comprehension.

Understand	Number	Percent Urban	Percent Rural	Total
Not at all	51	15%	11%	13%
A little bit	137	41%	33%	38%
Enough to get by	78	23%	34%	27%
Fluently	34	21%	21%	21%
Total	300	100%	100%	100%

7 LIFE STYLE VARIABLES

7.1 Children and School

All participants were asked if there were children who attended creche, Kohanga or school in their households.

- Over half (57%) had children in their home who attended creche, Kohanga or school.

Are there children who attend creche, Kohanga or school in this household?	Number (n=300)	Percent
Yes	170	57%
No	130	43%
Total	300	100%

- Two-thirds (67%) of these households had children who attended Primary or Intermediate, one-fifth (40%) had children who attended Secondary school, fourteen percent (14%) had children who attended Kohanga, twelve percent (12%) had children who attended Kindergarten and five percent (5%) had children who attended creche.

Which of the following do/es your child/ren attend?	Number (n=170)	Percent
Creche	8	5%
Kohanga	23	14%
Kindergarten	20	12%
Primary (including intermediate)	114	67%
Secondary	68	40%

7.1.1 Informing Parents of Upcoming Events

- Those with children were asked how the various educational organisations informed of them of upcoming events.
 - Four-fifths (83%) noted letters sent home with individual children and three-fifths (62%) received newsletters. Interviewers noted that many parents and caregivers commented they did not receive these letters or newsletters as children failed to deliver them.

- Half (49%) replied they spoke to other parents, teachers or members of Board of Trustees to gain information.
- One-third (31%) relied on the local newspaper and one-fifth (22%) the radio.
- Two percent (2%) suggested other means of gaining information such as school notice boards.

How do the various educational settings inform you of events?	Number (n=170)	Percent
Letters -sent home with children	141	83%
Newsletters	105	62%
Word of mouth	84	49%
Local Newspaper	53	31%
Radio	38	22%
Other	3	2%

7.1.2 Effectiveness of Methods

- Eighty seven percent (87%) of those with children suggested individual letters sent home with children as an effective method of informing parents and caregivers.
- Fifty nine percent (59%) felt word of mouth was effective and fifty eight percent (58%) thought newsletters were effective.
- Two-fifths (39%) chose the local newspaper and twenty seven percent (27%) chose the radio.

Which of these are the most effective in informing you of upcoming events?	Number (n=170)	Percent
Letters -sent home with children	148	87%
Word of mouth	101	59%
Newsletters	98	58%
Local Newspaper	66	39%
Radio	46	27%
Other	1	1%

7.1.3 Fire Safety Messages From Children

- Participants were asked if they remembered their child/ren talking about any fire safety messages. Three-fifths (61%) replied they had and two-fifths (37%) replied they hadn't. Two percent (2%) were unsure.

Can you remember the children talking about fire safety messages?	Number (n=170)	Percent
Yes	104	61%
No	63	37%
Not sure	3	2%
Total	170	100%

- Of those who chose to comment specifically about the fire safety message, twenty nine (29) remembered their child/ren talking about 'Stop, Drop and Roll', twenty four (24) about 'fire drills' and twelve (12) had been told about visits from fire staff.

What fire safety messages do you remember your child/ren talking about?	Number
Stop Drop and Roll	29
Fire Drills	24
Visits from Fire staff	12

7.1.4 Fire Safety Messages Adults Remember

- Participants were asked if they remembered hearing any fire safety messages whilst they were visiting their child/ren's schools. Forty six percent (46%) acknowledged they had, and fifty three percent (53%) replied they hadn't.

Can you remember hearing fire safety messages when YOU were visiting your child/ren's school?	Number (n=170)	Percent
Yes	78	46%
No	90	53%
Not sure	2	1%
Total	170	100%

- Of those who chose to comment specifically on the fire safety messages they had seen while at their child/ren's school, thirty five (35) remembered 'Stop, Drop and Roll', eight (8) remembered 'Crawl low under smoke' and three (3) remembered 'don't panic'.

What fire safety messages do you remember when you were visiting your child/rens school?	Number
Stop Drop and Roll	35
Crawl Low Under Smoke	8
Don't Panic	3

7.2 Participants Attendance

- All were asked if they had attended a variety of events within the past six months.
 - Three-quarters (76%) had attended a marae. In most cases, the interviewers noted this was their local marae.
 - Almost two-thirds (64%) reported having watched a sporting group, whilst fifty percent (50%) attended a public library.
 - One-third (35%) attended an after match event, the same proportion (35%) attended a club or hobby group or played sport (34%).
 - Thirty percent (30%) went to a church or religious group and one-quarter (26%) went to watch a movie.
 - Ten percent (10%) mentioned something else such as pubs, weddings and funerals.

In the last six months, which of the following have you attended?	Number (n=300)	Percent
A Marae	229	76%
Watch a sporting group	192	64%
A public library	149	50%
Attend an after match event	105	35%
A club or hobby group	103	35%
Play sport	101	34%
A church or religious group	90	30%
The movies	77	26%
Something not mentioned	31	10%

7.2.1 Specific Codes

- Of the thirty four percent who played sport, thirty four (34) people played rugby and thirty two (32) people played netball. Four (4) reported playing basketball and darts and less than four played sports such as tennis, hockey, golf and pool.
- Of those who watched sport, the majority watched rugby (108) and netball (58). Eight (8) watched hockey, seven (7) watched basket ball and five (5) watched hockey. Other sports participants watched included horse riding, tennis and golf.

