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TIME USE AS A QUALITY OF LIFE FACTOR

Abstract: A significant problem in studies related to quality of life comes from the different respondents perceptions about specific issues related to the phenomena and events in their lives, as well as mental-psychological basis of an individual. Quality of life is influenced by various factors: air, water, health conditions, housing conditions, financial capacity of an individual, the feeling of happiness in the community, etc. The huge problem in the research is the possibility of quantifying certain qualitative category, which is reflected in the diversity of respondents answers related to a same phenomenon, which leads to the different final score related to quality of life. One of the most important factors related to the daily life of an individual is time. The research related to time use can give us a clear picture of how well people live in a specific environment. Acknowledging universal standards, it is possible to assess the quality of life by analysis existing time use studies. The objective of this paper is to present current research on the time use in the Republic of Serbia, and to enable the creation of the image of the quality of life of the citizens of Serbia.

Keywords: Quality of Life, Free Time, Statistic

1. INTRODUCTION

Quality of life depends on many factors that can be classified differently. Some of them can be turned by the general situation in a particular area, as conditions of life resulting from the natural characteristics, for example, air quality, potable water and liquid water, land, natural and biological diversity, the quantity of water and forests, etc., as quality of life natural factors. Others may be related to economic and social activity in areas and regions, as well as industrial and energy potential, transport infrastructure, employment, health care, public education, social distribution, care for the elderly, social policy, waste management, the implementation of policies of environmental financing, etc., as a quality of life socio-economic factors. A third factor may be of a personal nature, arising out of a sense of respondents personal satisfaction, as their own personal satisfaction, i.e. earning score capability, a personal sense of happiness and well-being, personal sense of justice and fairness, and so on.

When examining the factors that are based on personal perception of respondents, certainly there are some differences in responses. This is understandable considering the fact that different subjects (people) have a different view

of a world around them. The same natural, social or economic phenomenon can be assessed differently by the respondents, because of the people's nature itself. It is understandable that some phenomenon has different effects on different people. Someone is more, and someone is less affected by some negative phenomena (such as corruption, injustice, different criteria for employment, and so on). This stems from a different psychological profile of citizen-subjects, different families and relationships within them, as well as the environment and climate where the respondent grew and formed their own personality. Just for this reason-diversity in assessing satisfaction, surveys are often unable to provide safe and reliable assessment.

One of the universal factors in testing the quality of life is the time. By examining the time use relatively reliable picture of citizens will be acquired in the quality of the community life. National statistic office is an institution that conducts research of national importance, and the research results are the basis for the creation of appropriate national policies by the state leadership. European statistical authority Eurostat has issued recommendations for harmonized survey on time use (*Harmonized European Time Use Surveys – HETUS – 2008 guidelines*) [1] in

2008, which provided identical manner of collection, processing and publication of data obtained from research using time. The Statistical Office of the Republic of Serbia is applying the harmonized modus research conducted in the period of 5 years, and from it can draw conclusions regarding the time use in 2010 and 2015.

Available data are an important source of suitable informations for the development of social policy and decision makers in relation to work, culture, sports and general citizens living conditions. It is indisputable that these conditions determine the sense of citizens life in terms of life quality. On the other hand, it can be also useful for the general population in Serbia and scientific researches and students, journalist and general public from other countries, to see how the citizens of the Republic of Serbia use their time, because the collected data represent a valuable source of information regarding the life quality.

2. OBJECTIVE AND METHODOLOGY

The objective of the paper is to present current data on the time use (24 hours) in the Republic of Serbia, from year 2010 to 2015, to systematize them so as to ensure the creation of the image of the citizens of Serbia life quality. Data refer to the time of sleep, work (paid and unpaid), how much time respondents devote to other activities (learning) work in the household (personal hygiene, household maintenance), and how much there is free time for other activities such as sport, entertainment, hobbies, travel and the similar. Survey observed respondents older than 15 years who are not in penal institutions.

The paper itself does not examine the quality of the working environment of the employees surveyed, their load while performing unpaid work, transport conditions to the work, the learning conditions and personal care, but only time spent for these activities. If a respondent spends more time in personal hygiene, this does not necessarily mean that he use better hygiene products than the other respondent.

It is expected that the time spent at work (paid or unpaid, work in the household and such), is not a quality spent time, and that the rest of the time, which was not carried out as indicated above, or sleep, represents a quality

spent time regardless of whether it is marked as well as free time or time in leisure, travel, sport, entertainment, etc. Instruments which are used are completely in accordance with the HETUS 2008 [1].

The main instruments of the survey are:

1. The household questionnaire: IKV – 1
2. An individual questionnaire for person aged 15 and over: IKV – 2
3. A diary for person aged 15 and over: IKV – 3
4. The weekly schedule of working time: IKV – 4

The first research was completed as a Pilot research in 2009, as a training project with an aim of training statistic researchers in Serbia. The second was conducted in 2010/2011 in Serbia, under Klas Rydenstam, as a founder of the HETUS approach and Richard Ohrvall, who shared his knowledge and skills leadership, and was published in 2012 in Serbia.

