

THE LOCAL PERCEPTION OF URBAN SAFETY IN OPEN PUBLIC SPACES AS A PARAMETER FOR TOURIST ATTRACTIVENESS IN THE HISTORIC CORE OF SMEDEREVO, SERBIA

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Abstract: The concept of urban safety has been developed on the contemporary/broad feeling of human safety in open urban spaces. It is connected with ordinary people's fear of crime and crime perception. In this constellation, lack of urban safety is directly confronted with the always desired aspirations to make open urban spaces liveable, attractive and socially mixed. Indirectly, it can negatively influence other socio-economic conditions, which consequently downgrades extended urban areas. Therefore, urban safety is a demanding task for qualitative open public spaces in modern cities.

In the case of cities that are rich in cultural heritage, these aspirations are not just related to local residents, but to prospective visitors from the cultural tourism sector as well. Therefore, urban places with abundant cultural heritage and a high level of safety have better prospects to boost cultural tourism.

The aim of this paper is to examine the personal perception of urban safety in open public spaces in Smederevo, Serbia, and its role in upgrading the city's attractiveness for cultural tourism. This sector is underdeveloped in the city today despite the abundant cultural heritage of its historic core, with the exceptionally valuable medieval Smederevo Fortress, and the position of the city on the Danube, a major tourist route in Europe. It is assumed that the lack of urban safety in open public spaces located close to cultural heritage sites in Smederevo's historic core contributes to their underuse by local people, which further minimises their tourist attractiveness. Hence, a survey based on the actions of crime prevention through urban design and planning was conducted to examine the personal feelings of safety in open public spaces among local people from Smederevo. The results

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of this survey imply that these spaces should be redesigned to be safe and more attractive for tourists.

Keywords: Urban Safety, cultural heritage, cultural tourism, survey, open public space, Smederevo, Serbia

1. INTRODUCTION – URBAN SECURITY

Since ancient time, cities have been major sites to advance human security and development. One of the UN's 2016–2030 Sustainable Development Goals, which should become the new global agenda for future urban development, has proposed that we should 'build cities and human settlements inclusive, safe, resilient and sustainable'. One of the proposed targets within that goal is: "by 2030, provide universal access to safe, inclusive and accessible, green and public spaces, particularly for women and children, older persons and persons with disabilities" (UN-SDSN, 2012). The European Urban Charter asserts "a secure and safe town free, as far as possible, from crime, delinquency and aggression" (CE, 1992) as the basic right for the citizens of European towns. Furthermore, urban planning, design and management of open public spaces influence people's feelings of safety. However, good governance supports safe cities.

Open public spaces in cities, as the main vibrant places for the everyday life of their citizens and visitors, should fulfil the criteria for successful functioning and social cohesion. The safety and security of an open public space, besides its accessibility, identity, comfort and liveability, is considered as one of the main factors for the validation of its quality. Currently, the perceived insecurity of open public spaces has become one of the main problems in cities (Valera & Guardia, 2014; Gehl, 2004; Gronlund, 2012), with important psychological and psycho-social consequences (Amerio & Roccato, 2005). Open public spaces which are perceived as safe and secure are often more occupied by users. A sense of safety influences people's behaviour and leads to gathering and social contact in open public spaces. People's sense of safety can affect their everyday routines and activities, and affect the way they choose their walking routes and places for rest and leisure (Barni et al, 2016).

The perceived safety of open public spaces is based on several factors, such as: perceived security, accessibility, maintenance, visibility in the area, the presence of greenery and water, streetlights, the concentration of users, the shape and size of the place (Fennelly & Crowe, 2013; Gronlund, 2012; Ellaway et al, 2005; Gehl, 2004; Borst et al, 2008; Schroeder & Anderson, 1984; Mehta, 2014). However, an open public space that has visible CCTV or police patrols is perceived to be safer. Comfort is another important criterion that influences the behaviour of people and their sense of safety (Gronlund, 2012; Gehl, 2004; Fennelly & Crowe, 2013).

Three factors are used in literature to describe perceived insecurity (Fernández & Corraliza, 1997). The first factor corresponds with personal competences to cope with crime, and is related to age, gender, behaviour patterns, physical fitness and self-confidence. The second one is related to previous personal and social, direct and indirect experiences of the place. The third is related to the environmental characteristics of the place, including:

- its physical aspects (street lightening, visibility, maintenance, vandalism) and
- its social aspects (concentration of users, gathering, and level of interactions between different groups).

The main goal of this research is to explore the perceived security and insecurity among the users of the main open public spaces in the city of Smederevo by analyzing and describing key environmental variables, and to provide suggestions for improving their safety.

2. METHODS AND RESULTS

This research uses a survey as a core method. Surveys are a suitable method for research that deals with thoughts, opinions, and feelings (Shaughnessy et al, 2011). As previously mentioned, they are very common in urban security. Personal perception of fear and discomfort in an open public space can be significantly different from actual trends and figures relating to it.

This survey was developed into a supplementary questionnaire with 12 questions (plus 3 demographic variables), organised in 4 thematic groups. The questions also differ by type: rating scale, yes-no questions, multiple choice, and semi-open questions.

The survey was conducted in the summer of 2018. The results of the survey were based on 100 completed questionnaires. At the beginning, it is important to give some information in brief regarding the structure of the survey respondents, based on the aforementioned demographic variables:

- The gender ratio was almost identical as the general ratio in Smederevo – 51% of the respondents were women and 49% were men; the general ratio is 50.7% to 49.3% in favour of women;
- The age structure was based on three main statistical groups (<18, 18-65, and >65 years of age). The ratio between the respondent groups was 13%/69%/18%, respectively. Compared to the general age structure in Smederevo (18%/65%/17%, respectively), the situation is also very similar, although the youngest group had a slightly higher representation.
- The third variable was about education. Among the respondents, there were 1% without elementary education, 4% with elementary education, 41% with a high school degree, and most of them, 51%, with a college or university degree; 3% had a specialisation, a magister or doctoral degree.

3. SURVEY RESULTS

3.1. SMEDEREVO AS A RESEARCH ZONE

The questionnaire was administered in the City of Smederevo, a medium-size city in central Serbia, 41 km east of Belgrade. The city is located on the Danube and represents the seat of the Podunavlje (Danube) District.

