Preliminary communication

# The Attitude Towards Hunting of the Local Population from Two Settlements in Suburb of Skopje, Macedonia

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# **Abstract**

<u>Background and purpose:</u> The object of this paper is to investigate what kinds of perception towards hunting the local non-hunters population from settlements of Dolno Lisice and Dracevo have, their attitudes towards hunting activities and moreover of hunting as an economic activity.

Material and methods: Based on a survey method with using a questionnaire, the research is conducted between February 21st and 23rd, 2010 on the area of suburb of Skopje, the capital city of Macedonia. The analysis reveals public opinion, obtained from 67 interviewees, as a representing part of the investigated area. For this purpose a questionnaire with 11 questions is prepared and in order to be included biggest possible number of residents and to access bigger response, except door to door mail approach is used also. The gathered data are processed with manual recording obtaining quantitative data on the attitude of interviewees.

Results and Conclusion: Results reveal that most of the male population are going on hunting for benefit, unlike most women who hunt for sport and recreation. This analysis shows that hunting is quite widespread in this region and almost all respondents reported they know someone who is a hunter. Moreover in this case it is interesting that despite the big number of males of this region and female inhabitants as well have expressed desire to go on hunting.

<u>Key words:</u> hunting, public opinion, public attitude towards hunting

### INTRODUCTION

"The attitude construct continues to be a major focus of theory and research in the social and behavioural sciences, as evidenced by the proliferation of articles, chapters, and books on attitude-related topics published between 1996 and 1999. To the relief

of authors, the Annual Review of Psychology now divides this burgeoning field into two separate chapters, one surveying attitude change, persuasion, and social influence" [1, 2].

"Attitudes toward hunting depend on what the altitude is about and hunting alone is too broad as an object and needs to be more precisely defined to give a meaningful understanding of anti-hunting altitudes" [3].

The beginnings of hunting, in particular hunt as a form of human activity can be found from the time of human kind origins. As man evolved through history, also developed and hunting as an economic branch.

At the beginning, hunting was individual and not with high intensity, but somewhat later become to develop into organized joint activities with which people are involved as primary occupation.

From the time of old century, when people began to rely on agriculture and animal breeding, hunting is losing its initial meaning for the existence of humans and is no longer the main source of existential needs. It is considered that during this period of development of mankind are the beginnings of hunting as a sport and entertainment, in which participants prove its durability and dexterity. During this period, people go on hunting more for recreation than for material benefit. As a consequence to this, hunting was losing its original function.

"Over the past 25 years, research has furnished a great deal of descriptive information about the advantages of hunting and other wildlife-related activities. It has become clear that hunting is not merely a means to harvest game; it also affords opportunities to actualize a variety of social, psychological, emotional, and physical benefits" [4].

Nowadays hunting is treated as a sport, recreation, hobby and entertainment, but also a way of environmental management and specific relationship to the animal part of nature called game. The economy of many countries hunting takes prominent place and is subject to a separate, permanent and systematic attention to relevant organizations in terms of promoting and developing not only domestic but also international tourism. The life of modern man more in need of rest, recreation and refreshment in nature, and hunting has proved to be very desirable and appropriate for that kind of vacation.

"From the research done in the past, more than nine out of ten people support at least some form of hunting. This was true in 1978 in the United States and is true in both the U. S. and Sweden today. This shows that blanket statements that the public opposes hunting are not accurate" [3].

Concerning Macedonia, hunting activities enjoy special attention nowadays. Each adult person and active population (workable) citizens who fulfil conditions provided by law can become a hunter, to carry weapon and to hunt. It is estimated that there are about 34,000 hunters, members of some of the many in number hunting associations.

There are 256 hunting areas in total on the territory of the Republic of Macedonia, proclaimed as such with a Governmental decision [5]. These hunting areas are divided into 5 hunting regions, of which on hunting big game pertain 112 smaller parts of area and for hunting small game 144 hunting areas within these five regions. The hunting areas are given on concession to companies registered for hunting activities, where besides the right to hunt game, they are obliged to breed, store and protect wild life.

