Tartu Ülikooli sotsiaalteaduslike rakendusuuringute keskus RAKE

RAKE

Report on Descriptive Analysis of Estonia

Part of EVAPREM Project

RAKE, University of Tartu

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This study is commissioned as part of the EVAPREM project. The main goal of this project is to develop a universal and comprehensive model for evaluating the results of prevention measures implemented by the fire rescue boards of European countries.

This country-specific study of Denmark has been done at Centre for Applied Social Sciences (RAKE) of University of Tartu, Estonia.

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The author would also like to thank Uku Varblane and Andres Vork for their valuable inputs and support during the course of study.

The Centre for Applied Social Sciences (RAKE) was established in the University of Tartu in 2007. The fundamental goal of RAKE is to offer society high-quality applied research and analyses in social sciences.

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INTRODUCTION

This report is a detailed descriptive analysis of Estonia which is one of the five countries studied under the EVAPREM project.

The aim of the project is to deepen our understanding of the effectiveness and efficiency of the prevention services considering the corresponding socio-economic environment. The project will provide robust evidence and analysis to support policy-makers in understanding the impact of prevention and supports policy-makers at different administrative levels in elaborating and reshaping the selection of prevention services with providing cost-effective evaluation tools.

The main beneficiaries of the project would be the organizations responsible for planning and implementing the prevention measures in their respective countries on the national and local level as well as safety actors in European level. The direct beneficiaries will be populations of the participating countries and indirectly countries who will be adapting and using the evaluation tool afterward.

The survey is conducted in fifteen counties in Estonia. **The Estonian Rescue Board** is the Estonian partner of the EVAPREM project. Estonian Rescue Board (ERB) unites 72 fire and rescue service (FRS) brigades with a total personal of 1700 people, in addition to more than 115 voluntary FRS brigades and four reserve rescue squads. ERB has prioritized fire prevention measures since 2006.

One of the main reasons for that was a significantly high number of fire fatalities per 100,000 citizens (12,2 in 2006), which put Estonia among the worst countries in the world statistics of deaths by fire in the period of 2000-2006. The vision of Estonian Rescue Board has, therefore, been defined in terms of reducing the number of fire fatalities to the level of Nordic countries (1-2 per 100,000 citizens) and switching the focus from responsive to preventive activities, which also contributes to the implementation of the Estonian Inner Security Development Plan 2015-2020 (Siseturvalisuse arengukava 2015-2020). Estonian Rescue Board performs three types of fire prevention activities: informing, teaching and consulting. All three are linked with raising citizens` awareness and decreasing accidental deaths.

- **Informing**. The aim of informing activities is to raise awareness about fire prevention measures and safe behaviors through info-days, safety days, media campaigns and online channels.
- **Teaching.** The aim of teaching activities is to both evaluate the level of awareness about fire safety among the target groups and increase these levels through comprehensive training efforts.
- **Counseling**. Estonian Rescue Board consults homeowners, self-governance bodies and other cooperation partners about the issues of fire safety. Consultations include an overview of the knowledge of owners on fire safety and fire prevention, mapping possible risks and solutions, implementing solutions, etc.

The sample size of the study is 1722, which is representative on the Estonian population. Throughout the study, a **weighing factor** is maintained to produce the most accurate result. The project is financed by the European Union and serves also as a Flagship project of the European Union Strategy for the Baltic Sea Region (EUSBSR).

1. TECHNICAL INFORMATION REGARDING THE QUANTITATIVE SURVEY

The sample size of Estonian study is 1722. All 1722 respondents were asked the same set of questions (see Questionnaire attached). The survey was conducted in all fifteen counties (see Figure 1).

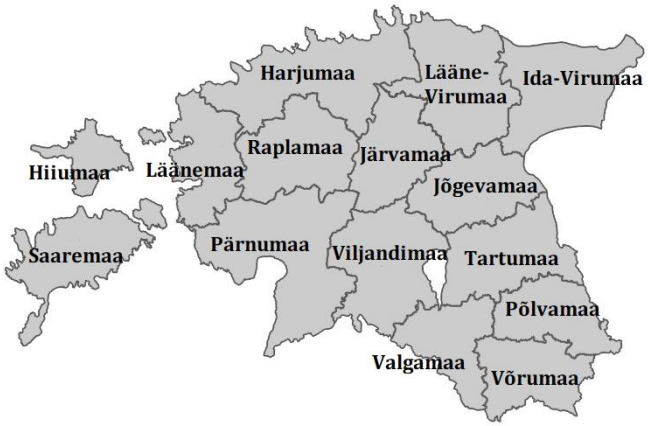


Figure 1. Fifteen counties of Estonia

Figure 2 shows the distribution of 1722 respondents among different counties of Estonia. Harjumaa has the highest number with 439 respondents while Hiiumaa has the lowest respondent size of 16. The respondent fifteen counties from and the exact population are shown in Table 1.

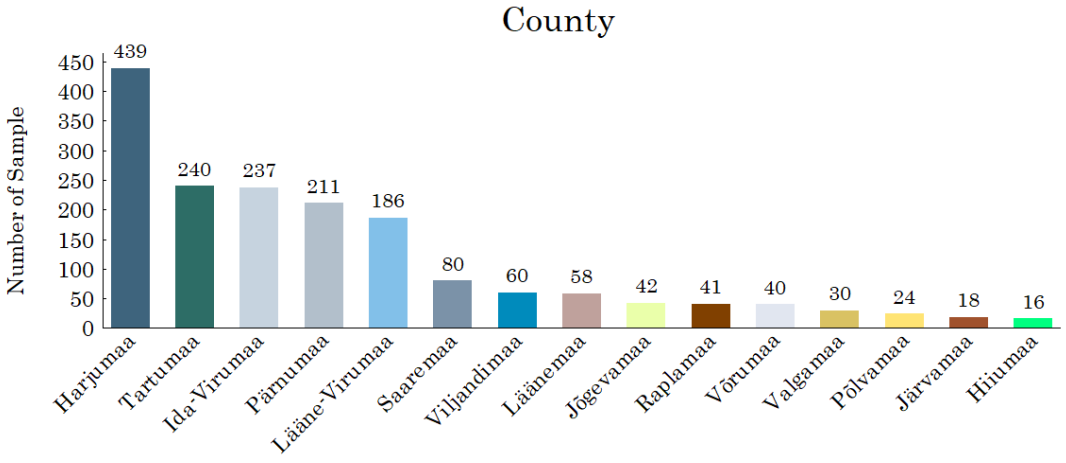


Figure 2. Samples from counties of Estonia

Table 1. Population and Sample

COUNTY	Population	Percentage	Sample	Sample(%)
Harju County	610,468	45.05	439	25.49
Tartu County	154,819	11.43	240	13.94
Ida-Viru County	142,562	10.52	237	13.76
Pärnu County	87,681	6.47	211	12.25
Lääne-Viru County	60,694	4.48	186	10.8
Viljandi County	47,563	3.51	60	3.48
Võru County	36,897	2.72	40	2.32
Saare County	33,925	2.5	80	4.65
Rapla County	33,774	2.49	41	2.38
Järva County	31,082	2.29	18	1.05
Valga County	29,571	2.18	30	1.74
Jõgeva County	29,544	2.18	42	2.44
Põlva County	25,655	1.89	24	1.39
Lääne County	21,174	1.56	58	3.37
Hiiu County	9,580	0.71	16	0.93
TOTAL	1,354,989	100	1722	100

*As of January 1, 2018

From Table 1, it can be observed that the number of respondents from most counties is in proportion to the population of counties except for Harjumaa (underrepresentation), Lääne-Virumaa and Pärnumaa (overrepresentation), the demographic structure of Harjumaa (Tallinn) is such that the number of most vulnerable age group (old people) is relatively lower than the national average while the number of working-age population is relatively higher, while in Lääne-Virumaa and Pärnumaa the number of old people is relatively higher and the working age group has relatively low share (see Appendix for demographics of Harjumaa, Lääne-Virumaa, and Pärnumaa).

In the survey, the **municipality** is also specified. The municipality of Tartu city has the highest number of the respondents which is 189 (approximately 11% of the total sample size), followed by the municipality of Pärnu with 150 respondents while the municipality of Vormsi has just one respondent (see Table 2 in Appendix).

The survey also focused on the **type of settlement** in which the respondent resides. Type of settlement is divided into four different groups. The groups are city areas, suburbs, small towns and rural areas. About half of the respondents (47%) have responded that they live in rural areas, about 42% of the respondents live in cities while 7% in small town and just 4% in suburbs (see Figure 3).

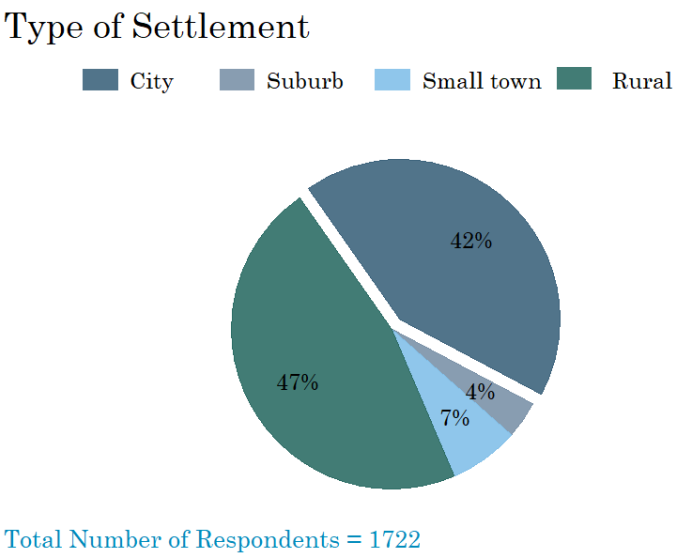


Figure 3. Type of Settlement

Figure 4 represents the information regarding **gender, the main language of communication, nationality and age group** of the 1722 respondents.

Respondents are almost equally divided on the basis of **gender**, there are 888 females (52% of the respondents) and 834 males (48% of the respondents).

In terms of **nationality**, 68% of the respondents are Estonian while 32% answered that their nationality is other than Estonian. 69% of the respondents identified Estonian as their main **language** of communication while 30% said their main language of communication is Russian and 1% said it is other than Estonian and Russian.

The respondents are evenly distributed among different **age groups**. The age groups are 15-19, 20-39, 40-64, and 65-74. By comparing the respondent size with the population pyramid of Estonia, it can be seen that the proportion of the population under survey which is aged between 15-74 is 73.8% of the population of Estonia (see Appendix for Population Pyramid of Estonia).

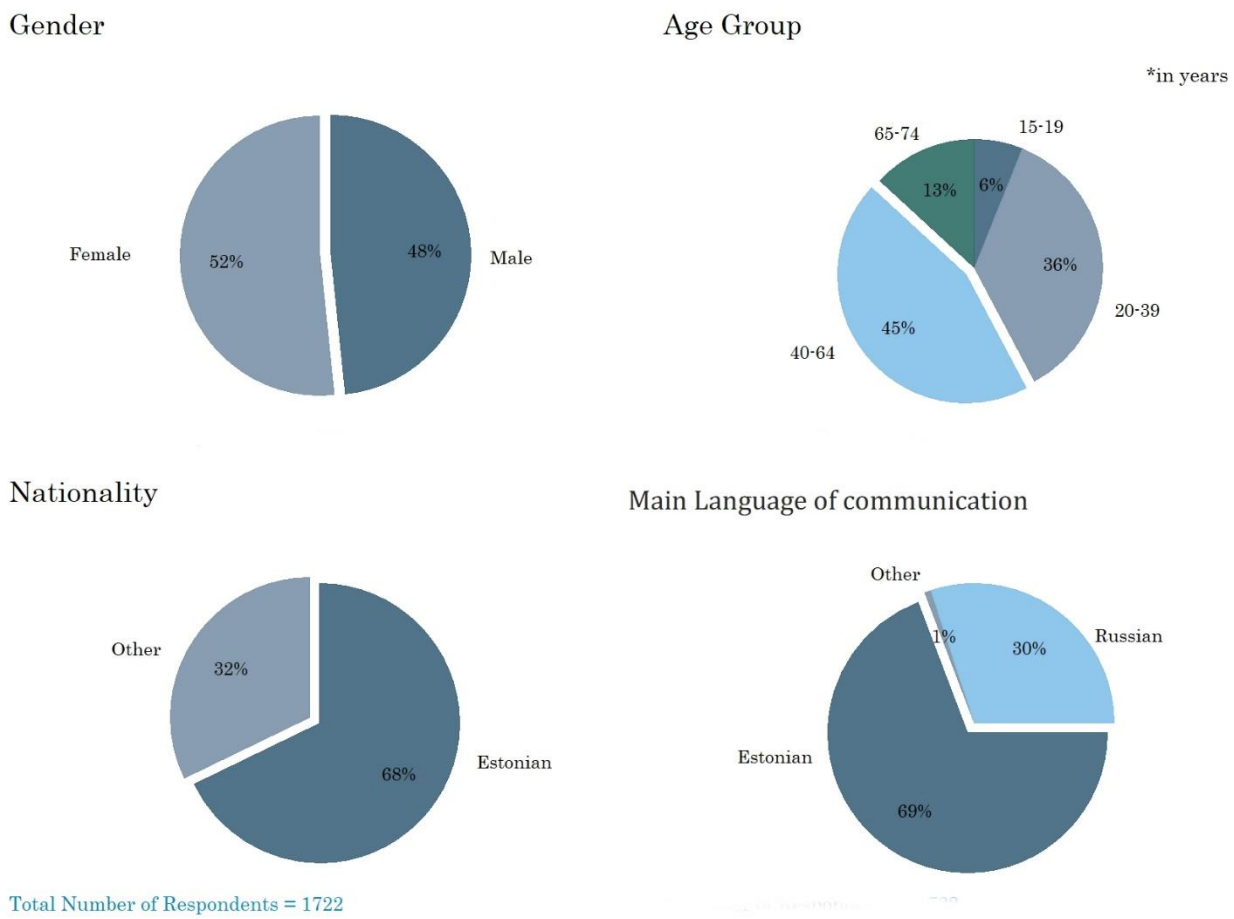


Figure 4. Gender, Age group, Nationality and main language of communication

1722 respondents are distributed among four different age groups in exact proportion to their share in the population pyramid of Estonia (see Table 3).