Smederevo has a rich cultural heritage dating back to the Roman period, through medieval to modern and industrial heritage sites. The most famous is the Smederevo Fortress, the seat of medieval Serbia in the fifteenth century (Fig. 1), and the Golden Hill (*Zlatni breg*), the royal summerhouse of the Obrenović dynasty. There are also several locations with well-preserved industrial heritage sites from the early twentieth century.



Fig. 1: Panorama of the Smederevo Fortress on the confluence of the Danube and the Jezava
(Source: <http://srbijauslici.blogspot.com/2015/03/smederevo-iz-vazduha.html>)

The historic core of Smederevo is also a concentration of cultural heritage (Fig. 2). However, all these heritage locations are divided by the old railway as a barrier; it disables the physical connection and visual overview of the historic core, the Danube riverside and the fortress as a coherent urban and tourist zone.



Fig. 2: Aerial view of the city's central zone
(Source: <http://srbijauslici.blogspot.com/2015/03/smederevo-iz-vazduha.html>)

The results of the survey were based on all completed questionnaires. As was already mentioned, the questionnaire was designed based on four groups of questions. The first group was related to the PERSONAL SENSE OF SAFETY, and included four questions, with separate responses for day and night.

In the first question, the respondents were asked to evaluate the safety of different places and areas in the central zone of Smederevo (Fig. 3). Cumulatively, there were nine places and areas evaluated in the first question:

Table 1: Comparative analysis of the personal perception of safety of places and areas in the central zone of Smederevo for day and night

NO.	PLACE / AREA	AVERAGE OF RATE SAFETY		THE MOST COMMON MARK	
		DAY	NIGHT	DAY	NIGHT
1.	Smederevo Fortress	3.86	2.03	4	2
2.	Danube quay and riverside	4.31	3.34	5	4
3.	Despot Đurađ Street	4.37	3.46	5	3
4.	Railway area	2.46	1.69	2	1
5.	Jezava Riverside	3.20	2.13	4	2
6.	City port area	3.05	2.23	3	1
7.	Karađorđeva-Goranska Street	4.24	3.29	5	3
8.	Majdan Hill	2.78	1.77	3	1
1.	(Main) industrial zone	3.35	2.22	3	2

Note: 5 is the highest mark for the safety of a place/area, and 1 is the lowest mark.

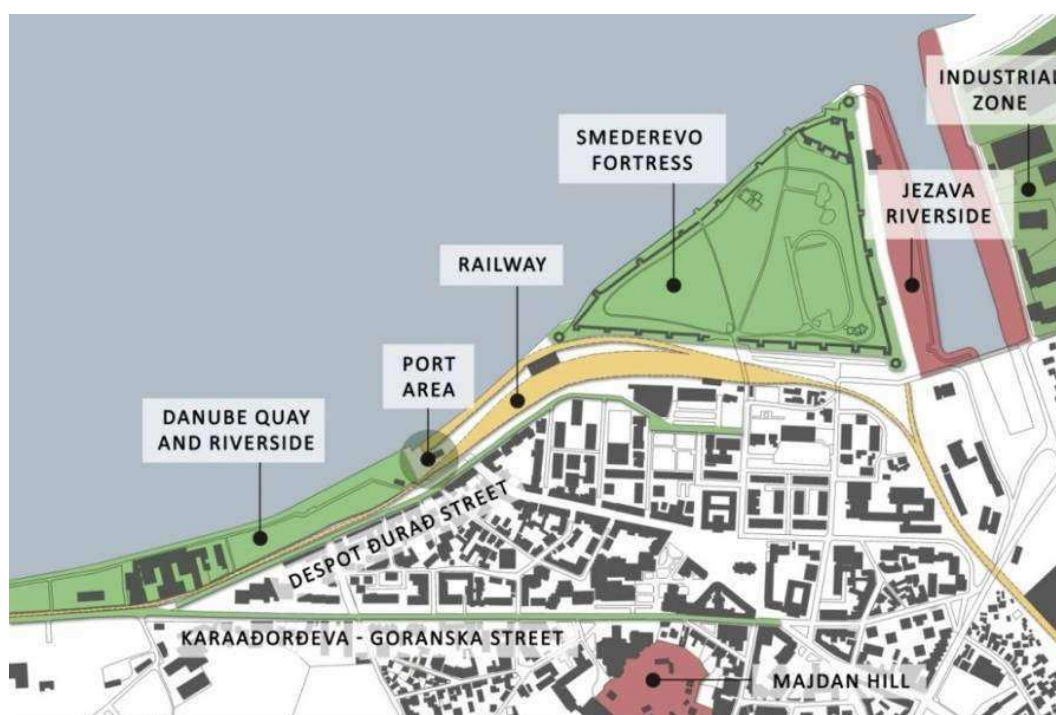
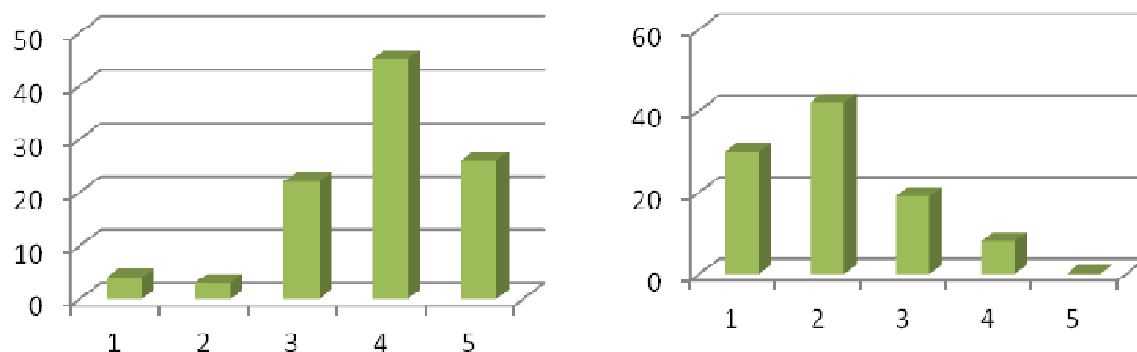


Fig. 3: Spatial disposition of listed places (Author: M. Ristović)

All selected places in central Smederevo are separately presented in the form of column charts (Fig. 4-6). In these charts, the evaluation of safety for each place is shown for day and night.