Although on the territory of our country there are a number of different game species, the main types of corporate hunting game are wild boar, roe deer and chamois, and also the small game as rabbit, partridge, etc. Certain types of game such as bear and lynx, because of its reduced numerical condition are declared permanently protected species and its hunting is prohibited.

Besides the richness of indigenous game species in certain hunting areas introduction and reintroduction of some non-indigenous game species of several types of deer, muflons, pheasant and other game is done. These activities contribute to wildlife enrichment in our country with game species that are not naturally present on this area or some new species that could adapt to existing living conditions.

Concerning the great nature beauty, unpolluted environment, the richness and game quality in our country, hunting has great potential to grow into important branch and as part of the national tourism.

The object of this paper is to reveal what kind of attitude the local population from Dolno Lisice and Dracevo settlements have towards hunting, hunting activities and moreover hunting as an economic activity. Surveyed settlements are located east of Skopje and are considered as sub-urban neighbourhoods. Surrounded by large complex of farmland with mountain Jakupica in their close surrounding, there are excellent conditions for hunting. The main objective is analysis of what kinds of attitude the local people have towards hunting and moreover the attitude of ordinary citizens who are not hunters. This is even more significant if taking into consideration the fact that in this region were not done similar studies so far. Therefore, this can serve as a base for further similar studies based on public opinion. Through obtained responses and quantitative analysis made afterwards, we would like to get a clear picture of their attitude towards hunting in order to detect specific problems and offer possible solutions to resolve them.

These kinds of surveys are good tool to learn more about attitude of the people towards hunting and the level of public awareness of opportunities, goals and meaning of hunting in general. Taking into account that public opinion is not considered as an important one in Macedonia, in almost all forest activities, this study will be the base of further investigations in this area, and also it will be the base for the Association of hunters for their improvement in their behaviour towards sustainable hunting.

### THEORETICAL FRAMEWORK

"Recognizing the diversity of opinions about wild-life, researchers have emphasized segmenting the public into homogeneous meaningful groups in order to understand potential responses to wildlife management strategies. Much of this research has focused on differences among known interest groups (e.g. hunters) or people with different demographic characteristics such as sex and age [6, 7, 8]. Other research has segmented the public using psychological indicators such as motivations [9], attitudes [10], and normative beliefs [11]. These segmentation studies have enhanced our understanding of the differences between interest groups with different demographics, past experiences and psychological profiles" [12].

"Attitudes are positive or negative evaluations of an object, and can be measured at both general and specific levels" [13, 12].

"A schematic representation of the theory is shown in Figure 1. Briefly, according to the theory of planned behaviour, human action is guided by three kinds of considerations: beliefs about the likely consequences of the behaviour (behavioural beliefs), beliefs about the normative expectations of others (normative beliefs), and beliefs about the presence of factors that may further or hinder performance of the behaviour

(control beliefs). In their respective aggregates, behavioural beliefs produce a favourable or unfavourable attitude toward the behaviour; normative beliefs result in perceived social pressure or subjective norm; and control beliefs give rise to perceived behavioural control, the perceived ease or difficulty of performing the behaviour. In combination, attitude toward the behaviour, subjective norm, and perception of behavioural control lead to the formation of a behavioural intention. As a general rule, the more favourable the attitude and subjective norm, and the greater the perceived control, the stronger should be the person's intention to perform the behaviour in question' [4].

# **MATERIALS AND METHODS**

For the purpose of this paper, examination of local population's attitude from the settlements of Dolno Lisice and Dracevo towards hunting, with random choice of statistical examination of public opinion was made. Each area for collecting data is determined within administrative boundaries of Dolno Lisice and Dracevo, as suburban neighbourhoods with mixed population composition. They count about 30 000 inhabitants, with predominantly Macedonian Orthodox population. The survey was conducted with questionnaire given to the local people. The questionnaire was made of 11 questions, where most of them offer few possible answers.

