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Comparison of National Well-being of Mediterranean Countries in terms of EU: Turkey, Italy, Spain

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ABSTRACT. Global developments are leading change by finding answers in various ways for different nations. In addition to technological, economic, and financial developments, psychological and sociological developments also draw attention. While extraordinary situations such as a pandemic, global crises, and famine accelerate change, they inevitably shorten the adaptation process. Considering all developments in terms of different cultures enables us to benefit from the advantages of comparative studies. From this point of view, in this study, the issue of national welfare is discussed in terms of three Mediterranean countries and compared with the EU. In the study, in which the concept of well-being, which is discussed in seven dimensions, is supported by economic indicators, there are statistical differences between countries.

Keywords: EU; well-being; financial; emotional; physical; occupational.

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Introduction

Since the social and economic effects of European countries on the global economic system are quite evident, these countries are constantly being researched for specific purposes (Trevisanutoet al., 2022; Zhang et al., 2022).One of the pioneers of research, Eurostat is the statistical office of the European Union (EU), whose mission is to systematically provide statistical data on Europe (Zisopoulos et al., 2022). Also, it includes partnerships with the European Statistical System (ESS), European Economic Area (EEA) countries, National Statistical Institutes with other national authorities in EU Member States (Brancato et al., 2006). Some countries, such as Turkey, are included in the study even if they are not members of the EU. Some of the EU member states are also referred to as Mediterranean countries.

About 22 countries have coasts in the Mediterranean Basin. These are Spain, France, Monaco, Italy, Malta, Slovenia, Bosnia and Herzegovina, Albania, Croatia, Montenegro, Turkey, Syria, Lebanon, Greece, Israel, Palestine, Libya, Cyprus, Tunisia, Egypt, Algeria, Morocco (Duru, Hayran, & Gül, 2022). Some Mediterranean countries are known for their close culture (Bargnesi, Moro, Leone, Giovos, & Ferretti, 2022). In general, these similarities are seen in culinary culture, lifestyle, and economy (Torrecillas & Martínez, 2022). Relatively, since the economic growth in Mediterranean countries is slow compared to the west and north and the national income is low, it is recommended to learn from the epidemic and to make progress in many areas such as migration, technology, and economic growth (Testaverde & Pavilon, 2022). For this reason, within the scope of the study, Turkey (TR), Italy (IT), and Spain (ES) are selected from the countries with a coast on the Mediterranean Sea and the relevant data are presented with country codes. It is thought that the comparison to be made with the EU will provide detailed information in terms of the determined countries. The study is crucial in terms of providing the comparison of different cults during the pandemic process and then providing the opportunity to compare the effects of the pandemic. It is important to understand different cultures and the economic structures of these cultures in terms of today's structures where the strategic partnership is discussed in the globalizing world (Ince, 2021a).

Eurostat summarizes its research on EU and non-EU countries under the following headings (Eurostat, 2022a):

- General and regional statistics
- Economy and finance
- Population and social conditions
- Industry, trade, and services
- Agriculture, forestry, and fisheries
- International trade in goods

- Transport, environment, and energy
- Science, technology, digital society

When these issues are considered in terms of the concept of well-being, it is seen that the questionnaires that are directly related to psychological or subjective well-being have not been updated or renewed after 2013 and 2018. However, it is possible to interpret the existing data on this variable under the subtitles of other research areas. Although the general scope of the concept of well-being is wide, it can be summarized in two main groups (Davillas, Burlinson, & Liu, 2022; Wang, 2022):

- Objective well-being: It relates to economic and living conditions such as health, education, employment, literacy, poverty, occupation, income, and other financial factors.
- Subjective well-being: The main assumption in this classification is self-report and includes residents' perceptions of quality of life such as emotional factors, abilities, and other psychological factors.