Table 3. Population and Sample distribution

Age group	Actual share in Population(%)	Adjusted share(%)	Sample (%)
15-19	4.1	5.56	6%
20-39	26.3	35.64	36
40-64	33.7	45.66	45
65-74	9.7	13.14	13
TOTAL	73.8	100	100

2. BACKGROUND OF THE RESPONDENTS

Figure 5 shows the **type of home** in which the respondent resides. There are three categories: "Apartment block with more than 8 apartments" is the most common one as 54% of the respondents reside in this type of home. The proportion of single-family house in Estonia is 29%[1] but it is represented by 36% of the sample in the study. The over-representation can be explained by the sampling method where 42% of the respondent resides in a rural locality, where the proportion of single-family dwelling is higher (see Figure 5).

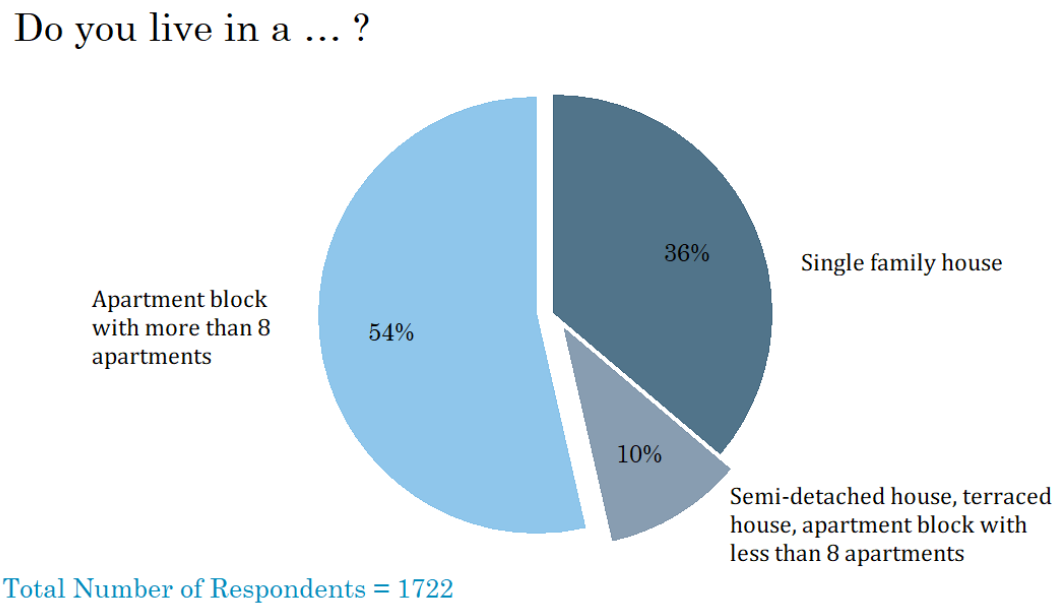


Figure 5. Type of home

Figure 6 shows the **education level** of the respondents. Out of 1722 respondents, 1% has Elementary education, 8% has a Basic education, 48% has the High School or Vocational Education while 42% have attained education level of Higher education (see Figure 6).

[1] Population and Housing Census in 2011, Statistics Estonia. https://www.stat.ee/phc2011, Accessed on 25 July 2018.
To Calculate proportion of single family house the number of one family dwelling and other small residential building is summed up.

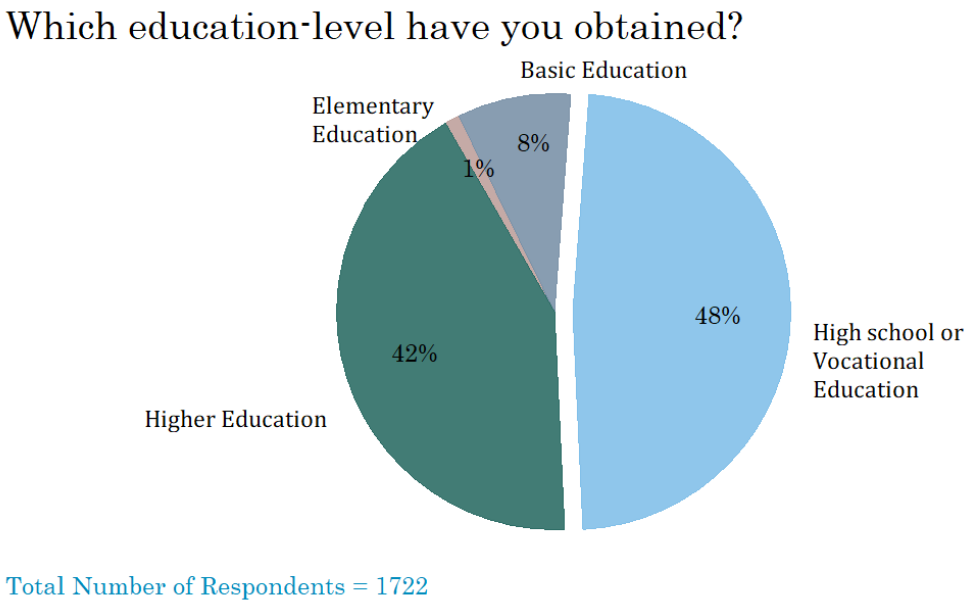


Figure 6. Education level

Figure 7 and 8 give a structural composition of the family of the respondents.

Figure 7 represents the **labor market status of the respondent's family**. 35% of the respondents only have working members (no retirees or children), 32% of the respondents either have all working member or children. 17% of the respondents have working members and retirees and may also have children. In 15% of the respondents, all the family members are retired.

65% of the respondents said that they have either children or retirees or both in their household. The focus of our study is children and elderly people (retirees) who are the most vulnerable to a fire accident. The policymakers should formulate the policy keeping in mind the relative vulnerabilities of different risk groups, e.g. children and elderly people (see Figure 7).

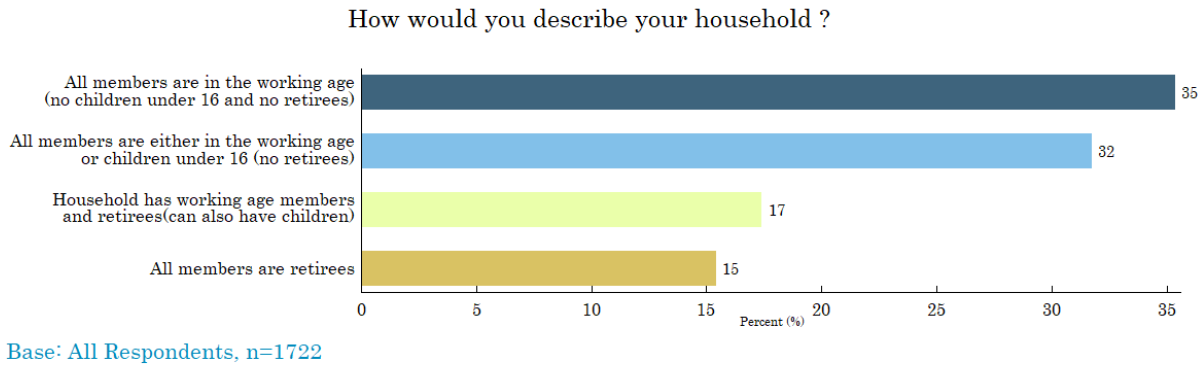


Figure 7. Labor market status

Figure 8 shows the **household size of the respondents**. 33% of the respondents just have 2 members in the household, while 13% just had one. The proportion of 3-member household and 4-member household is 22% and 21% respectively. Just 12% of the respondents have a relatively large of 5 or more than 5 family members in the household (see Figure 8).

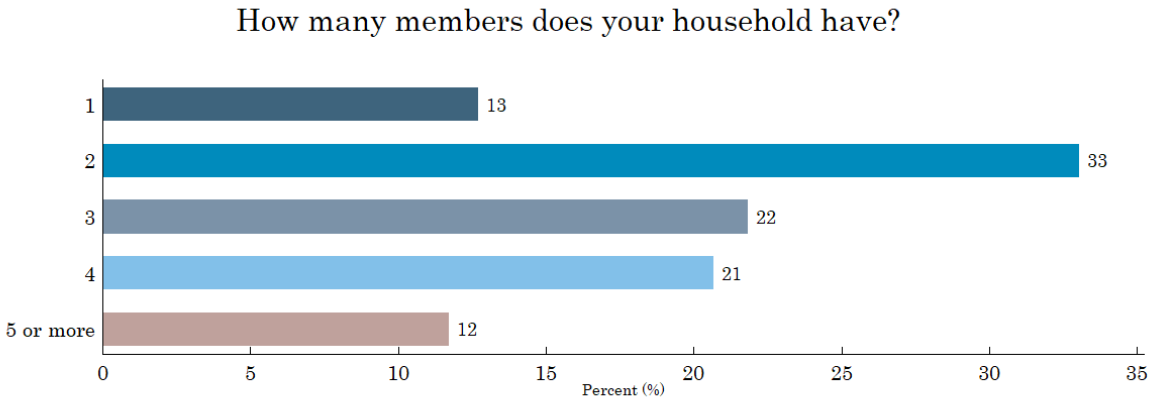


Figure 8. Household size

Figure 9 represents the **current employment status of the respondents**. Almost six-tenth (59%) of the respondents are wage workers, while 18% of the respondents are retired. 9% are self-employed and 7% are students. 3% of the respondents are unemployed, while 3% are on parental leave. Out of 1722, 1% are just **at home** and 0.5% described their status other than mentioned above (see Figure 9).

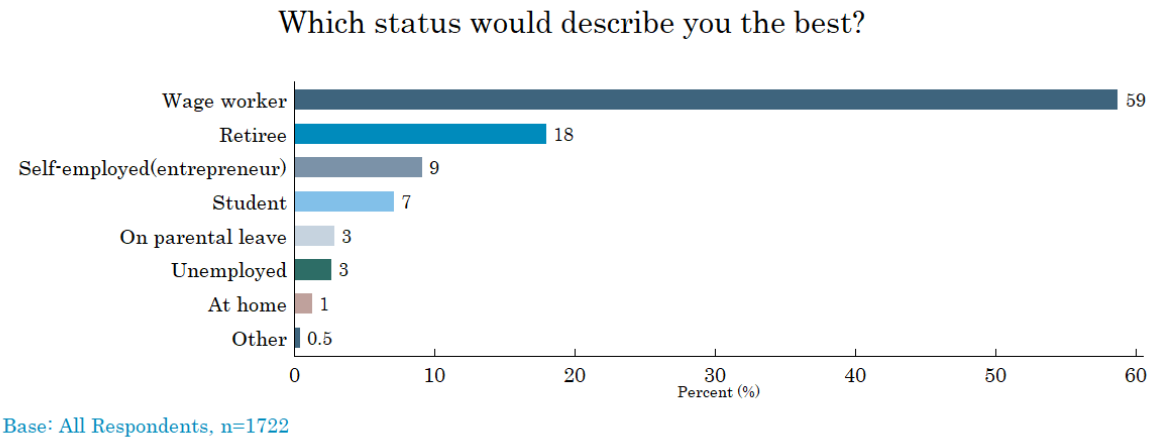


Figure 9. Employment Status

Out of 1722 respondents, the number of people who are working and whose job position is available in the survey is 993. Figure 10 shows the **different position at which 993 working people are employed**. 45% of the respondents are a top specialist, while 21% are skilled workers and 17% of respondents are working on a clerical level. Top level and Middle-level management position have been taken by 2% and 11% of the respondents respectively. 5% of the respondent is employed as an unskilled worker (see Figure 10).