For the manner of obtaining data, by the given slow movement of the statistical sample frame, the attitude of the locals who do not change in a short period of time, we conclude that the survey can be conducted at any time of the year without affecting the outcome of the analysis. An inquiry between February 21<sup>st</sup> and 23<sup>rd</sup>, on 67 respondents, by going from house by house and correspondent obtaining data was carried out.

In order to be included biggest possible number of residents in survey and access to bigger response obtained, the questionnaire was also sent by mail to the some respondents.

The data are processed with manual recording according to the given answers, obtaining quantitative data on attitude of the local population. Appropriate conclusions, based on which we can offer suggestions for improvement of certain views and understanding of the local population to hunting are pulled out.

The results obtained from the examination of the local population attitude within the settlements of Dolno Lisice and Dracevo to hunting will be explained further.

### RESULTS

For the purpose of this paper, research on public opinion on a representing part of statistical sample frame by random choice in the settlements of Dolno Lisice and Dracevo was carried out. The survey is conducted and obtained interesting results will be explained in continuation of this paper. Therefore each of the questions and the result obtained will be analysed separately and presented graphically.

Q1: How old are you? – On the first question of respondents' age the answers were divided into 6 age classes, presented within the Graph 1. First class includes all respondents younger than 20 years, the second is between ages of 21 and 30 years, third is from 31 to 40 years, fourth class is 41 up to age of 50, the fifth takes from 51 to 60 years and all respondents older than 61 are in age class six. The most respondents as it can be seeing from the Graph 1 are on age between 31-40 years old with 34.3 % share and most of rest of the respondents are under the age of 20-30 years with 20.9 %.

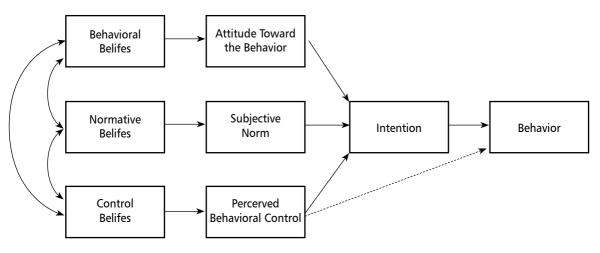
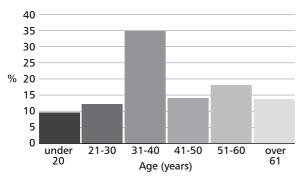
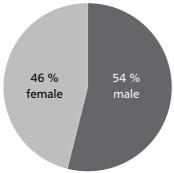


FIGURE 1
The theory of planned behaviour (source [4])



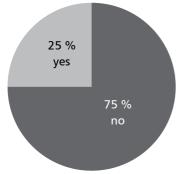
GRAPH 1
Question 1: How old are you?

Q2: What gender are you? – With the second question and further quantitative analysis of obtained answers we got a good picture of gender respondents' structure. Within Graph 2 representation regarding relationship between genders as almost identical with a small predominance of the female participating with 53.7 %, and compared to men with participation of 46.3 % is visible.



GRAPH 2
Question 2: What gender are you?

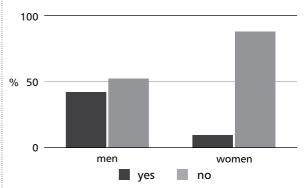
Q3: Have you ever have chance to hunt? – The obtained responses indicate that 74.6 % of respondents had no single opportunity to participate in hunting, as opposed to only 25.4 % of residents who have participated in hunting (Graph 3a).



GRAPH 3a

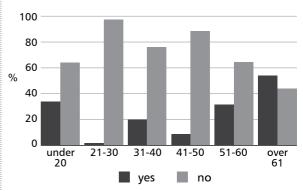
Question 3: Have you ever have chance to hunt?

If you look at percentages' difference between those men who have participated only once in hunting and those who have never been on hunting, you will see that their ratio is almost identical (Graph 3b). Largest percentage of male respondents which had no opportunity to hunt is 54.8 %, as opposed to 45.2 % respondents, who were only once on hunting. Concerning female respondents, the situation is quite different and the percentages difference is very outstanding. Even 91.7 % of the respondents have never had the opportunity to hunt, as opposed to only 8.3 % which sometimes went on hunt.