In this study, both objective and subjective sub-dimensions of well-being are included as physical, financial, emotional, and occupational factors. This study aims to compare the basic socio-economic indicators and welfare dimensions of the countries determined within the scope of the sample, examine the situation of these countries within the EU countries and make suggestions. Also sub-objectives:

- To determine welfare levels in terms of various socio-economic sub-titles
- To make cross-cultural comparisons by identifying the differences between the specified countries
- To analyze whether these differences are statistically significant by comparing them with EU averages
- To measure the effect size of the differences

The reason for choosing these three countries is to determine how the geographical features that bring them together culturally affect the whole life in terms of sub-dimensions of well-being. In studies conducted on European Union countries, countries such as Turkey, Iceland, Norway, Switzerland, Montenegro, Macedonia, Serbia, and Turkey have been included in the research even if they are not members of the union. For this reason, it can be said that Turkey is considered important in social and economic research on the EU (Dorronsoro, 2004; Gerhards, 2007; Phinnemore & İçener, 2016). For this reason, the sample selection of the research is also important in terms of enabling comparison between member and non-member countries.

Research methodology

In the study, well-being indicators and related socio-economic data of 36 EU and non-EU countries, including Turkey, Italy, and Spain, are used. Data are based on the latest data presented by completing Eurostat surveys, in 2020 (Eurostat, 2022b). However, since there is a lack of data on the psychological dimensions of well-being in some countries, especially Italy, 2019 and 2018 data are also used in some indicators. Since 2021 has not yet been completed and EU averages cannot be reached in the database, it is kept up to date using the full data of 2020. The 2021 data, which can be accessed, albeit limitedly, when necessary, are also mentioned for comparison purposes. All tables and graphs in the study are created by the author based on Eurostat data. In the surveys used by Eurostat, it is noticed that while information is collected on psychological factors within the scope of well-being, the self-report technique is used. However, it is stated that comprehensive information is obtained from relevant institutions in socio-economic data such as population, age, and education.

Statistical method

Statistical analyzes are made with IBM SPSS 28 package program. For descriptive analyses, categorical data are expressed as frequency (n) and percentage (%), and continuous data as mean and standard deviation. The coefficient of variation and Kolmogorov-Smirnov test are used to test the normal distribution. As the data are normally distributed, the one-sample t-test is used to compare data from Turkey, Italy, and Spain with the EU. In addition, the effect size of the differences for one sample t-test is measured assuming a $p<0.05$ value.

Socio-economic structure of the countries

According to Eichhorst and Neder (2014), current youth unemployment rates in Mediterranean countries are at an alarmingly high level. The rise in the level of youth unemployment after the 2008 crisis became even more pronounced in countries such as Greece and Spain. After 2012, this rate exceeded 55 percent and increased by nearly 3 ratios, exceeding the EU average (Eichhorst & Neder, 2014). To interpret such situations well, it is useful to look at the economic structures of the countries before moving on to the psychological factors. In the tables

below prepared for this purpose, the age distribution of the population is shown in Table 1, and the gender-based education rate is shown in Table 2.

Table 1. The population and age groups of the countries (2020).

Group/Country	TR	IT	ES	EU (27)
Under 18	22,876.798	9,433.158	8,325.756	81,367.968
20-24 years old	6,624.078	2,955.888	2,352.185	24,089.592
25-29 years old	6,397.311	3,128.494	2.544.980	26,387.457
Others	47,256.810	44,123.948	34,109.693	315,362.472
Total	83,154.997	59,641.488	47,332.614	447,207.489

Table 2. Percentages of university graduates to total population by gender.

Gender	TR	IT	ES	EU
Female	23.3	17.1	31.1	23.5
Male	18.4	11.2	23.4	16.9

In terms of population, it is seen that Turkey's population is almost as much as the combined population of three countries such as Italy and Spain. According to Table 3, which shows the distribution of the population by age, the ratio of the population aged 25-49 years old is high in all countries, including the EU.

Table 3. Percentage of age groups by population.

