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ON SOME SOCIAL CHARACTERISTICS OF THE DECEASED IN TRAFFIC ACCIDENTS WOMEN IN PLOVDIV REGION OF REPUBLIC OF BULGARIA Momchil Mavrov, Assoc. Prof. Ivan Novakov, PhD, Dr. Marin Baltov MD, Dr. Stela Yancheva

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ABSTRACT

In the recent years there is an increase of road traffic and with it – an increase in the number of road accidents. Parallel to that there is an increase in the number of women injured in road accidents.

OBJECTIVE: The objective of the present work is to study the dynamics of female mortality in road crashes, the social image and role of victims in road accidents.

MATERIALS AND METHODS: the subject of the survey was the women, who died in traffic accidents in Plovdiv region for the period between 2000 and 2014, registered and autopsied at the department of Forensic Medicine at the St. George University Multi-Profile Hospital for Active Treatment in Plovdiv. For processing of the results the historical, statistical and graphical analysis were used.

RESULTS: The research includes 323 women, who died in road accidents in Plovdiv region between 2000 and 2014. The dynamics of female mortality during the period is wavy and irregular with a tendency to decrease in recent years. $72,85 \pm 4,93\%$ of them live in the cities of Plovdiv region and $22,68 \pm 4,65\%$ in the villages. Most of the deceased women are over 65 years old $/33,23 \pm 5,23\%/$ and young people aged 19 to 44 $/31,63 \pm 5,16\%/$. The majority of the deceased women are pedestrians ($43.45 \pm 5.49\%$) and passengers in the motor vehicles ($41.85 \pm 5.47\%$).

CONCLUSION: Traffic accidents continue to be a serious threat to the lives of older women, pedestrians and traveling young women.

KEY WORDS: *Traffic, Accidents, Mortality, Women, Plovdiv.*

With the development of modern society, there is a growing need for communication and transport. The increased traffic of people and goods has led to an increase in the number of transport vehicles and the accidents with them. Traffic accidents are a serious problem and are the third most important cause of death after cardiovascular and oncological diseases.

According to Eurostat, Bulgaria is the country in the European Union with the highest death rate on the road in 2016. [11] In the country, the championship for this indicator falls on the city of Plovdiv and the region [4]. The data undeniably highlights the relevance of problem with road accidents. Regardless of the statistics and publications on this topic, little attention has been paid to the role of women as participants and victims of road crashes.

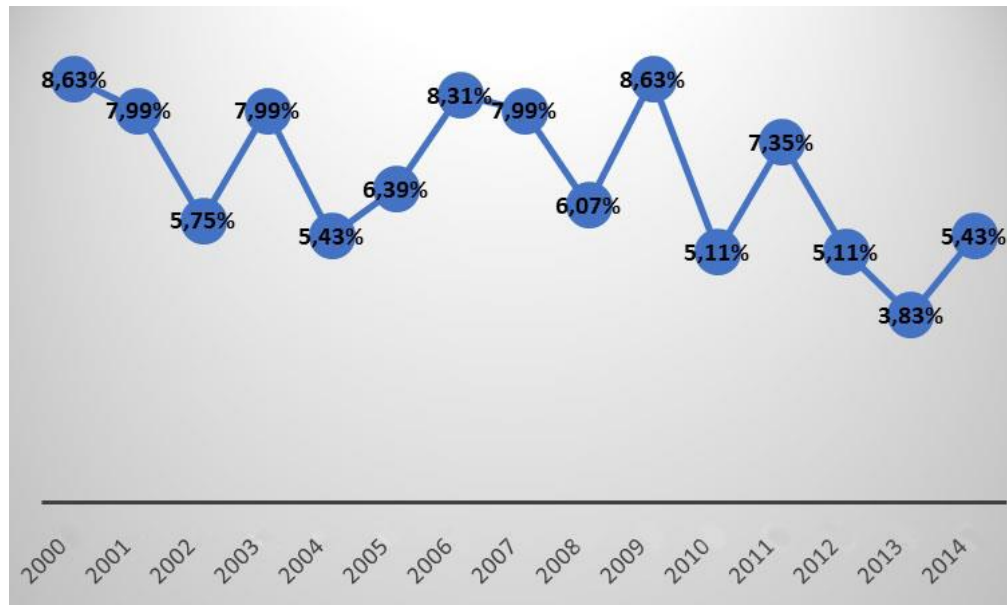
OBJECTIVE of the present work is to study the dynamics of female mortality in road crashes, the social image and the involvement of victims in road accidents.

MATERIALS AND METHODS: the subject of the survey was the women, who died in traffic accidents in Plovdiv region for the period between 2000 and 2014, registered and autopsied at the department of Forensic Medicine at the St. George University Multi-Profile Hospital for Active Treatment in Plovdiv. For processing of the results the historical, statistical and graphical analysis were used [1].