GRAPH 3b Question 3: Have you ever have chance to hunt?

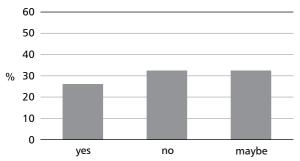
If you take the percentage of residents within age classes that had only once opportunity to hunt (Graph 3c), you will notice that with exception of age class of residents older than 61 in all other age classes' residents who had no opportunity to hunt, dominate.



GRAPH 3c Question 3: Have you ever have chance to hunt?

From the Graphs 3b and 3c you can see that biggest difference between those who had opportunity to hunt and those who had no such opportunity is for class of people aged from 21 to 30 years old, where all respondents declare they had no chance to hunt. Followed and opposite to that, residents older than 61 years, 55.6 % of the surveyed people had the opportunity to hunt (Graph 3c).

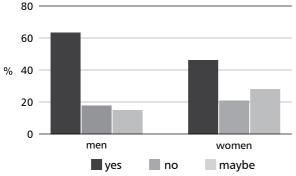
Q4: Would you go on hunting? – From following graphs (Graphs 4a, 4b, 4c) we can notice that more than half of respondents would like to go on hunting. Than 55.2 % of respondents said they would like to go on hunting, 20.9 % respondents reported that have no such desire, while 23.9 % of them said they might go on hunting in future if they got an opportunity (Graphs 4a).



GRAPH 4a Question 4: Would you go on hunting?

For better representation of the results of answers to this question depending on gender and age of the participants, they are presented in Graphs 4b and 4c.

Respondents asked if would go hunting, 64.5 % of men said they would to hunt, other 19.4 % said they would not go hunting, and 16.1 % of the respondents said if they will got an opportunity they might go on hunting. The same question posed to the female respondents had received many responses with not so different percentages, where 47.2 % of them stated if there is a chance they would go hunting, 22.2 % female respondents would not go to hunt and 30.6 % of them hesitate and said they might went (Graphs 4b).

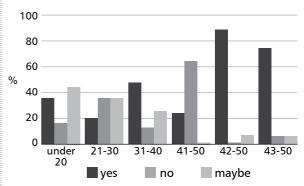


GRAPH 4b
Question 4: Would you go on hunting?

From quantitative analysis of responses to this question, it is notable as between male and female respondents as well dominate those who would like to go on hunting. Yet, desire is greater among male respondents where difference is more remarkable, so

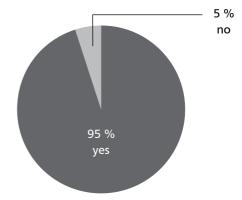
we get a respondent who does not want to go on hunting opposite to three people who would like to go. Unlike males, with female respondents difference is not that notable so on one female respondent who wants to go hunting comes two with desire to go.

But, if we look at the results from the peoples' declares per adult classes, the most of them interested to go on hunt are older respondents, compared to younger people who did not expressed such a desire. Thus, the percentage is 91.7 % of residents who are aged between 50 and 60 years with 33.3 % of residents under the age of 20 years (Graph 4c).



GRAPH 4c Question 4: Would you go on hunting?

**Q5:** Do you have any relatives or friends hunters? – As we can see from Graph 5, vast majority or 95.5 % of population have relatives or friends hunters, compared to only 4.5 % respondents who do not have relatives nor hunters acquaintances.

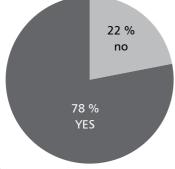


GRAPH 5 Question 5: Do you have any relatives or friends who are hunters?

The largest percentage of respondents of both genders asked whether they have friends or relatives hunters, are given positive response. All male respondents reported they have a friend or relative who is a hunter, unlike women with 91.7 % of respondents answered affirmatively to this question.