Age group/Country	TR	IT	ES	EU (27)
0—14 years	23.0	13.0	14.5	15.1
15-24 years	15.6	9.8	10.1	10.6
25-49 years	37.1	31.7	34.8	33.0
50-64 years	15.2	22.3	21.0	20.8
65-79 years	7.3	15.8	13.6	14.6
80 and more	1.8	7.4	6.0	5.9
Total	100	100	100	100

The female-male ratio in the population is 9.3% for TR; 105.3% for IT and 104.1% for ES and finally 104.7% for the EU. In terms of education, the number of primary school graduates is higher in Turkey. The fact that the population is in the majority between the ages of 25-49 may increase the average of primary school graduate parents. Since the contributions of individuals over a certain age are important in subjects such as education and employment, it is desired that the population being young, but there are also studies to keep the elderly active in business life (Ince, 2022). Since the ratio of individuals over 50 to the population cannot be underestimated, education and employment are still considered important.Issues such as retirement and health expenditures that concern this age group also make it important for the elderly to stay active.

In Turkey, the highest rate in Table 4 belongs to the primary education level, while the lowest rate belongs to the university graduation rate. In terms of EU, while the percentages are high at the secondary education level, IT has a suitable ratio for this result, while TR and ES education levels are not.However, looking at the data between 2014 and 2021, it was determined that while the number of primary school graduates in education decreased, the rate of university graduates increased.

Table 4. Education level percentages.

Education	TR	IT	ES	EU
Primary	50.4	39	37.3	34.7
Secondary	28.8	47	35.5	45.2
University	20.8	14	27.2	20.1
Total	100	100	100	100

To understand the direction of development and progress in the age of technology, it is useful to know the higher education rates before looking at the number and rates of human resources trained in this field. In terms of gender, when the number of university graduates in EU countries and TR is compared by gender, the number of women is higher. When calculating the unemployment rate, which is one of the most basic

economic indicators, those who have been looking for a job in the last 3 months and those who have started a job in the last 15 days are added and divided by the total workforce (Figure 1).

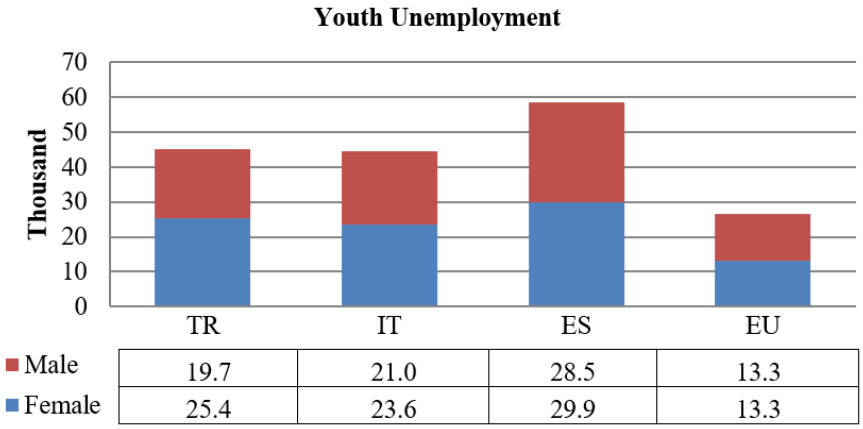


Figure 1. Youth unemployment percentages.

The unemployment rates by total population are 37.9 for TR, 29.8 for IT, 33.9 for ES, and finally 46 for EU (Thousand). The ratios of female unemployed are 0.56 for TR, 0.53 for IT, 0.50 for ES, and lastly 0.50 for EU. It is noteworthy that the same rates are reached for men and women in the European Union average.