Place 1: Smederevo Fortress



Place 2: the Danube quay and riverside

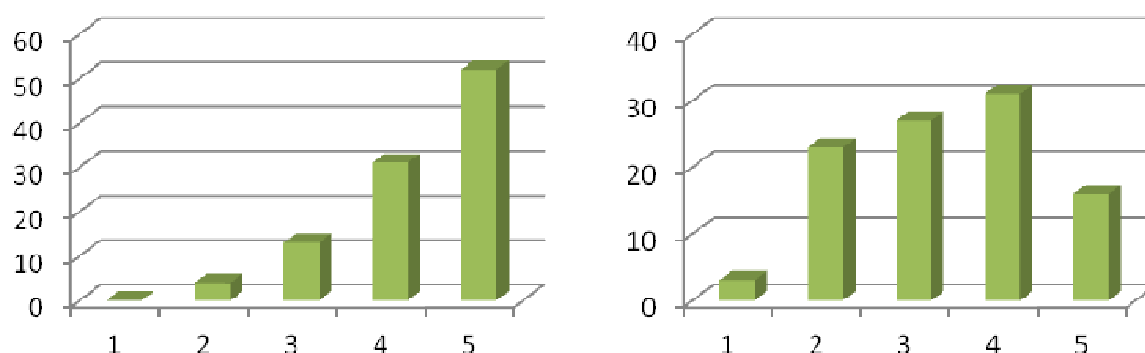
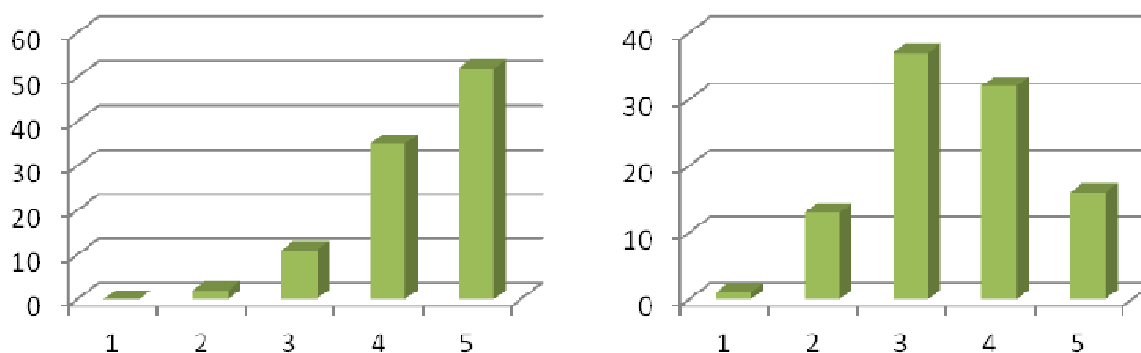
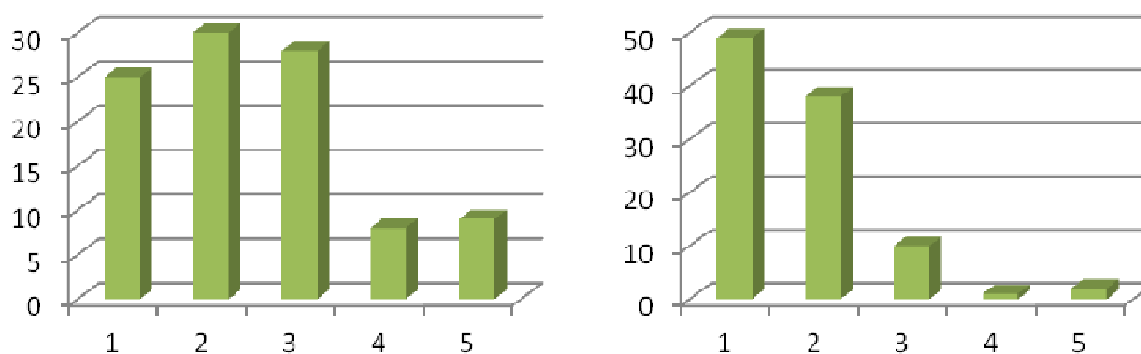


Fig. 4: The evaluation of the safety of selected places in central Smederevo – part 1 (Left chart - daytime; Right chart - night-time) (Author: M. Ristović)