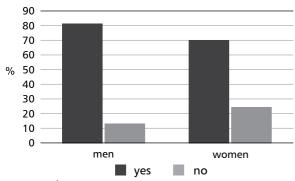
If we look at the results according to age class, we will notice two features. First is extremely large majority of respondents who gave answer upon this issue in all age classes. And the second is that all residents aged from 21 to 30 years, from 51 to 60 and over 61 years give affirmative answer to this issue. If we look at negative responses, we can notice most of the negative responses with 16.7 % are given by the youngest respondents, or respondents younger than 20 years old.

Q6: Does the stories of your relatives or friends hunters about hunting have positive effect on you? – Going through these answers we can see according to responses of 77.6 % the hunters' stories left positive impression to the respondents, unlike 22.4 % of respondents that have acquired negative impressions about hunting through such stories and discussions (Graph 6a).



GRAPH 6a Question 6: Does stories of your relatives/friends hunters have positive effect on you?

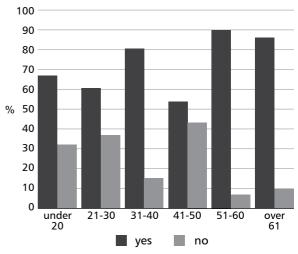
The results are presented for responses by gender (Graph 6b) and by age classes (Graph 6c). Here the highest percentage of respondents of both sexes, on this issue has responded affirmatively. Moreover friends or relatives with their hunting tales made positive affection to even 83.9 % of male respondents and to 72.2 % of female respondents, compared to 16.1 % male and 27.8 % females those stories have no positive affection on the respondents towards hunting.



GRAPH 6b Question 6: Does stories of your relatives/friends hunters have positive effect on you?

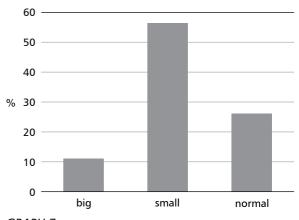
We can see that in all age classes respondents with positive impressions dominate. With the most outstanding percentage are the answers from residents aged from 31 to 40 years old with 82.6 %, from 51 to 60 years old class with 91.7 % and those over 61 with 88.9 % participation.

If we compare these results with question number 4 answers, with dominant positive answers on: "Would you go on hunting?" it is obvious that these two issues are in mutual dependence and among them is positive correlation (proportional depending).



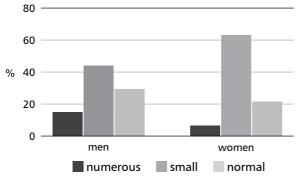
GRAPH 6c Question 6: Does stories of your relatives/ friends hunters have positive effect on you?

Q7: Are you familiar with the situation of game population density in Macedonia? – From the answers given to this question from the locals it shows that 58.2 % of respondents think game population density in Macedonia is a small, while only 13.4 % consider numerous state of the game number in our country is great (Graph 7a).



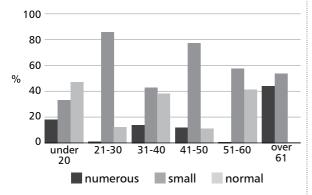
GRAPH 7a
Question 7: Are you familiar with the situation of game population density in Macedonia?

The most of both male and female respondents consider low game population density. However from female gender the share is 66.7 % responses, compared to male respondents with 48.4% of them who think game population density is low (Graph 7b).



GRAPH 7b
Question 7: Are you familiar with the situation of game population density in Macedonia?

If we consider answers from different age classes' respondents, we can see that with the exception of youngest respondents who are with age under 20 years (of whom 50.0 % reported that number of game in our country is normal) in all other adult classes dominate attitude that game population is small. The largest percentages of those who think game population density is low with 87.5 % are aged 21 to 30 years, followed by people aged between 51 and 60 years with 77.8 % share. It is interesting that none of respondents aged 21 to 30 years and over 60 years do not think that game population density in Macedonia is great (Graph 7c).

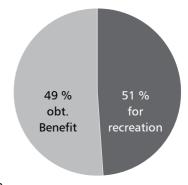


GRAPH 7c Question 7: Are you familiar with the situation of game population density in Macedonia?