Well-being dimensions of the countries

Well-being in the dictionary basically means "the state of feeling healthy and happy". In recent years, psychological well-being continues to be of intense research interest. Psychological well-being lies in the experiences of the individual. Within the scope of the concept, it can be defined as feeling healthy and happy, satisfied, relaxed, joyful, and peaceful. It deals with people's feelings about daily experiences in life activities. Such emotions range from negative mental states or psychological pressures such as anxiety, depression, distress, frustration, emotional exhaustion, unhappiness, and dissatisfaction to a state defined as positive mental health (Joshi, Kumari, & Jain, 2008). Besides, the Gross National Well-being or Wellness (GNW) is a kind of socioeconomic development and measurement framework (Correa, 2017). The concept, which consists of seven dimensions economic, environmental, physical, mental, commercial, social, and political, generally includes subjective data based on self-report (Kaka, Miller, & Rizk, 2022). Psychological well-being, whether national or individual, consists of positive relationships with others, personal dominance, autonomy, a sense of purpose and meaning in life, and personal growth and development (Ryff, 1989). Psychological well-being is achieved by reaching a state of balance that is influenced by both challenging and rewarding life events (Dodge, Daly, Huyton, & Sanders, 2012). For this reason, subjective well-being (SWB) is a self-reported state of well-being typically obtained through a questionnaire that describes how people experience their quality of life and includes both emotional responses and cognitive judgments (Diener, 1984). It proposes three distinct but frequently related components of well-being: cognitive assessments such as frequent positive affect, infrequent negative affect, and life satisfaction (Busseri, & Sadava, 2011). As the study aims at a cross-cultural comparison, it is considered the following dimensions of well-being based on national data:

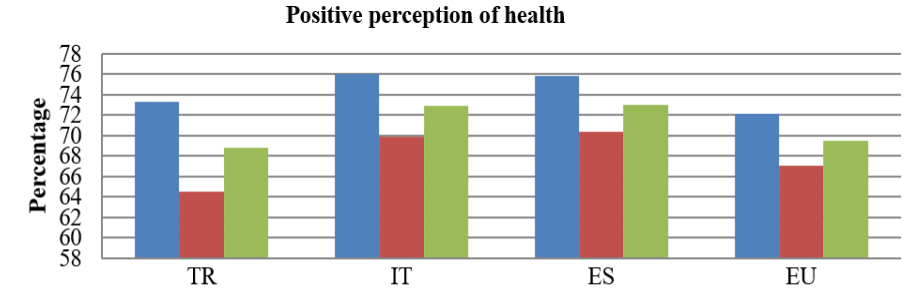
- Physical: Health as a factor of living conditions
- Financial: Inability to make ends meet and income
- Emotional: Being happy and life satisfaction
- Occupational: Human resources in science & technology (HRST) and working at home

In total, 7 sub-dimensions and 4 main dimensions of well-being are analyzed with striking differences from 3 different countries and the means of EU and other countries.

Physical dimension

The physical indicator is a subjective measure of how people judge their health in general on a scale from "very good" to "very bad" with the age of 16 years or over. The data originate from EU Statistics on Income and Living Conditions (EU SILC). Perceived general health is a good predictor of people's future health care use and mortality.

The concept of self-perceived health is functionalized with a question about how individuals perceive their health in general, using one of the very good, good, fair, bad, and very bad. Figure 2 shows the positive responses as very good, good, and fair. In the Graph, it is only based on the previous year as there is no data for 2020 in Italy.



	TR	IT	ES	EU
Male	73.3	76.0	75.8	72.1
Female	64.5	69.9	70.4	67.1
Total*	68.8	72.9	73.0	69.5

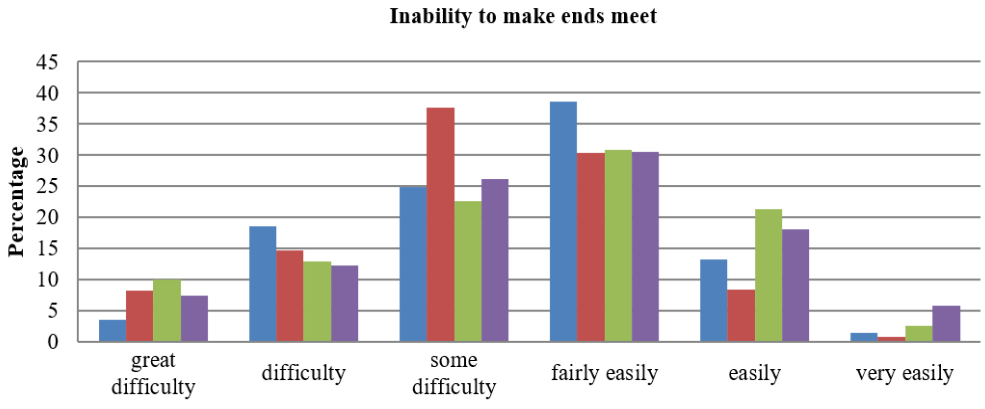
Figure 2. Perceived health by gender.