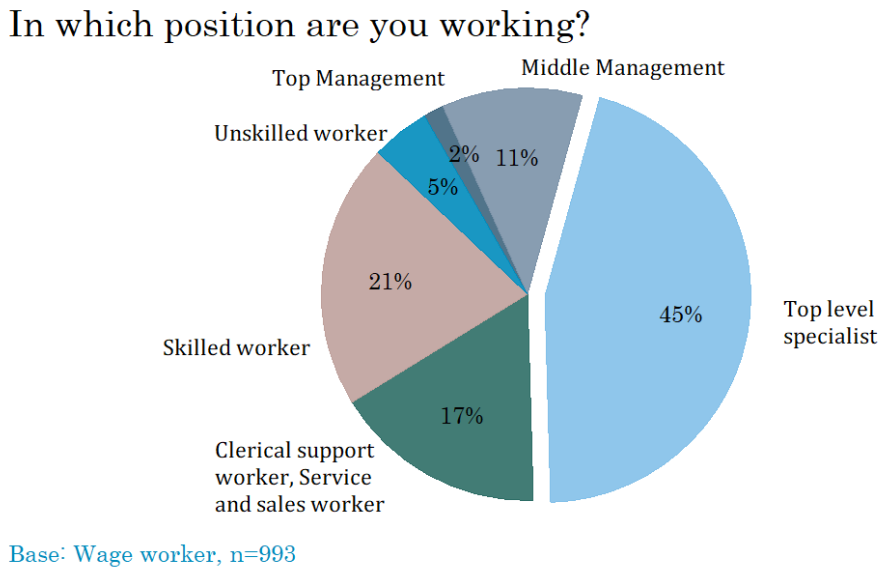


Figure 10. The position of the working respondent

Figure 11 shows **the per capita income level of the respondents**. Just 11% of the respondents have the highest per capita income (5 is the highest level of income). 25% of the people said that it is difficult or refused to answer how much is the households' income per member. 1% of the respondents said that they don't have any income. (see Figure 11).

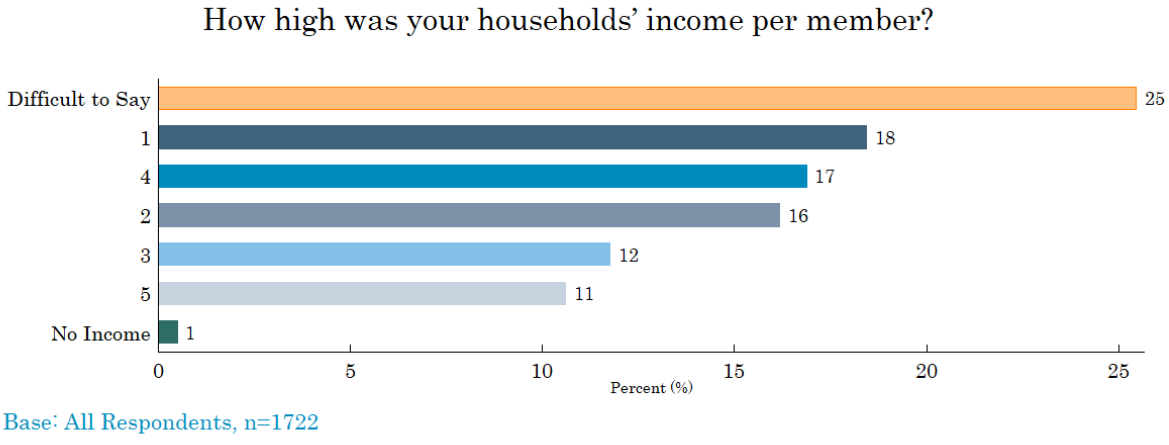


Figure 11. Income level

Figure 12 displays the **participatory level of the respondents in different types of activities**.

Regarding **attending cultural events (such as theatres, cinemas, museums, libraries, art exhibitions, concerts) or participating in non-professional cultural activities**, 35% of respondents answered that they are doing it "very often" or "quite often". Most often participation in this kind of activities are less frequent (answers "sometimes" or "very seldom" were marked by 58%). 8% of the population replied that they never visit such events.

According to the study carrying out some **household improvement projects (like renovation, decoration, spring cleaning, gardening, repairing)**, "very often" and "quite often" in such projects are involved 44% of respondents, 52% answered "sometimes" or "very seldom", while 2% admitted that they do not perform such kind of projects at all.

55% also answered that when they go **shopping**, they "very often" or "quite often" **choose products based on extra qualities (such as health impact, ecological footprint, your type of brand, local origin, fair trade)** which is relatively most popular activity from the list. 39% said that they do it "sometimes" or "very seldom", while 7% have not done it at all.

When asked how often they **go out with their friends or acquaintances (to the cafe, restaurant, nightclub, pub)**, only 20% thought that it is "very often" or "quite often". About 68% answered that it happens less frequently (answers "sometimes" or "very seldom") and 12% answered that they never do it (see Figure 12).

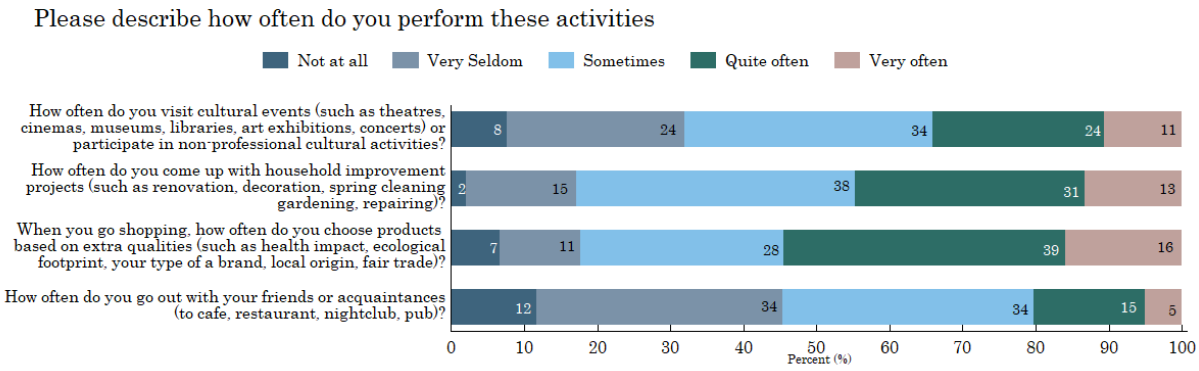
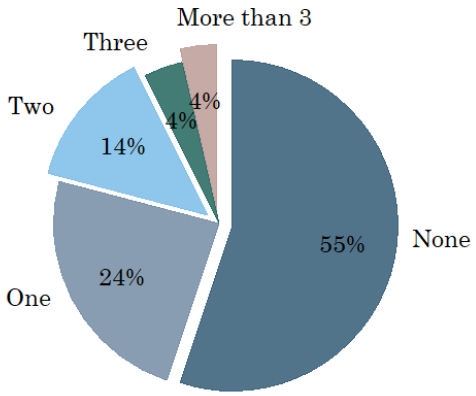


Figure 12. Participation in activities

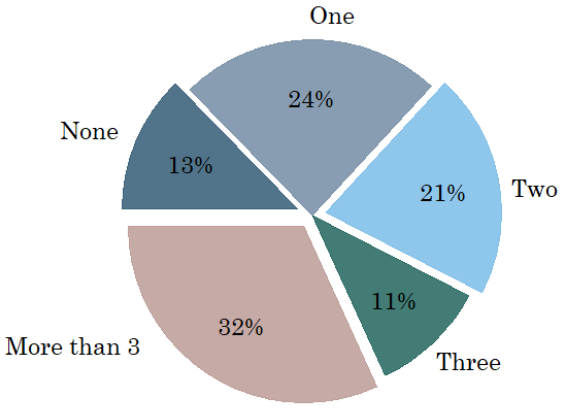
Characterizing their **involvement in different kinds of civic organizations**, 55% answered that they do not take any part in this activity at all. 24% mentioned that they participate in one, 14% - in two, 4% - in three, while 4% answered that they are members of or take part in more than three organizations (see Figure 13, left).

According to survey data, 13% of the population does not follow **the news** at all. At least once a day the actual information is received by 87% of respondents: 24% answered that they read, watch or listen to the news once a day, 21% - that they do it twice a day, 11% - three times per day, while 32% replied that they do it more than 3 times a day (see Figure 13, right).

How many different civic organizations do you take part in or are a member of (such as societies of profession, hobbies, sports clubs, religion, communities, people of special needs, or other NGOs)?



How many times per day do you usually keep up with (read, watch or listen to) the news?



Base:All respondents, n=1722

Figure 13. Membership and News

3. MAIN RESULTS OF THE QUANTITATIVE SURVEY

Around 86% recognized the **smoke detector's fire alarm**. While just, 7% indicated that it is some kind of danger-risk alarm, 3% - that it is the alarm of the empty battery of a smoke detector or a similar device, 2% - that it is a sound of the security/burglar alarm. About 0.5% of the respondents said it is some other sound. 2% said they cannot recognize it (see Figure 14).

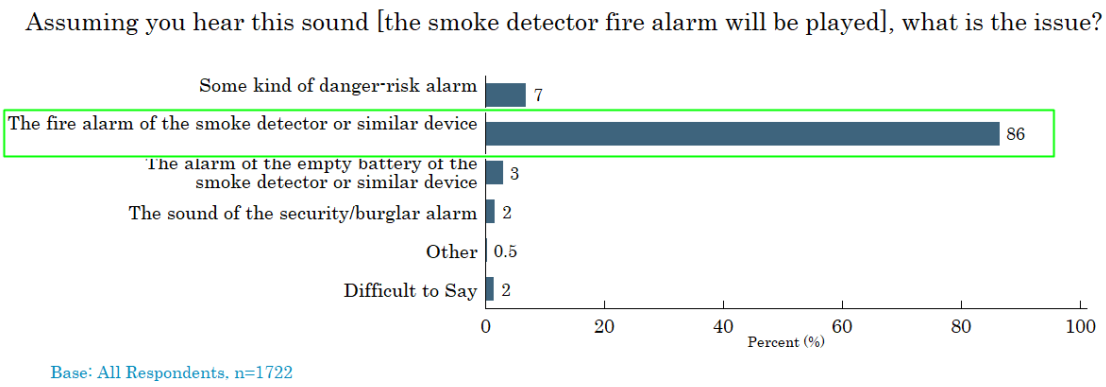


Figure 14. The sound of the smoke detector fire alarm

The **smoke detectors sound of an empty battery**, in turn, was recognized by 69% of study participants. 3% considered the sound to be an alarm for some kind of danger-risk, 1% - the sound of the security/ burglar alarm, and 1% - a fire alarm of a smoke detector or a similar device. About 2% said it is some other sound while for about one-fourth (23%) it is difficult to say (see Figure 15).

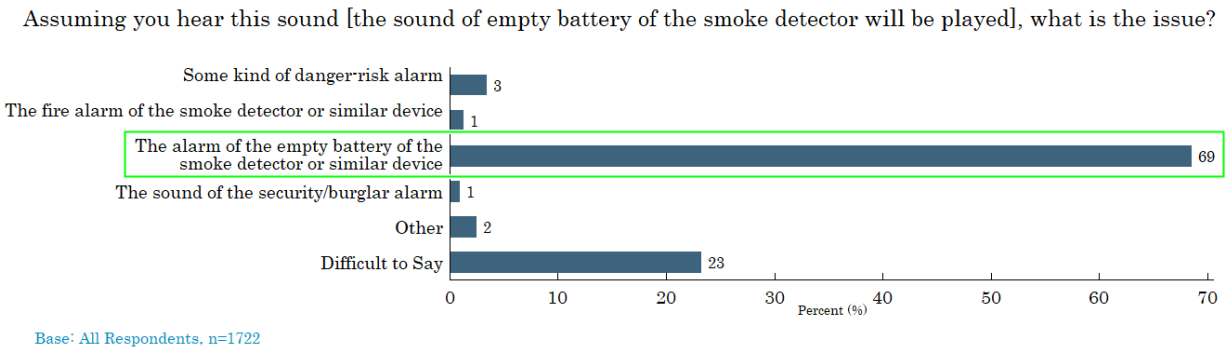
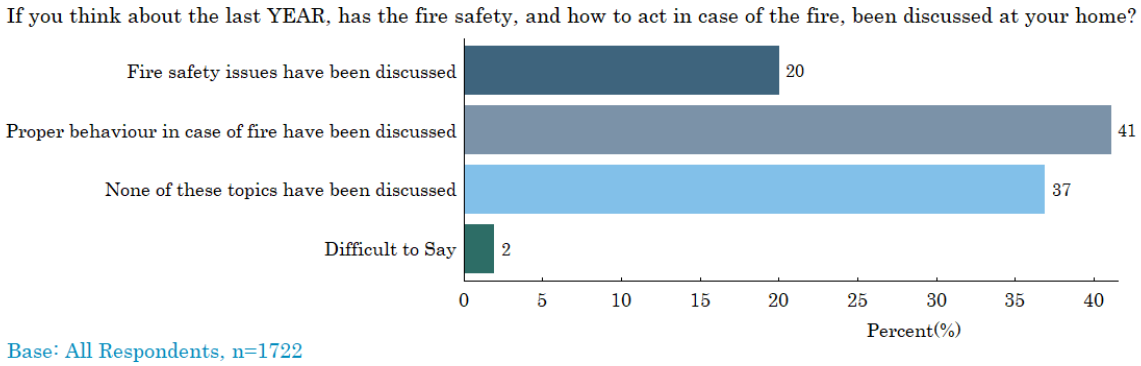


Figure 15. Empty battery alarm

Asked **whether during the last year they have discussed the fire safety and how to act in case of the fire**, 37% of respondents marked that there has been no discussion about fire safety at their home. 20% of respondents indicated that the fire safety issues have been discussed and 41% noted that

proper behavior in case of the fire has been discussed at home. In total, the fire safety related discussion took place in the majority (61%) of the households (see Figure 16).