If a comparation is done between answers to this question to results of question number 10 which states: "Are there any poachers in the area of your place of living?" we can see that they are positively correlated with claims of respondents answered positively to this question. In comparison, these two questions indicated that percentage of those who

think game population density is low (58.2 %), is very close to those considering there are poachers in the area of their place of living with (61.2 %). This leads to a conclusion that number of poachers is inversely proportional to the game population density, or as bigger the number of poachers the less the game is.

Q8: Do you think hunters hunt for recreation or sport or for obtaining benefit (ex. meat)? – This question provide perception that local people attitude towards motif of hunters to hunt is divided. It is almost equal percentage of those residents who think hunters hunt for sport and recreation to those who think they hunt for the benefit. As we can see from Graph 8, 50.7% of respondents gave affirmative answer to this issue and negative answer gave 49.3% of respondents.

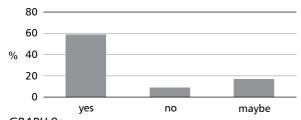


GRAPH 8
Question 8: Do you think hunters hunt for recreation or sport or for obtaining benefit (ex. meat)?

If we go through results of responses from both gender classes separately, we can see that there is almost equal percentage of respondents who believe that hunters hunt for sport and recreation to those who think that hunting is for benefit. From the results of the quantitative analysis, the responses given by male respondents, 51.6 % of them believe the hunters hunt for the benefit, while 48.4 % believe they hunted for recreation and sport. Unlike males, female respondents' position is reversed so that 52.8 % of them believe the hunters hunt for sport and recreation versus 47.2 % who thought that they hunted for the benefit.

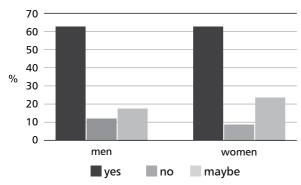
From the answers to this question, we can conclude that the most of the despondences look on hunting as an activity for providing benefit, where the most common motive is the meat.

Q9: Do you think hunters are with different ethnic, political and religious background? – Results show that 64.2 % of local population believe hunters are with different ethnic, political and religious background, while 13.4 % believe they are not with different background. Of these, 22.4 % were not sure and they gave answers as maybe or I am not sure (Graph 9a).

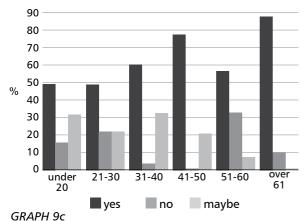


GRAPH 9a Question 9: Do you think hunters are with different ethnic, political and religious background?

If we made quantitative analysis to this question according to the respondents by gender, we will see that in both sexes percentage ratio of given results is almost identical (Graph 9b). With members from both genders confirmative answer dominate, and even two thirds of them on this issue gave positive response or rather 64.5 % males with 63.9 % of females. Unlike them, the issue gave a negative answer with 16.1 % of males and 11.1 % female respondents, while 19.4 % male and 25.0 % female respondents said that hunters might be with different ethnic, political and religious background.



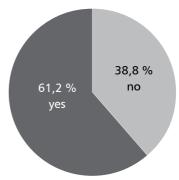
GRAPH 9b Question 9: Do you think hunters are with different ethnic, political and religious background?



Question 9: Do you think hunters are with different ethnic, political and religious background?

From the Graph 9c we can see that with age increasing, increases the percentage of residents who think hunters are with different ethnic, political and religious background. But at the same time with increasing of ages decreases the percentage of undecided residents who answered to this question with "maybe".

Q10: Are there any poachers regarding your place of living? – From results of the two possible answers to this question, you'll learn about the attitude of locals from villages Dolno Dracevo, Lisice and whether there is and to what extent poaching in their place of residence. The result shows that almost two thirds or more accurately with 61.2 % of population, respondents claim their settlement has poachers, unlike of 38.8 % think their settlement do not have poachers (Graph 10a).



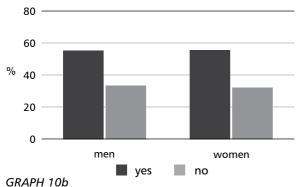
GRAPH 10a
Question 10: Are there any poachers regarding your
place of living?