Place 3: Despot Đurađ Street



Place 4: Railway Area



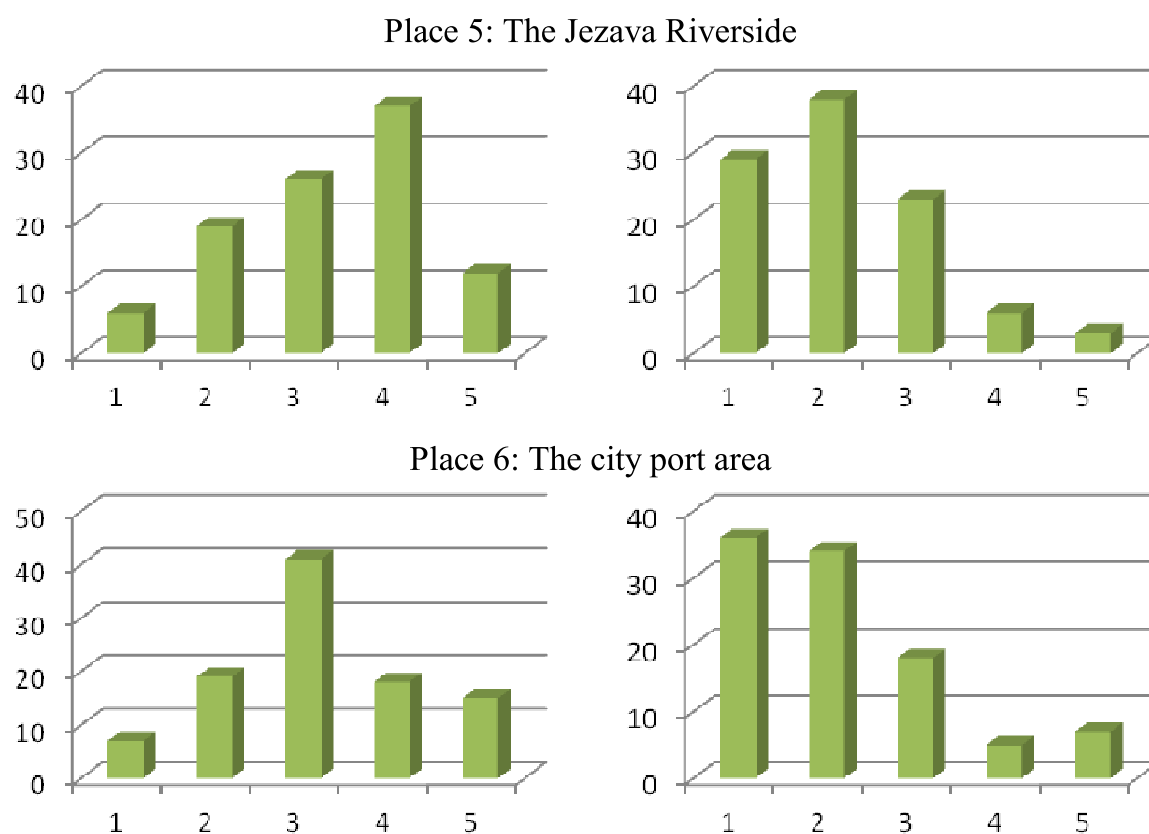
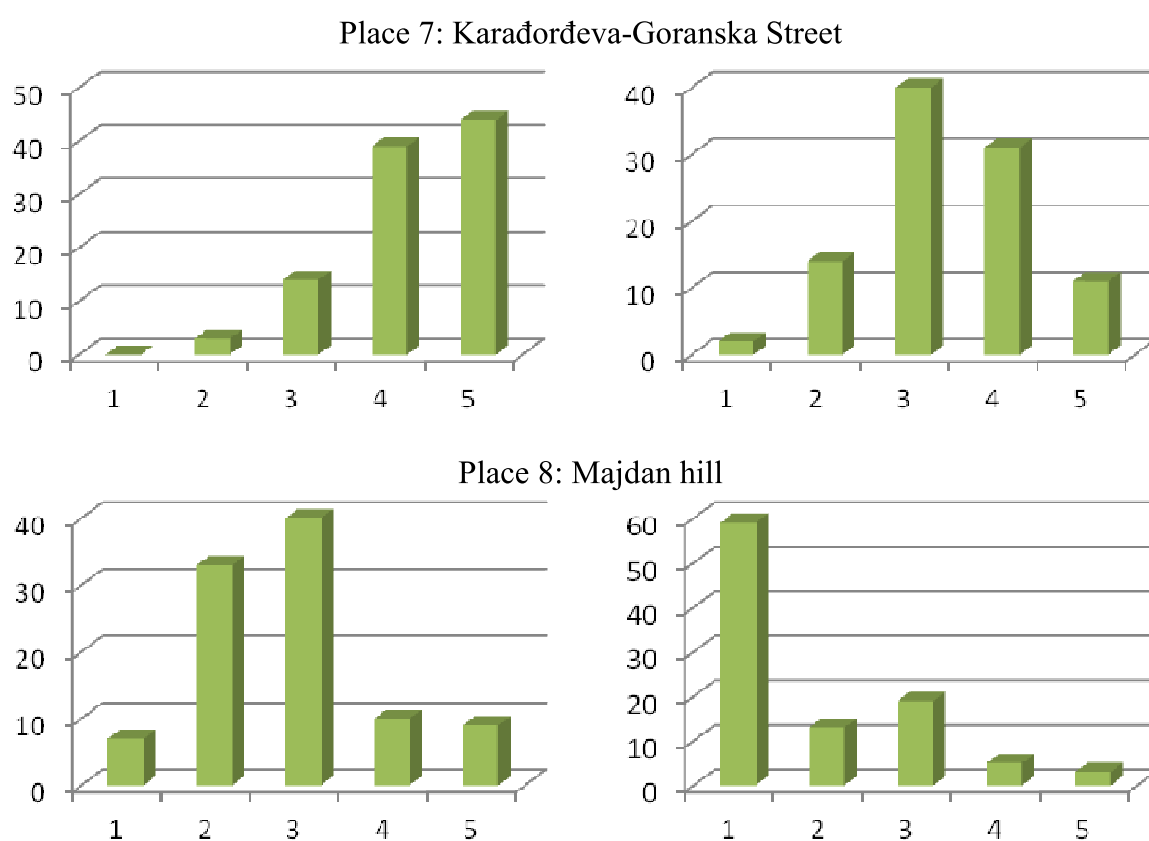


Fig. 5: The evaluation of the safety of selected places in central Smederevo – part 2 (Left chart daytime; Right chart - night-time) (Author: M. Ristović)



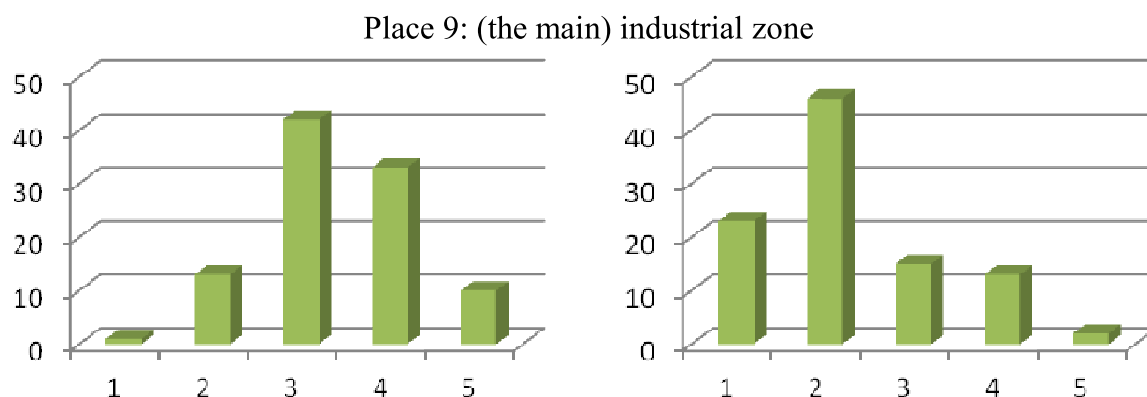


Fig. 6: The evaluation of the safety of selected places in central Smederevo – part 3 (Left chart -daytime; Right chart- night-time) (Author: M. Ristović)

In the second question (Fig. 7), the respondents were asked if they avoided any places in the city for safety reasons. During the day, 41% of the respondents kept away from some places because they considered them unsafe. During the night that percentage was expectedly higher – 79%.