RESULTS: During the period 2000 - 2014 in the Department of Forensic Medicine of St. George University Multi-Profile Hospital for Active Treatment, Plovdiv, 7557 autopsies were carried out, 1288 of which were of victims in road crashes ($17.04 \pm 0.43\%$). Female victims in crashes in this period are 313 or $24.30 \pm 4.76\%$. The female mortality due to road accidents in the studied period is represented in percentages (the number of deaths per year compared to the total number of perished women). It ranges from 8.63% in 2000 and 2009 to 3.83% in 2013. The dynamics over the years is fluctuating with alternating maxima and a marked downward trend in recent years (see Figure 1).

DYNAMIS OF FEMALE MORTALITY DUE TO ROAD ACCIDENS

Figure 1



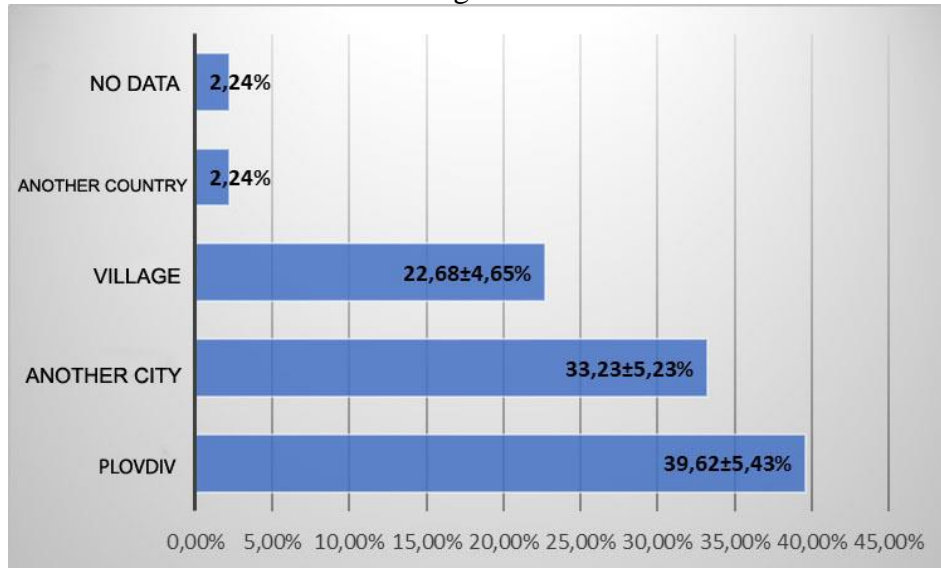
The place of residence is part of the social characteristics of the deceased women. It was found that $\frac{3}{4}$ of them ($72.85 \pm 2.52\%$) live in the cities of Plovdiv region, with the vast majority ($39.62 \pm 5.43\%$) from the city of Plovdiv. In the villages live $22.68 \pm 4.65\%$ of the deceased. On the roads of Plovdiv region, 7 foreign females died - 2 from Turkey and Serbia and 1 from Greece, Macedonia and Austria (see Figure 2).

Age is another part of the social image of the perished. The youngest victim is 2 months old and the children under the age of 10 are 17. The oldest are two pedestrians from Plovdiv at 93 and 90 years old.

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DISTRIBUTION OF THE DECEASED IN ROAD ACCIDENTS WOMEN, BASED ON THEIR RESIDENCE