3. INTERPRETATION OF DATA [2]

Data in this research were collected through time diaries, where respondents by their own words inscribed their own activities and indicating the time of activities. Each respondent has filled two diaries for two pre-selected days, and each diary is filled for each ten-minute interval. Based on these data, all recorded episodes were calculated how long they lasted and who performed it. In accordance with HETUS guidelines, with the time diary as survey instrument, following domains were registered:

1. Main activity – What respondent did?
2. Parallel activity – What respondent did also? Did he do anything else?
3. Location and transportation means – Where he was? How did he travel?
4. Who was with the respondent? Was he alone or with somebody?

4. RESEARCH RESULTS

Time use structure (time spent in different activities) tells a lot about quality of life. The table below shows the time use data of the population of the Republic of Serbia, both genders above 15 years. The data are given in six grouped activities conducted during a day.

Table 1: Average time spent on activities by those who undertook them, by sex, weekdays, weekend days and all days in the Republic of Serbia, 2010/2011 (hours) [3]

Activity	Woman			Men			Total		
	Weekdays	Weekend days	All days	Weekdays	Weekend days	All days	Weekdays	Weekend days	All days
Paid work	07:12	05:34	06:55	08:15	06:59	08:00	07:48	06:25	07:32
Unpaid work	05:05	05:12	05:07	02:59	02:53	02:57	04:12	04:13	04:12
Study	06:18	03:16	05:37	06:43	03:10	06:00	06:28	03:14	05:46
Personal care	11:01	11:44	11:13	10:50	11:45	11:05	10:56	11:44	11:10
Free time	05:05	06:05	05:22	06:05	07:35	06:30	05:33	06:47	05:55
Other	00:24	00:27	00:24	00:30	00:34	00:31	00:27	00:31	00:28

What is immediately apparent from the obtained results, is the unpaid work that women perform more. This was expected, bearing in mind the climate where the research was conducted (Serbia). Thus, Serbian tradition has left women to perform unpaid household work, such as (preparing meals, cleaning the living space, child care, shopping and other services, preparing clothes, elderly persons care and similar). Correspondingly, free time is higher in the male population in weekdays and weekends. This data indicate division of all time spent by female or male population in Serbia.

Impressive is the sum of hours that women spend on paid and unpaid work at home. Although women in paid work spend a little less time, they spend significantly more in unpaid, housework. It is clear that this work has not been adequately recognized, economically it should be treated as an important contribution to the overall work of the Serbian population. This research shows that a significant amount of time is consumed, which carries a certain economic value. Unpaid work of women in the household contributes to a higher life quality of the household, but reduces the women quality of life. Personal sense of women should be also added, which is considered to be doing housework as their obligations. Therefore, it is logical to consider that the discharge of housework is the second shift for women, which is successfully observed from Swedish theorists and statistician [4].

The following table will give a systematic overview of the unpaid activities performed by female and male population in Serbia, which

shows how much unpaid time is spent on individual activities.

Table 2: Participation rate for activities and average time spent on various unpaid work activities by those who undertook them, by sex, all days, the Republic of Serbia, 2010/2011(hours) [5]

No.	Activity	Average time per doers	
		Women	Men
1	Food management	2:28	1:01
2	Household upkeep	1:12	1:13
3	Making and care textiles	1:11	0:39
4	Childcare	2:17	1:33
5	Shopping and services	0:38	0:44
6	Gardening and pet care	1:29	2:03
7	Travel related to housework	0:39	0:45
8	Other household and family care	0:51	1:30
9	Total	5:07	2:57

The table gives data showing how much time is spent on the given tasks. It is clearly evident that the work related to food are far more performed by women, as well as jobs with clothing. Hard physical work related to household and gardening is more done by men population. These data indicate how much time must be spent for the normal functioning of households.

What the respondents mostly perceive as the most important element in testing the quality of life is the use of free time. The amount of free time certainly depends on the age, sex of the respondents, family status, employment and time spent at work, personal socialization, etc.

The following table will give a systematic overview of the free time activities performed by female and male population in Serbia, which shows what kind of activities were conducted in free time.

Table 3: Participation rate for activities and average time spent on various free time activities by those who undertook them, by sex, all days, The Republic of Serbia, 2010/2011(hours) [6]

No.	Activity	Average time per doers	
		Women	Men
1	TV and radio	2:45	3:12
2	Social life entertainment	1:48	2:03
3	Sports and outdoor activities	1:25	1:43
4	Reading	1:06	1:05
5	Hobbies and computing	1:27	1:47
6	Voluntary work and meetings	1:59	2:30
7	Travel related to free time	0:50	0:54
8	Total	5:22	6:30

The result was expected, because it stems from the previous tables. It is clear that free time is more frequent in the male population, which they use more in each individual activity.

Above presented using time research results relate to the 2010/2011 year. There have not been any similar national surveys conducted for previous years (not counting the pilot project in 2009 in order to train statistical staff). As the year 2015 carried out the same survey on time use, the new data may indicate changes in the citizens daily lives.