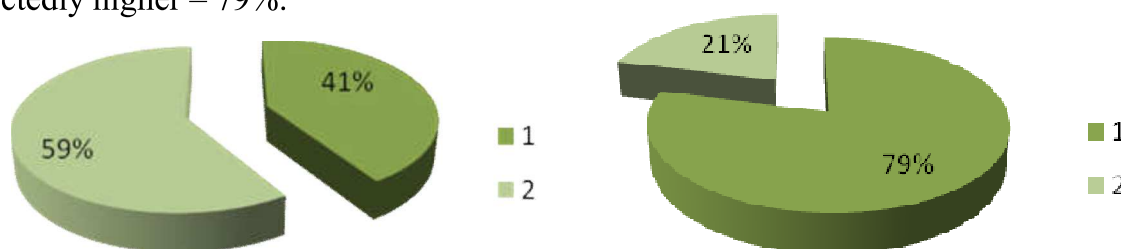


Fig. 7: The question "Are there places in the city that you avoid for safety reasons?" for day (left) and night (night) (Author: M. Ristović)

The next few questions were related to this one. The respondents were asked if they avoided some places for security reasons and which places they kept away from. All the sites whose safety they evaluated in the first question were listed, and there was a possibility to name a place which was not listed. The respondents were able to provide more than one response, but they were also asked to name the least safe place. As in the previous question, the responses for day and night were also separated.

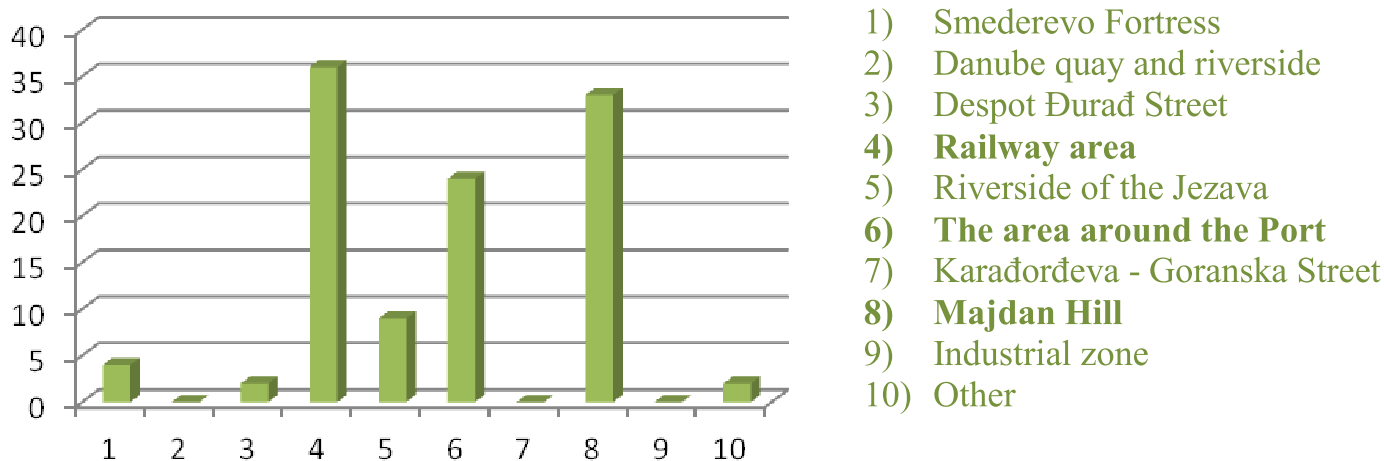


Fig. 8: The question "Which places do you avoid for safety reasons during the day?" (Author: M. Ristović)

During the day (Fig. 8), when 41% of respondents avoided some places, they mostly avoided the Railway area, but the area around the city port, which is located on the railway trace, and Majdan Hill were also really close in terms of the number of marks

Most people designated the Railway area as the least safe (42%), but Majdan Hill with 32% and the area around the port with 16% were also mostly designated as the least safe during the day (Fig. 9).

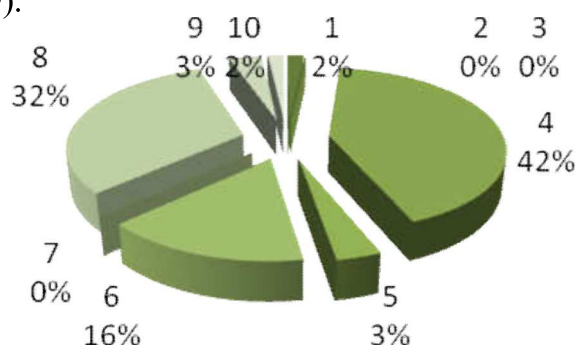


Fig. 9: The question “Which place do you consider the least safe during the day?” - Number of the listed responses is the same as in the previous question (Author: M. Ristović)

The respondents were also asked what made the place marked in the previous answer the least safe unsafe by day (Fig. 10), and the most common answer for this period was disrepair and lack of maintenance (36%), but there were also the large number of feral dogs and the usage of traffic intersections with 21%; the third reason was mostly provided for the railway or the port area as the least safe sites.