- Those who went to the public library reported the location as their local one.
- After match events were held at the various sporting clubrooms such as the rugby clubrooms or netball clubrooms.
- Those who went to the movies recorded the amount of visits in a six month period. Of those who responded, four (4) mentioned they attended regularly once a month.
- Participants recorded their sporting groups as their club groups, for example the rugby club or soccer club. Hobbies included activities such as carving, arts and crafts and kapa haka.

8 DEMOGRAPHICS

8.1 Districts Covered

- Fifteen (15) districts were covered within the greater Waikato district. The following table outlines how many participants came from each district.

Number of districts covered	Number (n=300)	Percent
Rotorua District	44	15%
Hamilton City	26	9%
Western Bay of Plenty District	26	9%
Tauranga District	25	8%
Hauraki District	20	7%
Opotiki District	20	7%
Kawerau District	19	6%
Taupo District	19	6%
Waitomo District	19	6%
Whakatane District	18	6%
Matamata-Piako District	18	6%
South Waikato District	15	5%
Waikato District	12	4%
Waipa District	12	4%
Thames-Coromandel District	4	1%
Otorohanga District	3	1%
Total	300	100%

8.2 Urban / Rural

- Over half (59%) came from urban districts. The remaining two-fifths (41%) were rural participants.

Breakdown of districts into urban and rural	Number (n=300)	Percent
Urban	177	59%
Rural	123	41%
Total	300	100%

8.3 Age

- One-third (29%) were aged between thirty and thirty-nine years old.

- Two-tenths (18%) were aged between twenty and twenty-nine years old and seventeen percent (17%) between forty and forty-nine years old.
- The remaining age groups each accounted for around one-tenth of the participants aside from the eighteen to twenty year age group (3%).

Age	Number (n=300)	Percent
<20	9	3%
20-29	54	18%
30-39	87	29%
40-49	51	17%
50-59	38	13%
59-65	30	10%
65+	29	10%
Refused	2	1%
Total	300	100%

8.4 Income

All participants were asked their total household income before tax.

- One-fifth (19%) reported their total household income was fifteen thousand or under and a similar number (23%) reported total household income between fifteen and thirty thousand dollars.
- One-tenth (11%) reported their total household income was between thirty and forty five thousand dollars.
- Seven percent (7%) reported their total household income was between forty five thousand and sixty thousand dollars.
- Two percent (2%) recorded over sixty thousand dollars for their total household income.
- One-third (26%) did not know what their total household income was.
- One-tenth (13%) did not answer.

Income	Number (n=300)	Percent
\$0-\$15,000	58	19%
\$15-\$30,000	68	23%
\$30-\$45,000	34	11%
\$45-\$60,000	20	7%
over \$60,000	5	2%
Don't know	77	26%
Refused	38	13%
Total	300	100%

8.5 Occupation

- Two-fifths (41%) of participants reported they were employed, while one-fifth (19%) were unemployed.
- Sixteen percent (16%) were homemakers and thirteen percent (13%) were retired.
- Five percent (5%) were self employed, four percent (4%) had other occupations such as students.
- Two percent (2%) did not answer.

Occupation of the MAIN income earner	Number (n=300)	Percent
Employed	124	41%
Unemployed	56	19%
Homemaker	49	16%
Retired	39	13%
Self-employed	16	5%
Other	10	4%
Refused	6	2%
Total	300	100%

8.6 Gender

- Three-quarters (73%) of participants were female and only one-quarter (27%) male.
- Interviewers reported attempting to screen households and target males, however factors such as single parent families with the female as the main parent did not always make this possible.

Gender	Number (n=300)	Percent
Male	82	27%
Female	218	73%
Total	300	100%

8.7 Home Status

- Half (54%) of the participants owned or part owned their homes. Two-fifths (37%) reported they rented and four percent (4%) boarded. Five percent (5%) lived with their parents or family.

Which statement best describes the home you live in?	Number (n=300)	Percent
I own, or am part owner of it	161	54%
I rent	111	37%
I board there	13	4%
I live with my parents or family	15	5%
Other	N/A	N/A
Total	300	100%

8.8 Ages of all Members of Household

- Participants were asked how many people from each of the four age groups lived in their home.. This study represented households which includes a total of two hundred and ninety three (293) adults and three hundred and eleven (311) children. The children included:
 - Ninety seven (97) were aged between zero and four years.
 - One hundred and twenty one (121) were aged between five and twelve years.
 - Eighty five (85) were aged between thirteen and seventeen years.
- Eight (8) households did not answer the question.

Including yourself, how many people are aged:	Number
18 years and over	293
0-4 years	97
5-12 years	121
13-17 years	85
Refused	8
Total	604

8.9 Future Fire Surveys

- Participants were asked if they were interested in taking part in future Fire Service research. Two-fifths (42%) replied they were interested and three-fifths (58%) were not.
- Interviewers reported some participants requested Maori interviewers or specific interviewers to return. Interviewers, unable to give these assurances recorded these responses as 'no'.

Are you interested in taking part in future research?	Number (n=300)	Percent
Yes	125	42%
No	175	58%
Total	300	100%