Technological development and changes in living standards and lifestyle changes affect the use of time. The new forms of electronic communication like the Internet, Facebook or Twitter replaced earlier communication with personal contact. The increase of the population living standard result as expected in individual development, but also the entire community,

increasing environmental protection, awareness of clean energy, increase social benefits, all of which results in an increase in the quality of life.

Crossing the data, survey can be improved and the differences and changes in the use of time can be detected. By analyzing changes in the use of time in 5 years study, researchers will try to determine what are the differences, and to see whether there has been an increase in the quality of life.

Table 4 presents the average time of respondents who have performed paid and unpaid activities.

Table 4: Average time spent on activities by those who undertook them, by sex, all days in the Republic of Serbia, 2010 – 2015 [7]

Activity		Average activity time	
		in 2015 (hours)	Difference 2010-2015 (minutes)
Female	Paid activities	07:14	1
	Unpaid activities	05:13	6
Male	Paid activities	07:56	-22
	Unpaid activities	02:55	11

It is interesting that the spent time on paid activities in both women and men population took place almost at the same level as five years ago. But, on average, unpaid activities was reduced at both sexes. Thus, less time was spent in the household activities, in relations to the five years ago period (women 15 minutes, men 11 minutes).

The major changes were at the activities related to a personal needs and to free time. Both women and men in 2015 conducted, on average, over 30 minutes shorter time in activities related to personal needs, such as sleeping, eating, personal hygiene, etc., than five years earlier. The difference in time is "recovered" in favor of activities related to free time. As for the so-called other activities difference in spent time from 2010 to 2015 is negligible. The research shows that women work more on paid and unpaid work than 5 years ago. Men do less on paid jobs, but more on unpaid work.

Table below presents the average time spent on various unpaid activities.

Table 5: Average time spent on various unpaid work activities, by sex, all days, the Republic of Serbia, 2010 – 2015 [8]

Activity		Average activity time	
		in 2015 (hours)	Difference 2010-2015 (minutes)
Food management	Female	01:49	-39
	Male	00:51	10
Household upkeep	Female	01:31	19
	Male	01:24	-12
Making and care textiles	Female	01:12	1
	Male	00:47	-8
Gardening and pet care	Female	01:29	3
	Male	02:08	-2
Childcare	Female	03:30	73
	Male	02:24	-52
Other persons care	Female	02:36	78
	Male	02:05	-43
Shopping and services	Female	01:08	30
	Male	01:07	-23
Total - Unpaid activities	Female	05:07	0
	Male	02:58	-1

In this research (2010-2015), it may be noted that there have been some changes in the use of time. Women spend less (about 15 minutes) time doing housework, while men spend more (11 minutes).

The following table will give a systematic overview of the free time activities performed by female and male population in Serbia, during 2010 – 2015, which shows what kind of activities were conducted in free time and difference in spent time.

Table 5: Average time spent on various free time activities, by sex, all days, the Republic of Serbia, 2010 – 2015 [9]

Activity		Average activity time	
		in 2015 (hours)	Difference 2010-2015 (minutes)
TV and radio	Female	02:42	-2
	Male	02:54	-19
Social life entertainment	Female	02:20	56
	Male	02:42	64
Resting	Female	01:28	14
	Male	01:32	14
Hobbies and computing	Female	01:35	9
	Male	02:04	16
Reading	Female	01:20	14
	Male	01:16	11
Sports and outdoor activities	Female	01:21	-4
	Male	01:48	5
Total - Free time	Female	06:02	39
	Male	07:03	33

Comparing the use of free time in 2015 with the results from 2010, the data show that both women and men use more free time than five years ago, women 38 minutes and men 33 minutes. On average, less time is spent watching TV programs (women less than men). The subjects dedicate more free time on other activities such as social activities (both women and men), sports (only men), resting and other, than five years ago.

5. CONCLUSION

Each country is making efforts to provide its citizens a better quality of life. The life of an individual may change due to the advancement of science and technology. Applied scientific and technological innovation leads to improved quality of life. Development of systems for air purification, purification of waste water, the development of clean energy, new products that

meet people's needs increase the quality of life [10].

Looking at events and developments in social environment quality of life is affected by the consistent application of the law, strong confidence in the institutions of the system, increasing transparency in employment, enabling realization of individual desire.

Time use research undoubtedly contribute to determining the quality of life. Studies how and where the time is spent may result in information how happy and satisfy studied population is.

Of course the research can be entered and pair other indicators of quality of life, such as employment, social welfare, earning ability, sense of personal satisfaction and similar, but time use research is certainly reliable mechanism for determining the level of quality of life. The statistical data presented by gender should become an important part of national policies and strategies related to the creation of appropriate state policies.

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However, the time use studies, conducted with the same methodology, in several countries can provide comparable cross-section of the population, which is important for the researchers. This paper maybe represents only the beginning in time use research in Serbia, especially because it is comparable with other studies from the European countries.

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