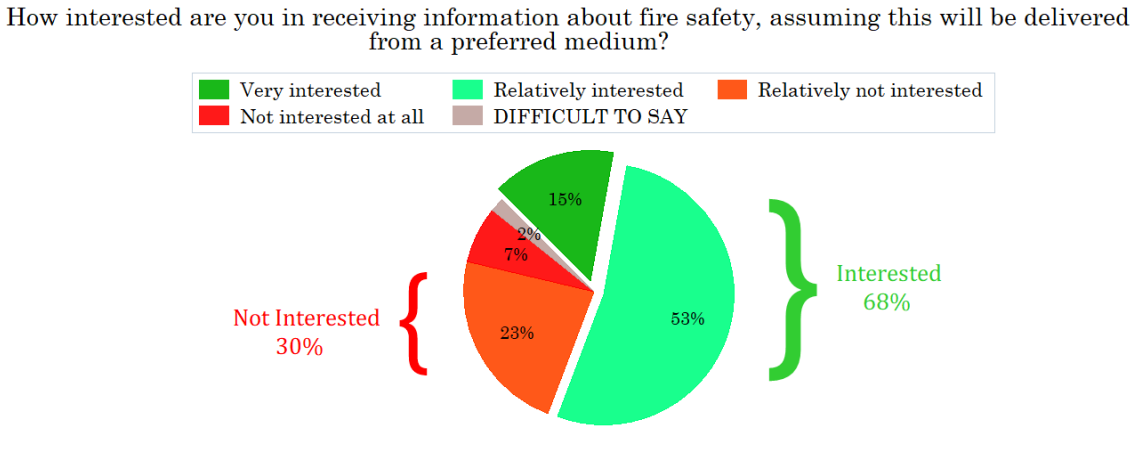


Base: All Respondents, n=1722

Figure 16. Fire safety discussion

*Since each respondent could mark more than one answer, the total percentage of the graph exceeds 100%.

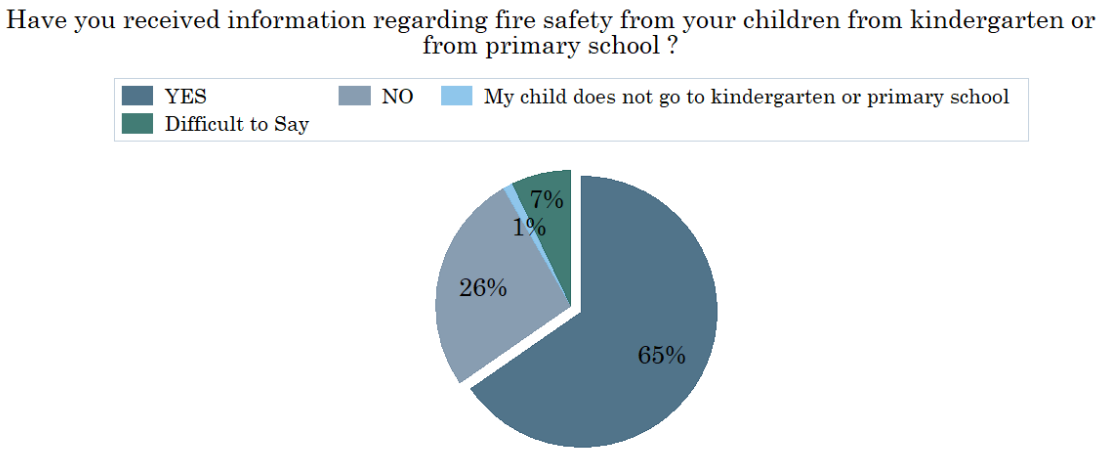
When asked **how interested they are in receiving information on fire safety**, in general, 68% said that they are interested ("very interested" and "relatively interested"). The lack of interest ("not interested at all" and "relatively not interested") was admitted by just 30% of the participants of the study (see Figure 17).



Base: all Respondents, n=1722

Figure 17. Fire safety information

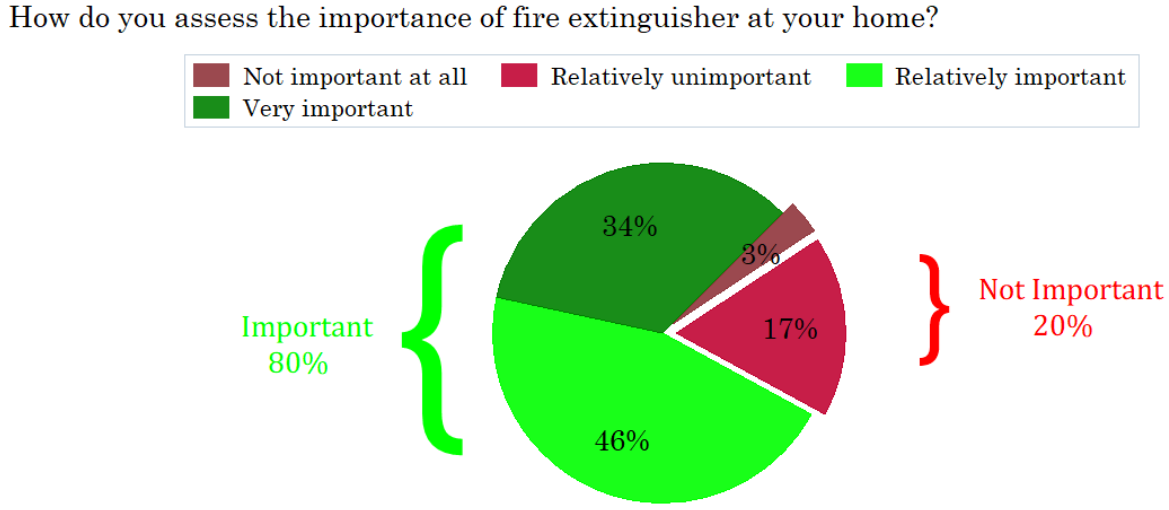
When asked **whether they have children aged 5-15 in their household**, 32% of the respondents answered in affirmative while 68% said that they do not have children aged between 5-15 years. Respondents who replied that there are children aged between 5 and 15 in their household (n=561) were asked to indicate whether they have **received information on fire safety from their children** who attend a kindergarten or a primary school, 65% of respondents replied that they have received it. About 26% of study participants who replied that there are children aged between 5 and 15 in their household answered that the information on fire safety from their children has not been received. For 7% of the respondents, it is difficult to say, while 1% of the respondents said that their children do not go to kindergarten or primary school (see Figure 18).



Base: Respondents who has a child at home aged 5-15 years, n=561

Figure 18. Fire safety in school

According to the survey, 80% of respondents replied that it is **important** (answers "very important" and "relatively important") **to have a fire extinguisher in their home**. The opposite opinion (answers "relatively unimportant" and "not important at all") have 20% of study participants (see Figure 19).

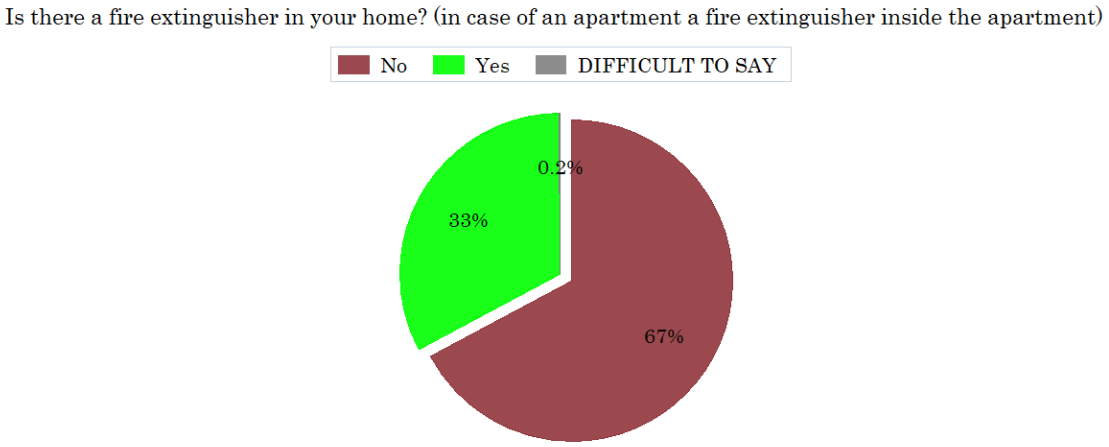


Base: All Respondents, n=1722

Figure 19. Importance of fire extinguisher

Asked whether or not they **have a fire extinguisher in their home**, 33% of respondents replied that they have one, but 67% - that they do not. While for 0.2% of the respondents it is difficult to say whether they have a fire extinguisher at home or not (see Figure 20).

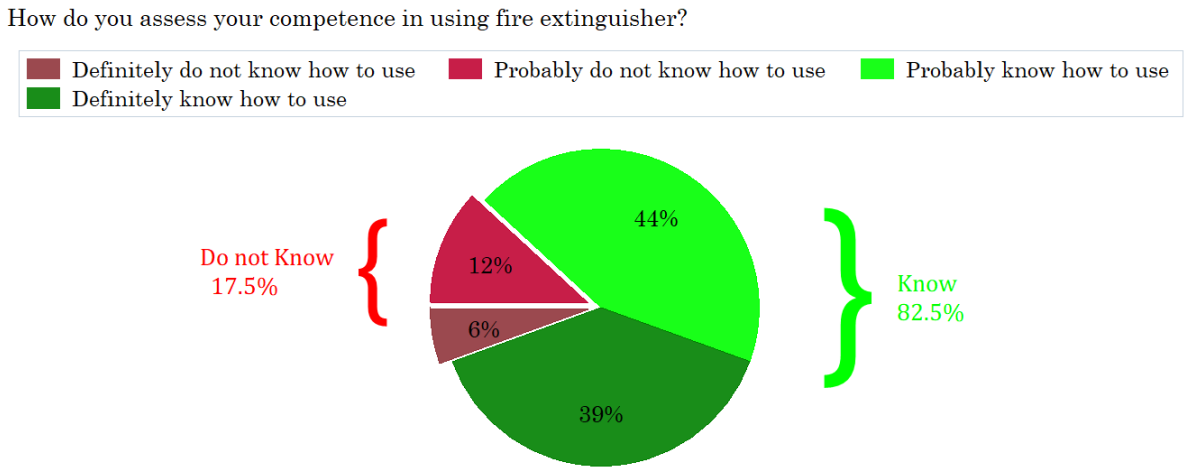
There is a statistically significant difference between the groups who think that fire extinguisher is important and actually having one at home in comparison to those who do not think it is important and do not have it at home (χ^2-test = 160.6 with a probability of 0.000 at p=0.05). So, one can conclude that if the respondents say that a fire extinguisher is important then they are more likely to have a fire extinguisher (See Appendix for statistical test).



Base: All Respondents, n=1722

Figure 20. Availability of fire extinguisher

In total, 82.5% of respondents indicated that they have **competence in using fire extinguisher** (answers "definitely know how to use" and "probably know how to use") and 17.5% noted that they do not know how to use it (answers "definitely do not know how to use" and "probably do not know how to use") (see Figure 21).