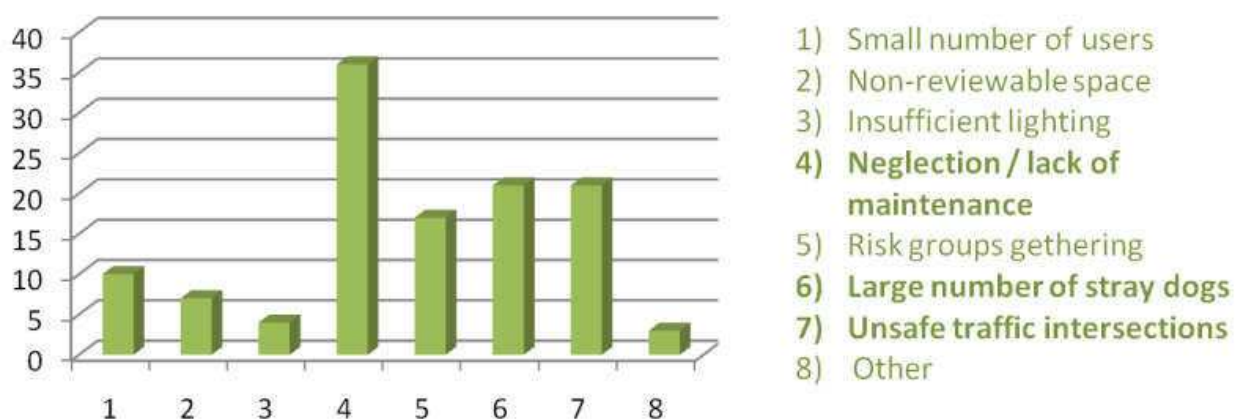


Fig. 10: The question “What makes the place marked as the least safe unsafe during the day?” (Author: M. Ristović)

During the night (Fig. 11), when 79% of respondents avoided some places, they mostly avoided the same places as in the daytime: the Railway area, the area around the port and Majdan Hill, but also the Smederevo Fortress, which was not a frequent answer for the daytime.

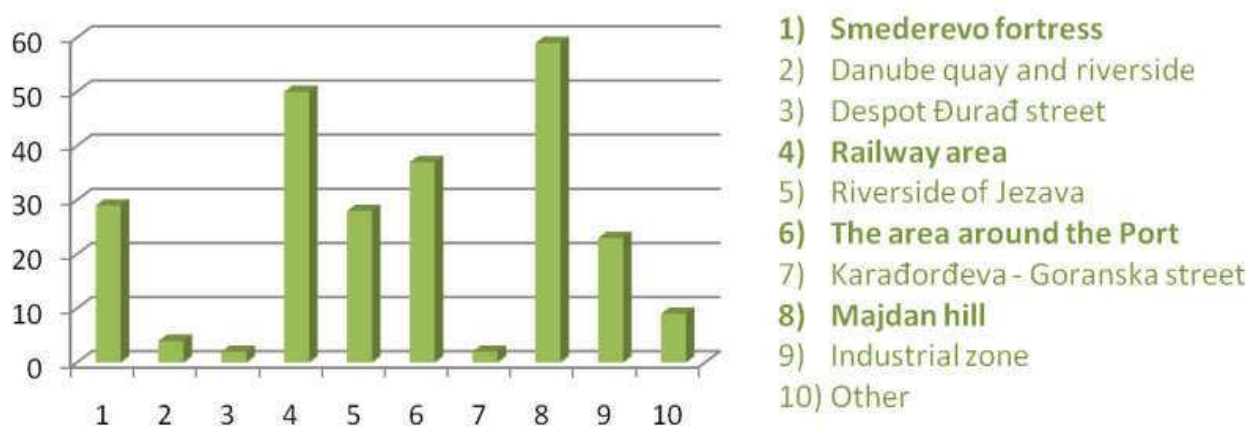


Fig. 11: The question “Which places do you avoid for safety reasons during the night?”
(Author: M. Ristović)

Half of the respondents (Fig. 12) designated Majdan Hill as the least safe during the night (50%), which was one of the most frequent answers for the daytime as well. The area around the city port, with 12%, and the Smederevo Fortress, with 11%, were also frequent answers. Once again, it is noticeable that the results match, so the Smederevo Fortress appears as an answer in both questions.

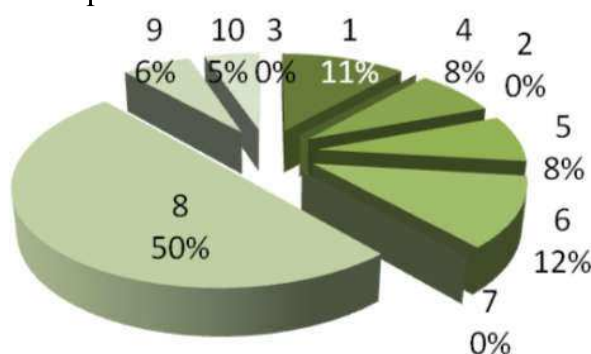


Fig. 12: The question “Which place do you consider the least safe during the night?” - number of the listed responses is the same as in the previous question? (Author: M. Ristović)

As the answer to the question about what made the least safe places unsafe during the night (Fig. 13), the respondents provided slightly different responses, so it is evident that they are mostly afraid of encountering dangerous groups of people, which was not the case in the daytime. Insufficient lighting also logically appears as a problem only during the night-time.

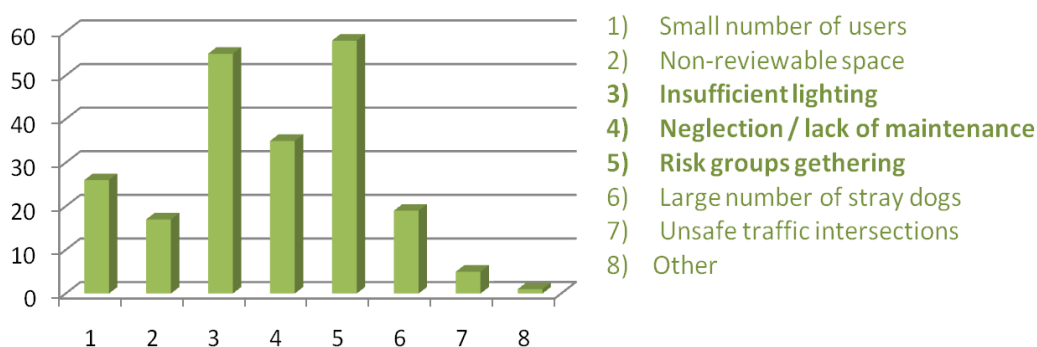


Fig. 13: The question “What makes the place marked as the least safe unsafe during the day?”
(Author: M. Ristović)

The second group of questions was related to REAL DANGERS. The respondents were asked if they or someone close to them had ever experienced an accident in the public area of the central zone of the City of Smederevo, and 14% of them responded that they did.