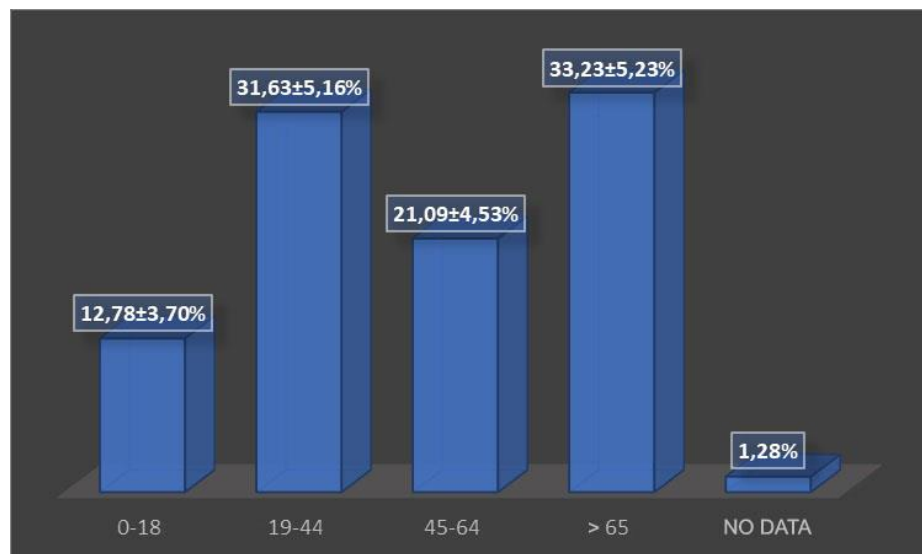
Figure 2



Victims of road traffic accidents are divided into four age groups: juvenile (0-18 years), young creative age (19-44 years), mature creative age (45-64 years) and retirement age (over 65). The retirement age victims (33,23 ± 5,23%) and those of young creative age (31,63 ± 5,16%) were found to be the largest (see Figure 3).

DISTRIBUTION OF DECEASED IN ROAD ACCIDENTS WOMEN, BASED ON AGE

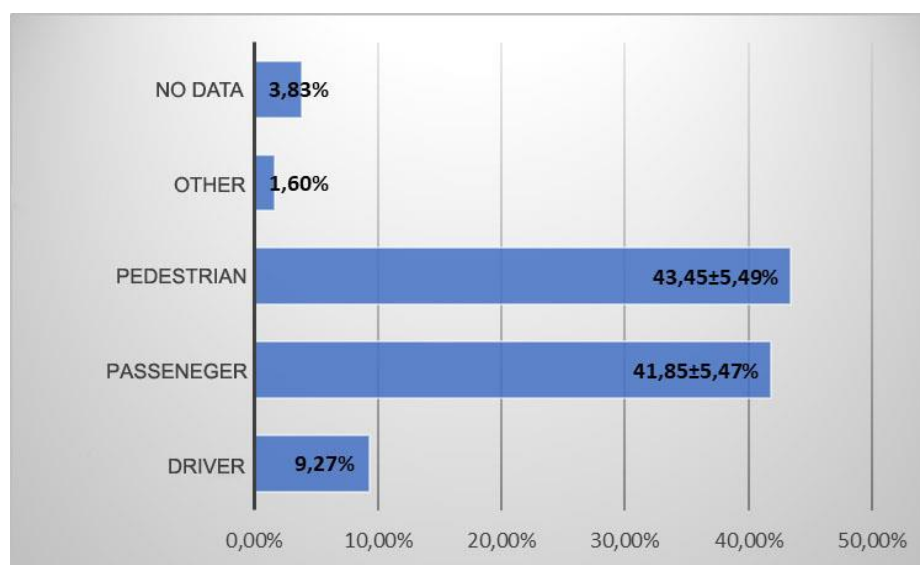
Figure 3



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It is of particular importance to establish how the women have become a victim of a road accident. The study showed that most died as pedestrians ($43.45 \pm 5.49\%$) and passengers in the vehicle ($41.85 \pm 5.47\%$). There is a small number of deceased drivers - 29 (9.27%). Two women have died as cyclists and three while traveling in a cart (see Figure 4).

DISTRIBUTION OF THE DECEASED IN ROAD ACCIDENTS WOMEN, BASED ON THEIR ROLE
Figure 4



DISCUSSION OF RESULTS: During the surveyed period, $\frac{1}{4}$ of all people deceased in road crashes were women. Similar results were also reported from other countries [2,5,8]. The established trend towards reducing female lethality in crashes in the period 2000-2014 is probably the result of measures taken by state authorities to reduce road accidents. There is no evidence of such studies in other areas of the country and therefore no comparison can be performed.

The residence of the majority of victims of road crashes is of great importance for prevention planning. The distribution of victims by place of residence corresponds to population statistics in the area. The aggregation of the majority of the population in Plovdiv as a regional city and the proximity to the "Trakia" highway are premises for increased traffic and hence an increased number of traffic accidents.

The largest share is the one of the deceased women in retirement age, which is also observed in Slovakia [5]. The large number of young fallen women is a worrying fact, as is the case in Pakistan [9], Fiji [7], India [8] and other developing countries.

The large number of pedestrians and passengers in motor vehicles is the result of the increasing traffic and the state of the road network in Plovdiv region. Such problems also exist in India [8,10], Trinidad [6], Pakistan [9], Fiji [7], as well as in some regions of Russia [2,3].

CONCLUSIONS:

1. The dynamics of female mortality in road accidents is unsustainable and, despite the downward trend, has high values.
2. The social characteristics of women victims of traffic accidents indicate that they are urban residents of young or retirement age.
3. The predominant part of the fallen women are indirect victims of road accidents.

CONCLUSION: Traffic accidents are a serious threat to the lives of older and younger women - pedestrians or passengers in a vehicle.

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