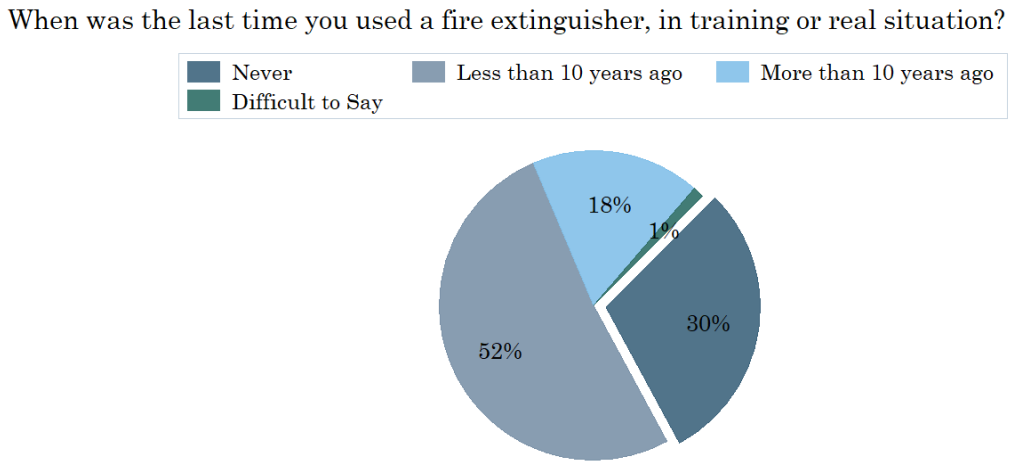
Base: All Respondents, n=1722

Figure 21. Competence in using a fire extinguisher

When asked to indicate when was **the last time they have used a fire extinguisher in training or in the real situation**, 30% of respondents replied that they have never used it. More than half, 52% have indicated that they have used a fire extinguisher less than 10 years ago, but 18% have had such an experience more than 10 years ago while for 1% it is difficult to say when they used one (see Figure 22).

The relationship between respondents who said that they know how to use the fire extinguisher ("Definitely know how to use" and "Probably know how to use") and those who have used them ("Less than 10 years ago" or "More than 10 years ago") in past is statistically significant (χ^2-test = 450.3845 with a probability of 0.000 at p=0.05). Thus, one can conclude that if the respondents say they have

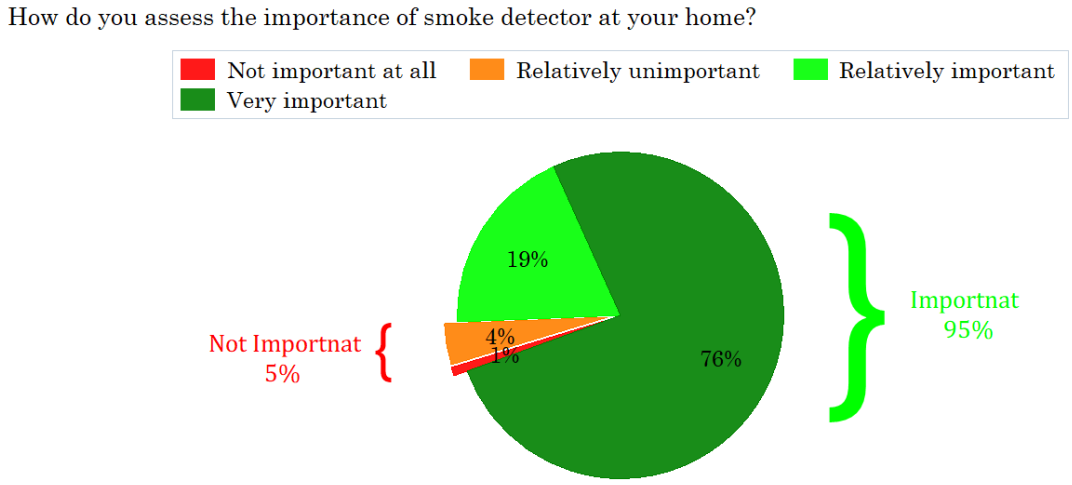
used a fire extinguisher in past then it is more likely that they know how to use a fire extinguisher (see Appendix for the statistical test).



Base: All Respondents, n=1722

Figure 22. Last using a fire extinguisher

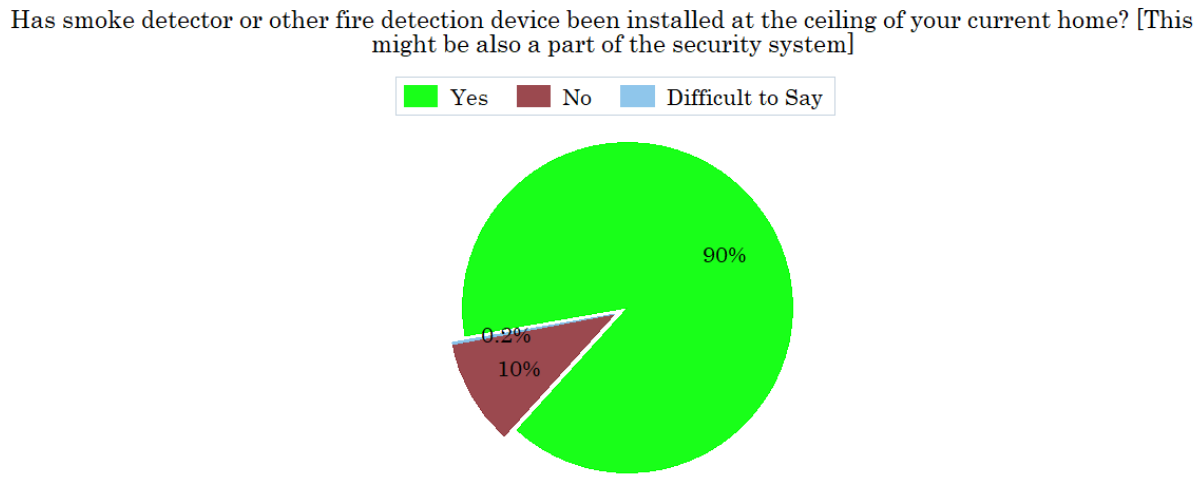
According to the survey, **95%** of respondents replied that it is **important** (answers "very important" and "relatively important") **to have a smoke detector at home**. The opposite opinion (answers "relatively unimportant" and "not important at all") had just 5% of study participants (see Figure 23).



Base: All Respondents. n=1722

Figure 23. Importance of smoke detector

About 90% of respondents indicated that **they have a smoke detector in their home**. The fact that there is no smoke detector was mentioned by just 10% of the study participants (see Figure 24).

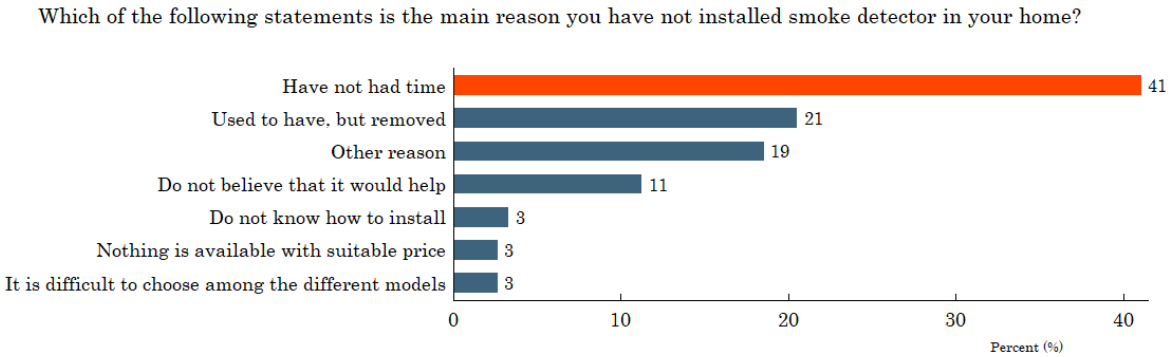


Base: All Respondents, n=1722

Figure 24. Smoke detector in the home

The relationship between respondents who said that they think that smoke detector is important and those who also replied that they have a smoke detector installed in their home is statistically significant (χ^2-test = 110.2 with a probability of 0.000 at p=0.05). Thus, one can conclude that if the respondents say that the smoke detector is important then they are more likely to have it installed in their home (see Appendix).

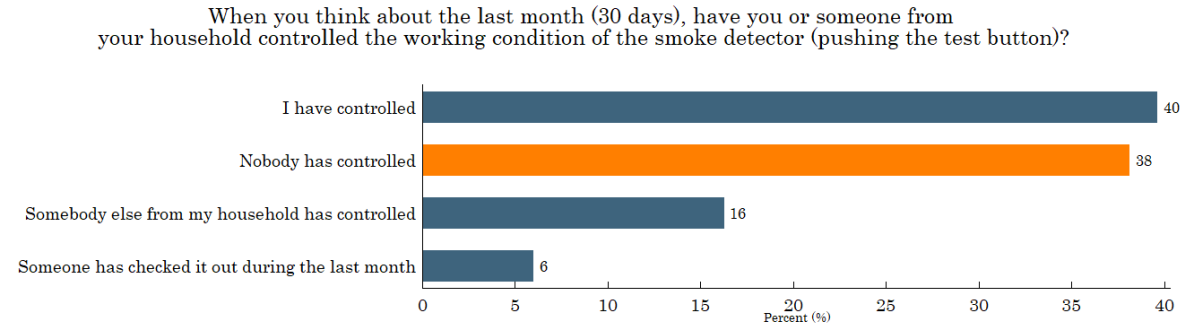
The respondents who indicated that they **do not have a smoke detector** in their home (n=151) were asked to name the main reasons for that. The data shows that the most frequently respondents mentioned lack of time (41%), followed by "used to have it but now it is removed" (21%) and other reasons (19%). While 11% do not believe that the smoke detector would help and 3% mentioned that they do not know how to install it. 3% indicated that it is difficult to choose what would be the best buy (which manufacturer or model) and 3% - that nothing is available with the suitable price (see Figure 25).



Base: Respondents who do not have smoke detector at their home, n=151

Figure 25. The main reason for not installing a smoke detector

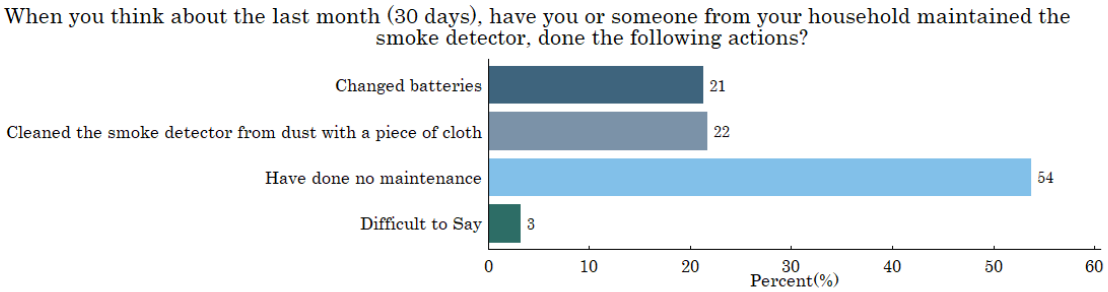
In answering the question "**When you think about the last month (30 days), have you or someone from your household controlled the working condition of the smoke detector (pushing the test button)?**", 40% of respondents who have a smoke detector marked that they have done it by themselves, 16% - that somebody else from the household have done so and 6% that someone has checked it out during the last month. About 38% of respondents indicated that nobody has controlled the working condition of the smoke detector during the last month (see Figure 26).



Base: Respondents who have smoke detector at their home, n=1568

Figure 26. Pushing the test button

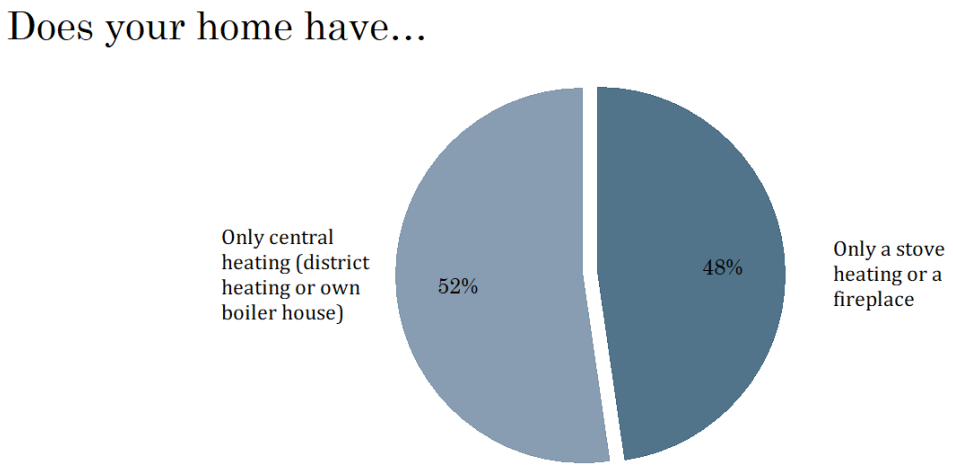
Asked about doing **smoke detector's maintenance in the last month** to the respondent who has smoke detectors in their home and it was controlled in last 30 days (n=1568), 21% of respondents indicated that they have changed the batteries. 22% of respondents marked that the smoke detector has been cleaned with a piece of cloth. More than half, 54% respondents indicated that they have done no maintenance, while for 3% state it is difficult to say (see Figure 27).