According to answers to this question of male and female respondents, it is noticeable that almost identical percentage of inhabitants of both sexes believes that their place of residence has poachers (Graph 10b). Only 61.3 % of males and 61.1 % of females believe that their place of residence has poachers, versus 38.7 % of males and 38.9 % of female respondents who believe that their place of residence has no poachers.

If you look at the responses from inhabitants of different age classes, we can notice that in all age classes dominate number of positive responses with exception of youngest people age class.

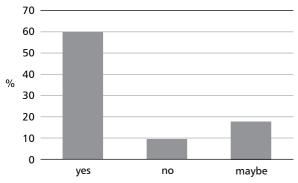
The Graph 10b gives clear difference in attitudes among male and female residents, between those who believe that their place of residence has poachers versus those who consider the opposite.

Analysis of responses to this question indicates on very high percentage of unplanned and illegal hunting, which adversely affects to game population density. For this reason there is a need for greater controls against poaching, which certainly will have positive impact on the number, sex ratio and genetic resources in the catchments areas of game.



Question 10: Are there any poachers regarding your place of living?

Q11: Do you think hunting could be a part of tourist offer in the state? – Almost two thirds of respondents answered affirmatively to this question, or 64.2 % of them think hunting has potential to be part of touristic offer of our country. In contrast, 13.4 % of respondents believe the opposite, while 22.4 % of the population were not sure if hunting could possibly be part of our tourism offer (Graph 11).



GRAPH 11
Question 11: Do you think hunting could be a part
of tourist offer in the state?

The answers are almost identical in both sexes of respondents. The largest percentage of males is with 67.7 % and even 61.1 % of female respondents believe hunting could be part of tourism in the country.

The interviewees from different age classes with exception of residents who are aged 21 to 30 years dominated by negative responses, in all classes the old age classes dominate confirmative response. Positive answer to this question gave the oldest inhabitants. On this issue all respondents older than 61 answered affirmatively. Most negative answers to this question were given by the residents aged 21 to 30 years of which 50.0 % and 33.3 % aged from 41 to 50 years reported they did not consider hunting could be a part of touristic offer of our country. It is interesting that on this issue none of the residents under the age of 20 years and over 51 did not give negative answer.

## **DISCUSSION AND CONCLUSIONS**

The attitudes towards hunting of males and females inhabitants from the surveyed settlements are identical with exception of some questions where there is slight difference between responses.

Therefore, as for instance in position of the motive hunters to hunt, most of the male population stated they hunt for benefit, unlike most women who think they hunt for sport and recreation.

This analysis shows that hunting is quite wide-spread in this region and almost all respondents reported having an acquaintance or relative who is a hunter. In most of the cases the stories have strong positive impression on the residents. Thus for majority of the respondents this had big influence and initiating desire to try out this kind of experience. In this case it is interesting that despite the big number of males and female inhabitants of this region as well have expressed desire to go hunting. Proof that their acquaintances with the stories have great influence on this desire for going to hunt is the high percentage of affirmative answers to three questions and their positive correlation.

Certain correlation can be noticed between the numerous of respondents with dominant position who think their region has in big part poachers with they who think the game population density is low. According to official data given we can conclude that majority of locals have proper perception regarding these phenomena. By analyzing the answers to these questions it is obvious that the respondents that claim the game population density is low and those who answered that within their place there are poachers, have approximately the same percentage of responses, showing negative correlation between them.

Considering this, we can conclude that a reducing of one occurrence will occur increasing of some other. Therefore, if we want to increase the game population density it is necessary reducing of poaching and unplanned hunting.

In conclusion one could draw that we should pay more attention to younger inhabitants of these settlements, to explain the potential hunting has to attract tourists - hunters in our state.

Hunting as tourist activities at the moment is not consider and treat properly regarding the fact that in Macedonia there are around 30.000 hunters and 256 hunting areas, and hunting areas are populated with diverse game species indicate that on hunting should be look on more different way than the current one.

This research is the first one on this issue in Macedonia. It will be good to be improved and spread in other parts of the country, in order to get a whole picture.

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