The next two questions were related to the type of accident and the place where they experienced it. From 18 accidents that people experienced (Fig. 14), ten were verbal violence (51%), four were physical attack (11%), and two were pickpocketing and mugging. Nobody experienced sexual abuse or murder as an eyewitness.

The places in the central zone of the city where the accidents occurred were the Smederevo Fortress (2), the Danube quay and riverside (2), Despot Đurađ Street (2), Karađorđeva-Goranska Street (1), and other places such as the Republic Square, or some sites in the peripheral zones of the city.

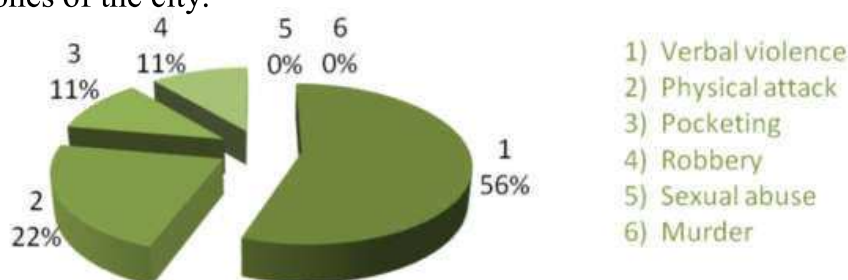


Fig. 14: The question “If you, or someone close to you, have ever experienced an accident in the public area of the central zone of the City of Smederevo, what kind of accident was it?”
(Author: M. Ristović)

The third group of questions was related to VIDEO SURVEILLANCE, where people were asked if they knew which public spaces were covered by video surveillance, how it influenced their sense of safety, and if they thought that video surveillance of public spaces violated personal privacy.

The results showed that 30% of the respondents knew which parts of public spaces were covered by cameras (Fig. 15). An equal percentage thought that it violated privacy (Fig. 16), but not the same respondents, because most of those who responded that they knew which places were covered also responded that it did not violate their privacy.

When it comes to the sense of security (Fig. 17), the same percentage of respondents (49%) responded that video surveillance made them feel more secure, and that it did not affect their sense of security, while only 2% of the respondents responded that they felt less secure.

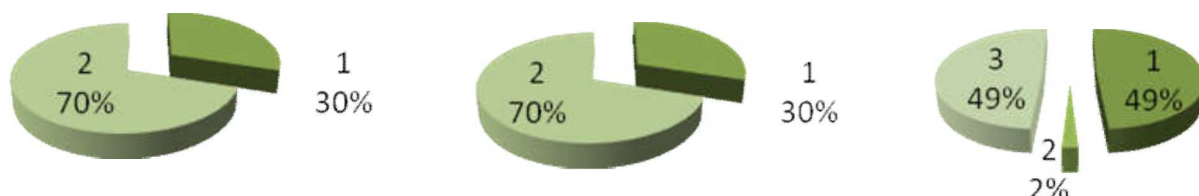


Fig. 15: Left pie chart – the question “Do you know which public spaces are covered by video surveillance?” (1=yes, 2=no)

Fig. 16: Middle pie chart – the question “Do you think that video surveillance of public spaces violates your privacy?” (1=yes, 2=no)

Fig. 17: Right pie chart – the question “Do you feel safer when a public space is covered by video surveillance?” (1-I feel safer, 2-I feel less safe, 3- It does not affect my sense of security)
(Author: M. Ristović)

The fourth and last group of questions referred to the POLICE. The first question in this group required the respondents to indicate if they had confidence in the police force or not (Fig. 18). The second/the last question was related to the way an increased police presence in public spaces affected the respondents (Fig. 19). Out of 100 respondents, 60% declared that they had confidence in the police and law enforcement; an almost identical number of respondents (58%) felt more secure with an increased number of police officers in public spaces; it did not affect the sense of security for 36%, and 6% of the respondents felt uncomfortable in that situation.

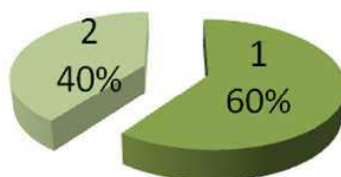


Fig. 18: The confidence of respondents in the police force (1 - yes, 2 - no) (Author: M. Ristović)

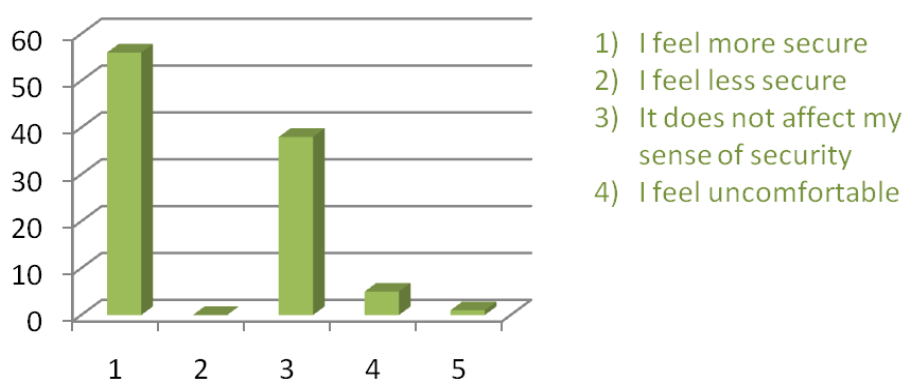


Fig. 19: The column chart for the question “How does an increased presence of the police in public spaces affect you?” (Author: M. Ristović)

4. DISCUSSION

After the overall examination of the results, it is obvious that most of the results match our theoretical presumptions. For example, the respondents gave the highest score to the safety of the areas that are intensively used by pedestrians, mostly in retail, residential and recreational zones with a high concentration of facilities. This was evident even if there was heavy traffic, such as in Karađorđeva-Goranska Street or Despot Đurađ Street.

Places with the highest scores (Despot Đurađ Street, Karađorđeva-Goranska Street and the city quay) are interconnected, but also connected with other urban facilities and functions in the city core. Places with the lowest ratings are mostly isolated (without any content that causes people to gather), not visited often, badly designed and inappropriately maintained. Those places where the railway represents a barrier for their access to the city centre (e.g. the fortress) are mostly marked as unsafe. This is evident for the railway itself, too.