Base: Respondents who have smoke detector at their home and it was controlled by some person in last 30 days, n=1568

Figure 27. Maintenance of smoke detector

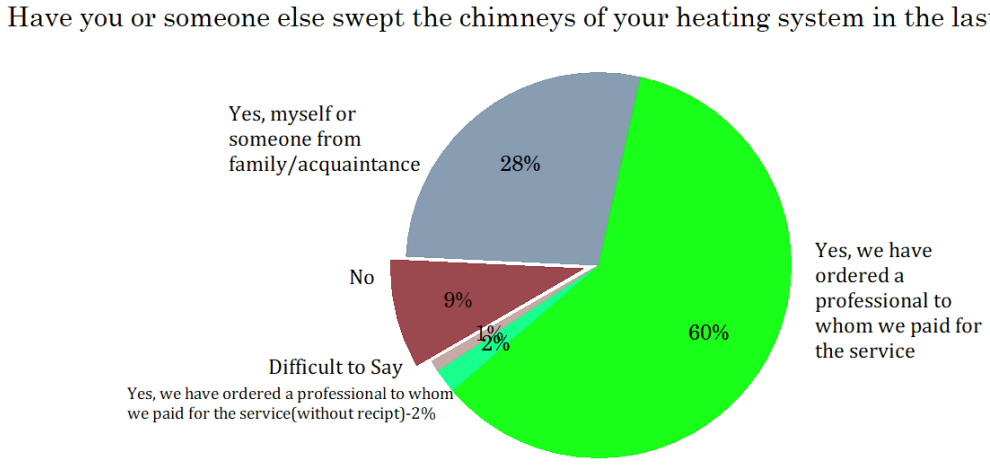
Regarding a **type of heating in their home**, 52% of respondents noted that there is only central heating in their housing and 48% - that there is only a stove heating or a fireplace (see Figure 28).



Base: All Respondents, n=1722

Figure 28. Type of Heating System

Out of 893 respondents who have a stove (or a fireplace), gas or mixed heating system, 90% of respondents marked that someone has **swept chimneys of their heating system in the last two years**: 28% of respondents whose house has gas heating, stove heating or a fireplace responded that they or someone from their family/acquaintances has swept the chimneys, while 60% have paid to a professional for this service. 2% of the respondents have paid to a professional for this service but they have not received any receipt. 9% of the study participants indicated that no one has cleaned chimneys in the last two years (see Figure 29).

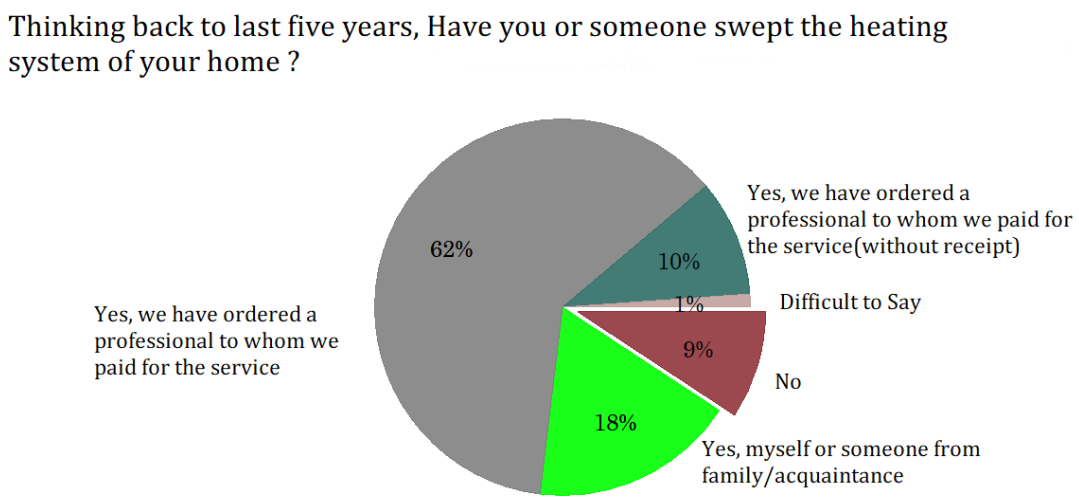


Base: Respondents whose house has gas heating, a stove heating or a fireplace, n=893

Figure 29. Swept the chimneys

Respondents, whose house is equipped with gas heating, stove heating or a fireplace and who have swept chimneys by themselves or it has been done by someone of family/acquaintances or no one has done it in the last two years, were asked whether someone has **swept chimneys of their heating system in the last five years.** About 18% of respondents whose house has gas heating, stove heating or a fireplace responded that they or someone from their family/acquaintances has swept the chimneys, while 62% have paid to a professional for this service. 10% of the respondents have paid to

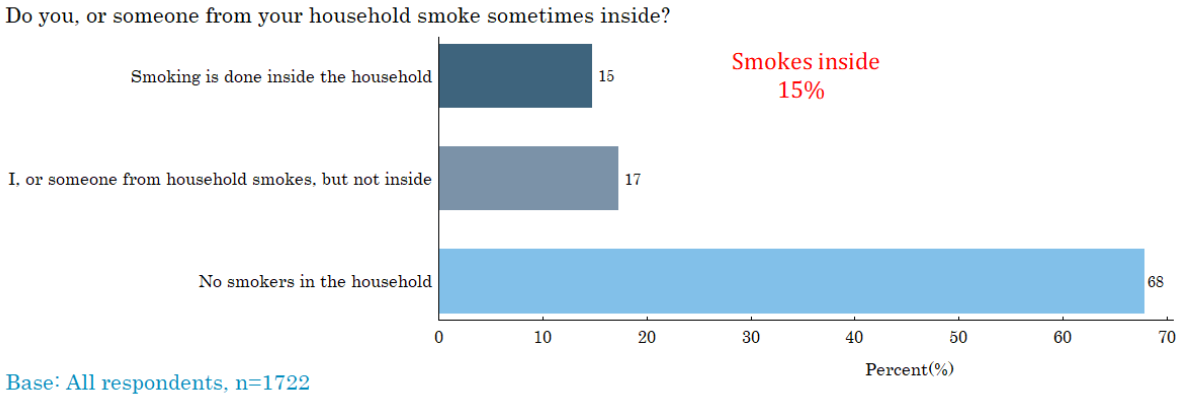
a professional for this service but they have not received any receipt. 9% of the study participants indicated that no one has cleaned chimneys in the last five years (see Figure 30).



Base: Respondents whose house has gas heating, n=893

Figure 30. Responses of respondents whose chimney was not swept in last 5 years

Asked **whether they or someone from their household sometimes smokes indoors**, 15% answered that smoking is done indoors. Another 17% mentioned that they or someone from the household smokes but not indoors. 68% of respondents answered that there are no smokers in the household. Overall just 15% of the respondents said the smoking is done inside (see Figure 31).

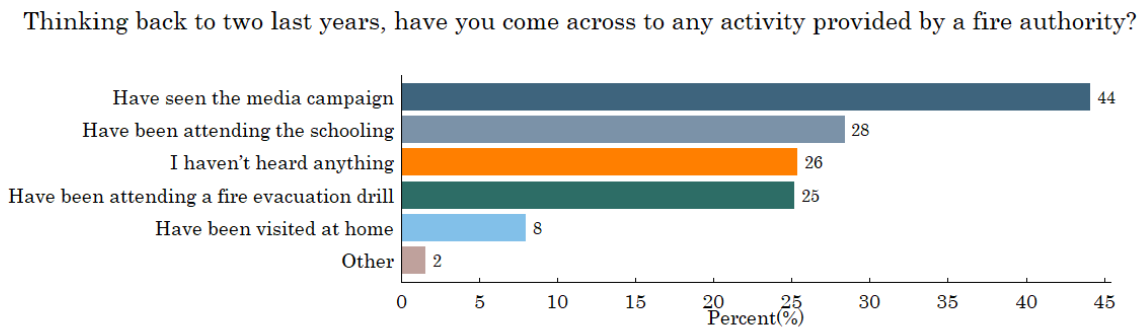


Base: All respondents, n=1722

Figure 31. Smoking

According to the survey, in the case of fire**, 95% of respondents would call** 112 which is the correct emergency number to dial in case of a fire emergency. Number 110 would be called by 2% of respondents, 1% would call 4 and 2% will call other numbers.

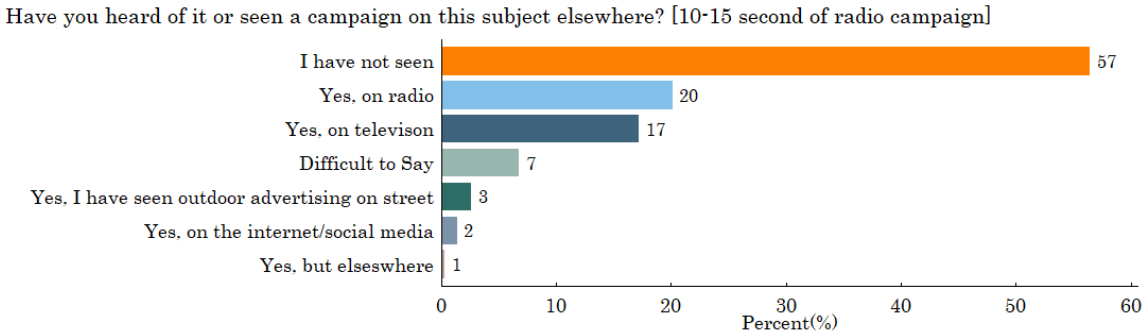
When asked "**Thinking back to two last years, have you come across any activity provided by a fire authority?"**. According to the survey, 44% of respondents have come across to activities provided by a fire authority, 28% of the respondents have been attending schooling and 25% of the respondents say that they have been attending fire evacuation drill. 8% has been visited at home by officials of the fire authority and 2% have come across another type of activity. 26% said that they have not come across to any activities provided by a fire authority (see Figure 32).



Base: All respondents, n=1722.
*Since each respondent could mark more than one answer, the total percentage of the graph exceeds 100%.

Figure 32. Activities by Fire Authority

When asked **have you heard or seen one particular 10-15-second-long campaign**. More than half, 57% of the respondents replied that they have not seen or heard anything like this campaign. 20% of the respondents have heard it on the radio while 17% have seen it on television. It is difficult for 7% of the respondents to answer this, 3% have seen it on outdoor advertising, 2% on internet/social media and 1% have seen/heard it somewhere else (See Figure 33)

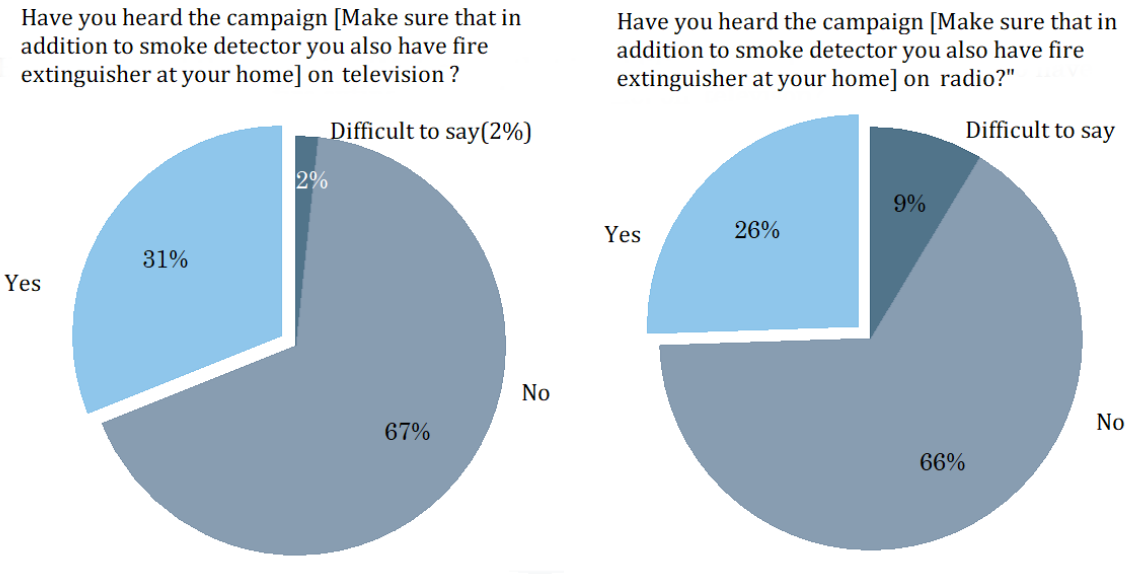


Base: Those respondents who have heard the campaign, n=960

Figure 33. Media Campaign

To the respondents who have not seen the campaign (n=762), when asked: "**have you heard the campaign [Make sure that in addition to smoke detector you also have a fire extinguisher at your home] on television?"** 31% responded that they have heard this campaign while 67% have not seen it (See Figure 34, left)

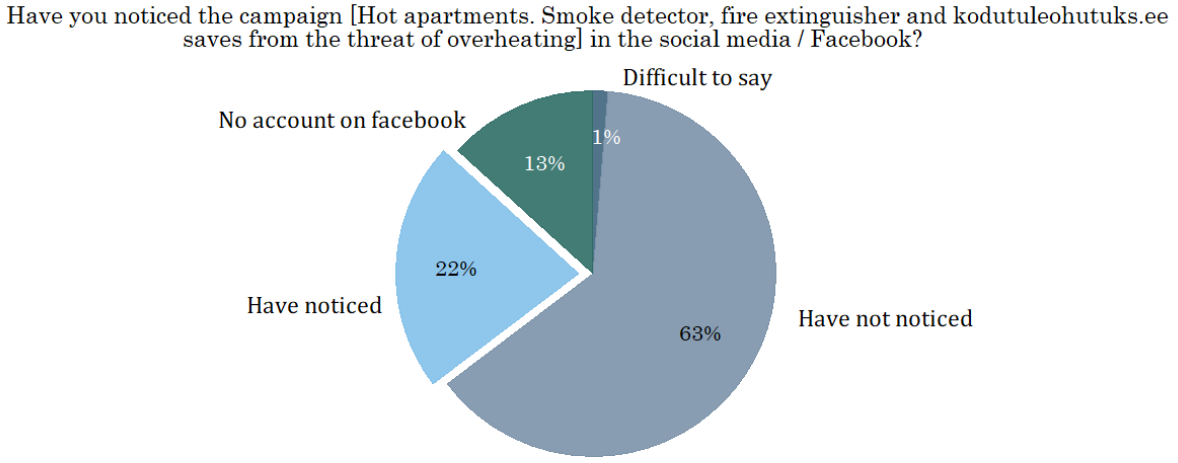
To the respondents who have not seen the campaign (n=762), when asked: "**have you heard the campaign [Make sure that in addition to smoke detector you also have a fire extinguisher at your home] on the radio?"** 26% responded that they have heard this campaign while 66% have not seen it. For 9% of the respondents it is difficult to answer this question (See Figure 34, right)



Respondents who havent seen the campaign, n = 762

Figure 34. Campaign on Television and Radio

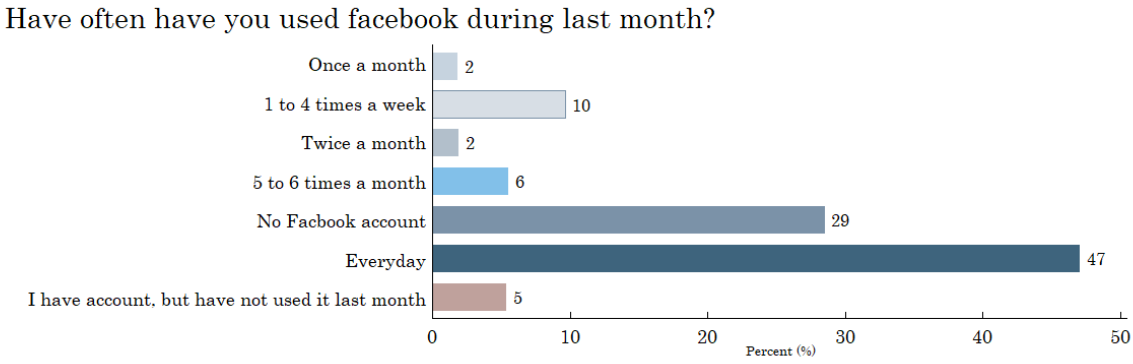
When asked whether the respondents have noticed **the campaign [Hot apartments. Smoke detector, fire extinguisher and kodutuleohutuks.ee saves from the threat of overheating] in the social media / Facebook?** majority of the respondents, 63% haven't noticed this campaign, 13% don't have a Facebook account and for 1% it is difficult to say. Only 22% of the respondents have noticed this campaign on Facebook (see Figure 35).



Respondents who havent seen the campaign, n = 762

Figure 35. Campaign on kodutuleohutuks.ee

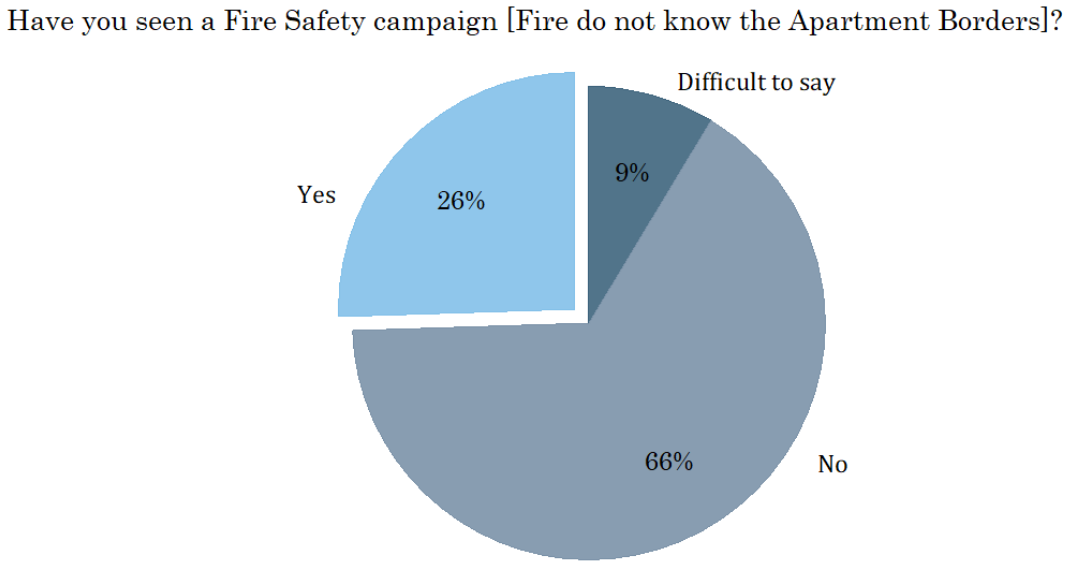
When asked **how often the respondents use the Facebook during last month**, almost half of the respondent, 47% replied that they use it every day while 29% do not have a Facebook account. 2% uses once a month, 10% uses 1 to 4 times per week, 2%- twice a month and 6%- 5 to 6 times per week. 5% of the respondents have a Facebook account but have not used it during last month (See Figure 36).



Base: All Respondents, n=1722

Figure 36. Facebook usage

When all the 1722 respondents were asked whether they have heard the campaign that "**Fire does not know the border of Apartments**", 26% replied in affirmative while 66% of the respondents have not heard this campaign. For 9% of the respondents, it is difficult to say whether they have heard this campaign or not (see Figure 37).



All Respondents, n = 1722

Figure 37. Fire does not know the border of apartment

In response to the question "**In addition to the campaign commercial itself, the TV and radio shows, newspaper articles and different events were used to make sure that in addition to the smoke detector, houses would also have a working fire extinguisher. Please remind, whether you have**

heard or seen in the last two months such notice in a show, article or event?", Majority of the respondents, 62% have said that they have not heard the campaign while for 9% it is difficult to answer this question. 11% of the respondents have heard/seen it on television, 8% on the radio broadcast, 8% on an online news portal, 5% in Newspaper/Magazines, 3% in some similar events and 2% at the public event organised by the Fire Rescue Board of Estonia (see Figure 38).

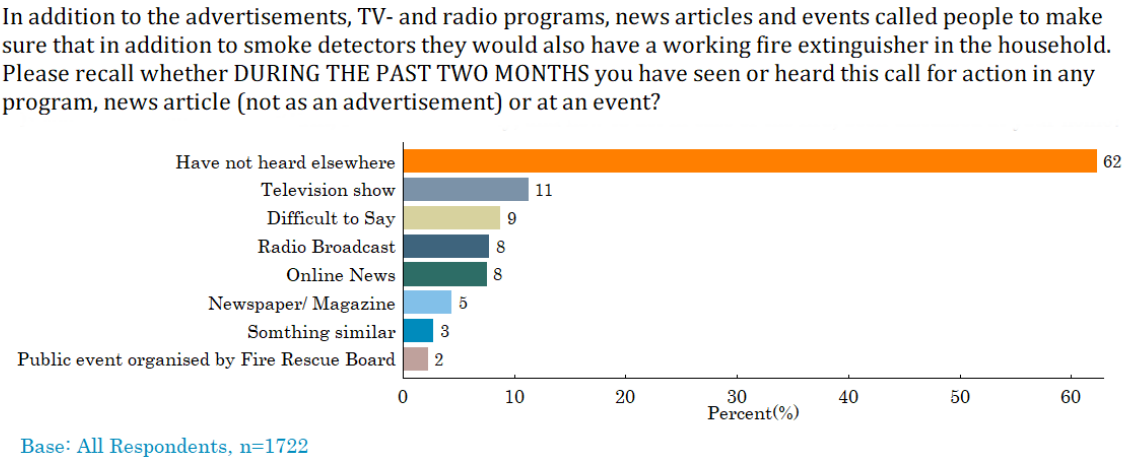


Figure 38. Campaign on different media

When asked "How long can a **sleeping person survive in case a fire starts** in the very same room?", 12% answered that they do not know. Almost half, 49% of the respondents chose the **correct** answer that a sleeping person would survive for 5 minutes. Still - 30% believed that the right answer is 10 minutes, and 8% thought that in such conditions a sleeping person would be able to survive even longer – for 15 minutes (see Figure 39).

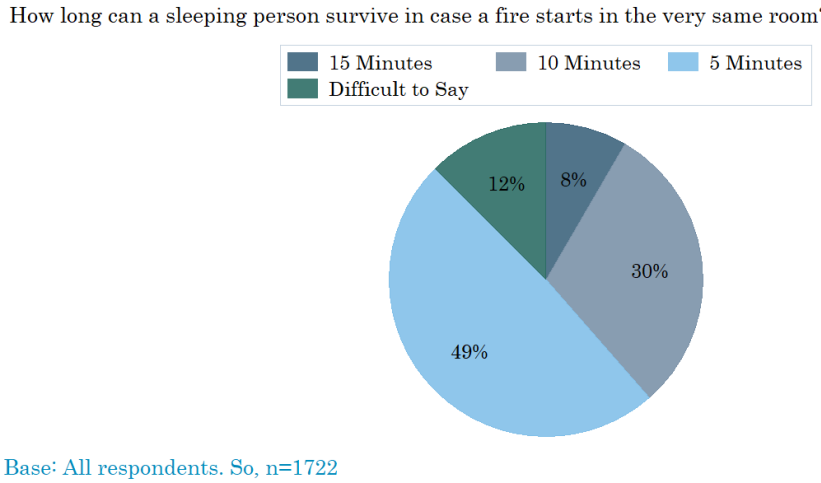
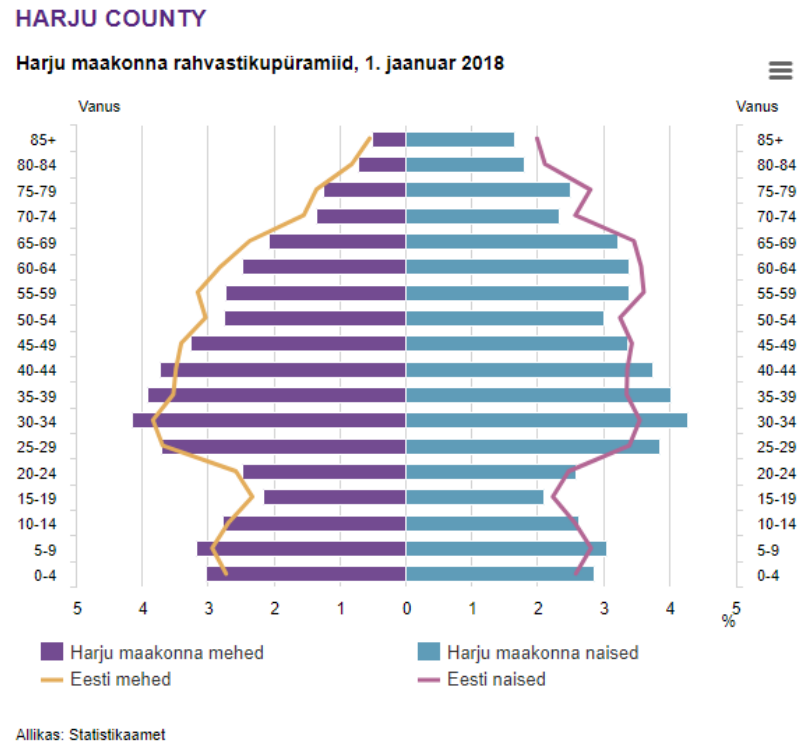