When we take into account the responses about the characteristics which make places unsafe, the reasons for the respondents' insecurity are indicative:

- 1) Traffic insecurity – rail traffic in the pedestrian zone (railway) – there is no ‘natural’ way of intersection for these two types of traffic. The railway is a completely inflexible system with zero tolerance for pedestrian traffic;
- 2) Non-attractiveness and substandard maintenance – typical places are Majdan Hill or the area around the city port. They are characterised by physical and functional isolation from other public spaces, a lack of equipment, even unmaintained one, and a lack of content. Therefore, they visited infrequently despite their essential attractiveness (closeness to water/greenery, nice panoramas, etc.).

The real danger is actually very low – only 14% of the respondents have been in any real danger. Most of the accidents that people experienced were verbal violence (56%). Extreme forms of violence in public areas were not observed by the respondents. The most serious forms of accidents, such as physical attacks, pickpocketing or robbery, were reported in only 6% of cases.

There is not enough information about the existence of video surveillance, and 30% of the respondents think that it does not violate their privacy. The respondents are almost completely divided regarding their stance about their confidence in video surveillance in terms of their security in urban spaces. Nevertheless, the majority of the respondents have confidence in the police (60%), while mistrust and discomfort due to its increased presence are negligible.

5. CONCLUSIONS

The presented survey generally confirms that the safety and security of an urban space are an important factor of its quality. Those spaces with a higher level of security are considered to be of higher quality, regardless of their real value and importance in the network of urban spaces. Hence, they are visited much more frequently.

The results of the survey show the connection of security perceptions and three factors:

- 1) Personal competitiveness related to gender, age, the education structure, behaviour patterns, self-confidence;
- 2) Personal and public experience of space; and
- 3) Characteristics of space considering physical and social aspects. Different requirements and attitudes are recognized towards security in different categories of users of open public spaces.

Security and, consequently, the perceived quality of open public spaces affect the habits of people regarding their use. Safer spaces are often more attractive for users than similar spaces with a higher degree of insecurity.

Considering that Smederevo is located on the Danube, a major European tourism route, and that the city is planning new facilities in order to develop into a new tourist destination along this international river, several issues relating to the safety in open public spaces in the city should be improved by urban planning and design, to support these intentions:

- Removing unacceptable content from open public spaces (e.g. railways) - currently in progress;
- The functional revival and increase of attractiveness of neglected public spaces, in accordance with their importance and function in the network of public urban spaces. This is especially true for the interior of the fortress as the most prominent cultural heritage site in Smederevo;

Networking/interconnection of open public spaces, which should be implemented both physically (through arranged corridors) and functionally (distribution of urban facilities and activities);

Urban furniture, pavement and other urban equipment in open public spaces has to be of higher quality and contribute to urban safety. Using this approach is important in multiple ways, because it also increases urban values and enhances the local identity, which is crucial for tourism development.

6. ACKNOWLEDGMENTS

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7. REFERENCES

- Amerio, P. & Roccato, M. (2005). A predictive model for psychological reactions to crime in Italy: an analysis of fear of crime and concern about crime as a social problem. *Journal of Community & Applied Social Psychology*, 15(1), 100-110. DOI 10.1002/casp.806.
- Barni, D., Vieno A., Roccato M. & Russo, S. (2016). Basic Personal Values, the Country's Crime Rate and the Fear of Crime. *Social Indicators Research*, 129(3), 1057–1074. DOI 10.1007/s11205-015-1161-9.
- Borst H.C., Miedama, H.M.E., de Vries, S.I., Graham, J.M.A. & van Dongen, J.E.F. (2008). Relationship between street characteristics and perceived attractiveness for walking reported by elderly people. *Journal of Environmental Psychology* 28, 353-361. DOI 10.1016/j.jenvp.2008.02.010.
- Council of Europe – CE (1992). *European Urban Charter*. Retrieved from <https://rm.coe.int/168071923d>.
- Ellaway, A., Macintyre, S. & Bonnefoy, X. (2005). Graffiti, greenery and obesity in adults: secondary analysis on European cross-sectional survey. *British Medical Journal*, 331(7517), 611-612. DOI 10.1136/bmj.38575.664549.F7.
- Fennelly, L. & Crowe T. (Eds.) (2013). *Crime Prevention through Environmental Design (3rd edition)*. Amsterdam: Elsevier.

- Fernández, B. & Corraliza, J.A. (1997). Hacia una tipología de lugares peligrosos, en relación con el miedo al delito. *Intervención Psicosocial* 6(2), 237–248. Retrieved from <https://dialnet.unirioja.es/servlet/articulo?codigo=2012648>.
- Gehl, J. (2004). *Towards a fine city for people: Public Spaces for Public Life* – London. Copenhagen: Gehl Architects.
- Grönlund, B. (2012). *Building safe living environments*. Retrieved from http://www.rikoksentorjunta.fi/material/attachments/rtn/rtn/jseminaarit/tampereenseminaarin2012alustukset/6CdYHbwzG/Bo_Gronlund_-_Turvallisen_kaupungin_rakentaminen.pdf. Amerio 1999.
- Mehta, V. (2014). Evaluating Public Space. *Journal of Urban Design*, 19(1), 53-88. DOI 10.1080/13574809.2013.854698. Retrieved from <https://www.fs.usda.gov/treesearch/pubs/14855>.
- Schroeder, H.W. & L.M. Anderson (1984). Perception of Personal Safety in Urban Recreation Sites. *Journal of Leisure Research*, 16(2), 178-194.
- Shaughnessy, J., Zechmeister, E. & Jeanne, Z. (2011). *Research methods in psychology (9th edition)*. New York, NY: McGraw Hill.
- United Nations - Sustainable Development Solutions Network – UN-SDSN (2012). *Indicators and a Monitoring Framework: Launching a data revolution for the Sustainable Development Goals*. Retrieved from <http://indicators.report/targets/11-7/>.
- Valera, S., Guardia, J. (2014). Perceived insecurity and fear of crime in a city with low-crimes rates. *Journal of Environmental Psychology*, 38, 195.