Figure 39. Survival in case of fire

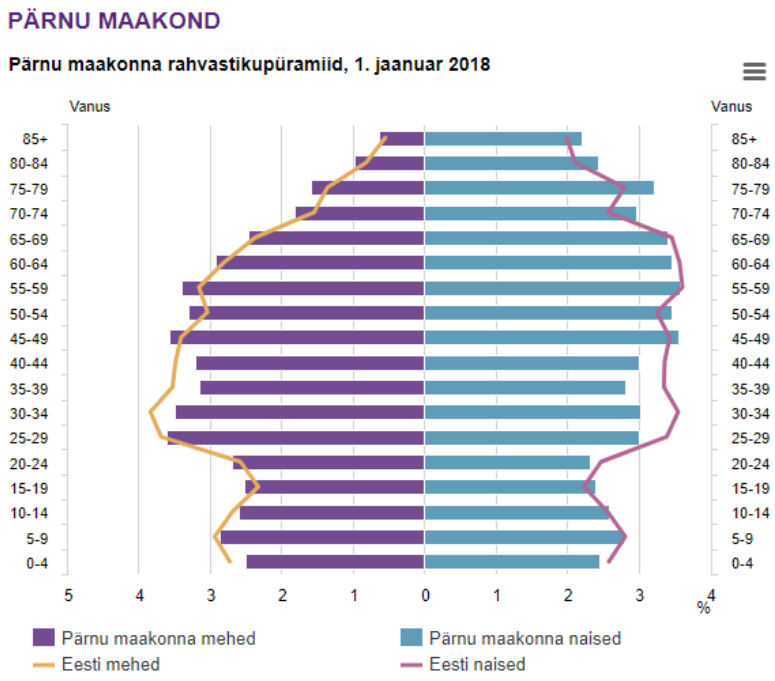
APPENDIX

Demography of Harju county (Tallinn)



Allikas: Statistikaamet

Demography of Pärnu county



Demography of Lääne-Viru county

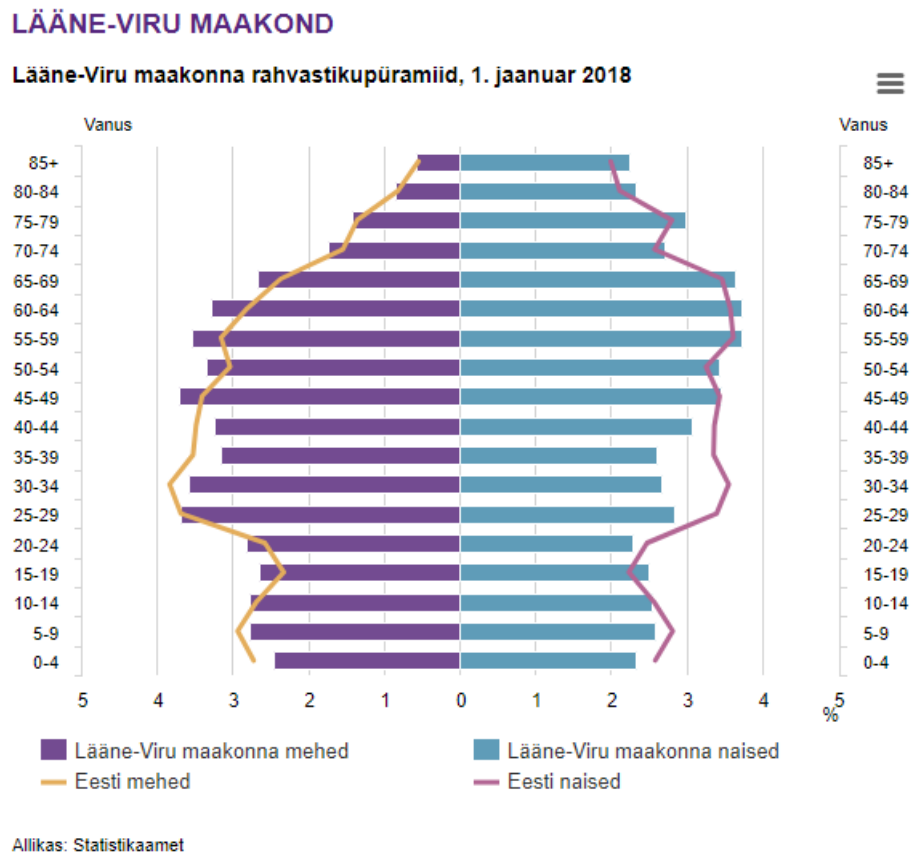


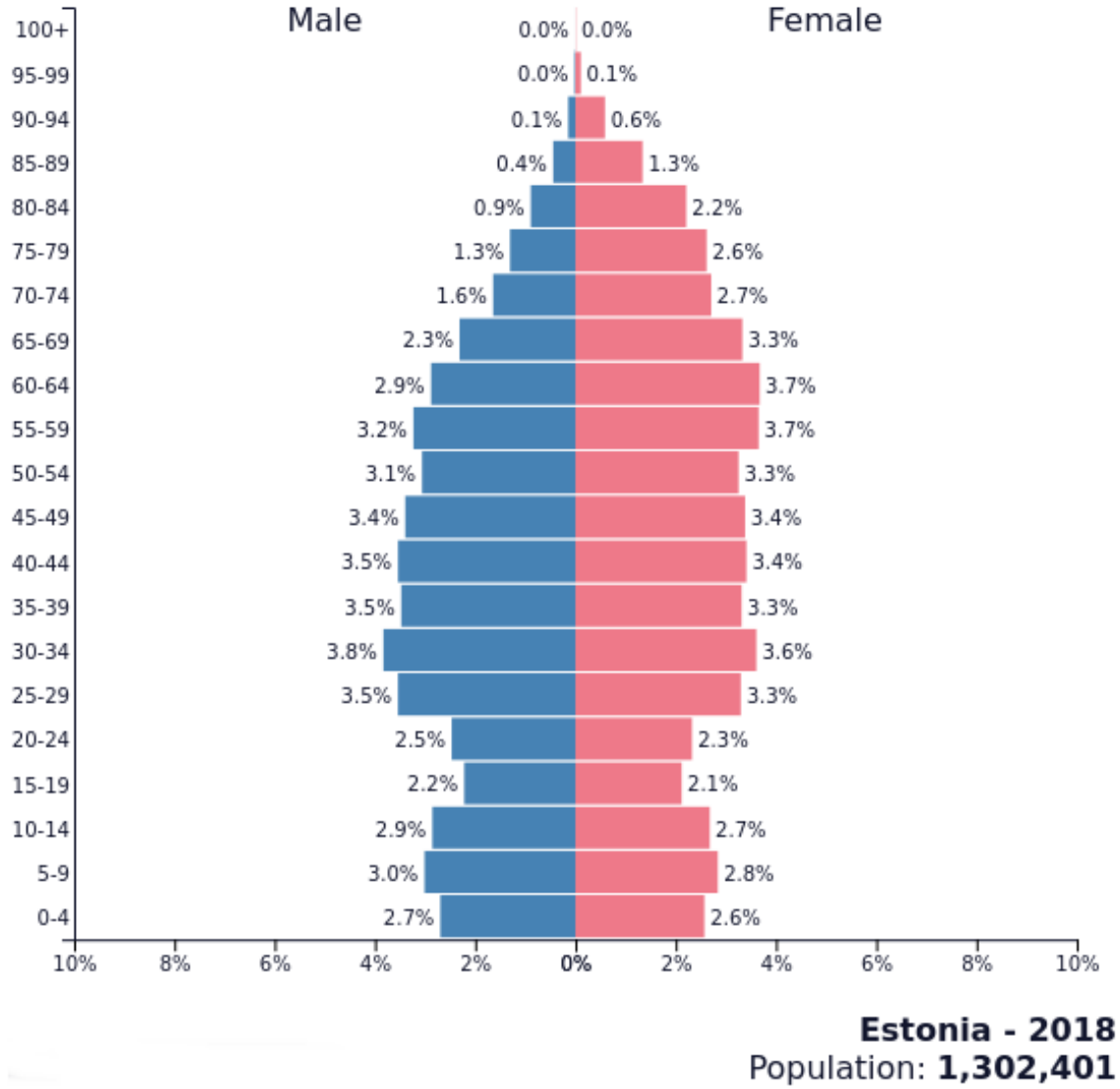
Table 2. Municipality of Estonia

Municipality	Frequency	Percent	Cum. Freq.
Tartu linn	189	10.98	10.98
Pärnu linn	150	8.71	19.69
Narva linn	77	4.47	24.16
Saaremaa vald	76	4.41	28.57
Lasnamäe linnaosa	72	4.18	32.75
Rakvere linn	60	3.48	36.23
Kohtla-Järve linn	56	3.25	39.48
Mustamäe linnaosa	52	3.02	42.5
Haabersti linnaosa	38	2.21	44.71
Kesklinna linnaosa	36	2.09	46.8
Kristiine linnaosa	33	1.92	48.72
Põhja-Tallinna linnaosa	32	1.86	50.58
Jõhvi vald	31	1.8	52.38
Haapsalu linn	30	1.74	54.12
Nõmme linnaosa	28	1.63	55.75

Tapa vald	28	1.63	57.38
Lääne-Nigula vald	27	1.57	58.95
Sillamäe linn	27	1.57	60.52
Viljandi linn	26	1.51	62.03
Vinni vald	22	1.28	63.31
Kadrina vald	20	1.16	64.47
Tori vald	20	1.16	65.63
Elva vald	19	1.1	66.73
Jõgeva vald	18	1.05	67.78
Pirita linnaosa	18	1.05	68.83
Rakvere vald	18	1.05	69.88
Valga vald	18	1.05	70.93
Saue vald	17	0.99	71.92
Hiiumaa vald	16	0.93	72.85
Keila linn	16	0.93	73.78
Toila vald	16	0.93	74.71
Lüganuse vald	15	0.87	75.58
Maardu linn	15	0.87	76.45
Põlva vald	15	0.87	77.32
Viljandi vald	15	0.87	78.19
Haljala vald	14	0.81	79
Põltsamaa vald	14	0.81	79.81
Rapla vald	14	0.81	80.62
Kohila vald	13	0.75	81.37
Põhja-Sakala vald	13	0.75	82.12
Rae vald	13	0.75	82.87
Väike-Maarja vald	13	0.75	83.62
Põhja-Pärnumaa vald	12	0.7	84.32
Alutaguse vald	11	0.64	84.96
Viimsi vald	11	0.64	85.6
Viru-Nigula vald	11	0.64	86.24
Võru linn	11	0.64	86.88
Võru vald	11	0.64	87.52
Mustvee vald	10	0.58	88.1
Saarde vald	10	0.58	88.68
Antsla vald	9	0.52	89.2
Lääneranna vald	9	0.52	89.72
Harku vald	8	0.46	90.18
Häädemeeste vald	8	0.46	90.64
Jõelähtme vald	8	0.46	91.1

Tartu vald	8	0.46	91.56
Kehtna vald	7	0.41	91.97
Kiili vald	7	0.41	92.38
Märjamaa vald	7	0.41	92.79
Peipsiääre vald	7	0.41	93.2
Anija vald	6	0.35	93.55
Järva vald	6	0.35	93.9
Mulgi vald	6	0.35	94.25
Otepää vald	6	0.35	94.6
Paide linn	6	0.35	94.95
Raasiku vald	6	0.35	95.3
Räpina vald	6	0.35	95.65
Rõuge vald	6	0.35	96
Saku vald	6	0.35	96.35
Tõrva vald	6	0.35	96.7
Türi vald	6	0.35	97.05
Kambja vald	5	0.29	97.34
Kastre vald	5	0.29	97.63
Kose vald	5	0.29	97.92
Kuusalu vald	5	0.29	98.21
Lääne-Harju vald	5	0.29	98.5
Muhu vald	4	0.23	98.73
Narva-Jõesuu linn	4	0.23	98.96
Nõo vald	4	0.23	99.19
Kanepi vald	3	0.17	99.36
Luunja vald	3	0.17	99.53
Setomaa vald	3	0.17	99.7
Kihnu vald	2	0.12	99.82
Loksa linn	2	0.12	99.94
Vormsi vald	1	0.06	100
TOTAL	**1722**	**100**	-

Population Pyramid of Estonia -2018



Chi2 Test for Fire Extinguisher

Rows-Fire Extinguisher Not Important -1 and Important-2

Column- Don't have a fire extinguisher-1, Have one -2

```
. tabulate fireimptwonotone firenooneyestwo, chi2
```

fire-imp(two)not(one)	fire-no(one),yes(two) 1	2	Total
1	316	16	332
2	809	577	1,386
Total	1,125	593	1,718

Pearson chi2(1) = 160.5757 Pr = 0.000

Chi2 test for the presence of Smoke Detector and its importance

Rows-Smoke Detector- Not Important -1 and Important-2

Column- Don't have a Smoke detector-1, Have one -2

```
. tabulate smokeimptwonotone smokenooneyestwo , chi2
```

smoke-imp(two)not(one)	smoke-no(one),yes(two) 1	2	Total
1	31	41	72
2	120	1,527	1,647
Total	151	1,568	1,719

Pearson chi2(1) = 110.1556 Pr = 0.000

Chi 2 test for a relationship between they know how to use the fire extinguisher ("Definitely know how to use" and "Probably know how to use") and those who have used them ("Less than 10 years ago" or "More than 10 years ago") in past.

Row: 1= Knows how to use, 0= Do not know how to use

Column: 1=Have used it in past, 0=Never used it.

```
. tabulate fireknowonenotzero fireuseonenotzero , chi2
```

fire-know(one)not(zero)	fire-use(one)not(zero)		
	0	1	Total
0	226	60	286
1	247	1,171	1,418
Total	473	1,231	1,704

Pearson chi2(1) = 450.3845 Pr = 0.000