Financial dimension

Financially, two variables are examined respectively the inability to make ends meet and income. Income is one of the most basic indicators of financial performance in a given accounting period. Thus, they are seen as important data on the quality of life or existing conditions.

Inability to make ends meet

This dimension is about not being able to earn a living and it includes the following reasons; not enough money because it is too expensive, waiting list, lack of time due to work, child or elderly care, hospital not in a convenient distance for travel, fear of treatment, waiting for the problem to resolve itself, not being able to find a good specialist treatment and others. Looking at the listed items, two situations draw attention. The self-reported unmet needs dimension measures both an individual's access to and subsequent effort or interest in a health care treatment. Further, the EU Statistics on Income and Living Conditions (EU-SILC) collects data on two types of health care services medical care and dental care. The response scale from the statements in the questionnaire is six as the households making ends meet with great difficulty, difficulty, some difficulty, fairly easily, easily, very easily (Figure 3).

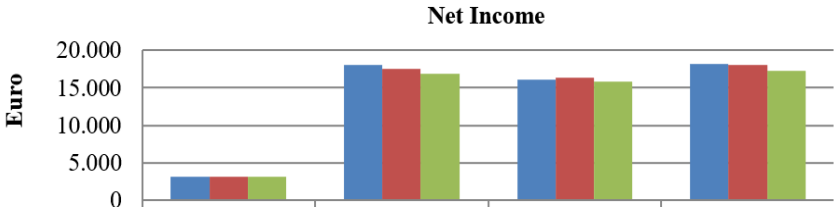


	great difficulty	difficulty	some difficulty	fairly easily	easily	very easily
TR	3.5	18.5	24.9	38.6	13.2	1.3
IT	8.2	14.7	37.7	30.4	8.3	0.7
ES	10.0	12.8	22.5	30.9	21.3	2.5
EU	7.4	12.2	26.2	30.5	18.0	5.7

Figure 3. Inability to make ends meet (Created by the author).

Mean annual income by gender

The European Community Household Panel (ECHP) is a panel survey of interviews with a sample of households and individuals each year, and currency-based data in Euro for comparison. Within the scope of the research, the latest data are taken from the last update made in April 2022.With the addition of data from some missing countries, such as Italy, in the update made in June 2022, the EU regional averages for 2020 have also changed. The mean net income of the European Union, which was 17.637, rose to 18.237 after June.Although the 2021 data of the countries have not been completed yet, the EU average for 2021 is unknown, but it is seen that countries such as Denmark, Austria, and Finland have achieved an increase of close to 2 thousand Euros throughout the season of the pandemic period. In addition, when looking at Figure 4 for the distribution of net income by gender, it is seen that countries other than Turkey have widened the gap by taking values close to the European Union average.



	TR	IT	ES	EU
Total	3.128	18.067	16.043	18.237
Males	3.161	17.551	16.339	18.059
Females	3.096	16.829	15.804	17.267

Figure 4. Mean annual income by gender (Created by the author).

While the wage gap varies widely by country, the common point is that women do the same work in all countries for lower wages. Although the country with the lowest wage gap between men and women seems to be TR, when the EU average and other Mediterranean countries are examined, it is determined that the general wage level is very low.

Emotional dimension

Emotional dimension data including happiness and life satisfaction for those aged 16 and over have not been updated after 2018. The data are about perceived happiness and perceived satisfaction due to the self-report of participation. The classification of education levels in the measurement made on a 5-point scale is as follows:

- All ISCED 2011 levels (International Standard Classification of Education-ISCED 2011)
- Less than primary, primary, and lower secondary education (levels 0-2)
- Upper secondary and post-secondary non-tertiary education (levels 3 and 4)
- Tertiary education (levels 5-8)

Being happy

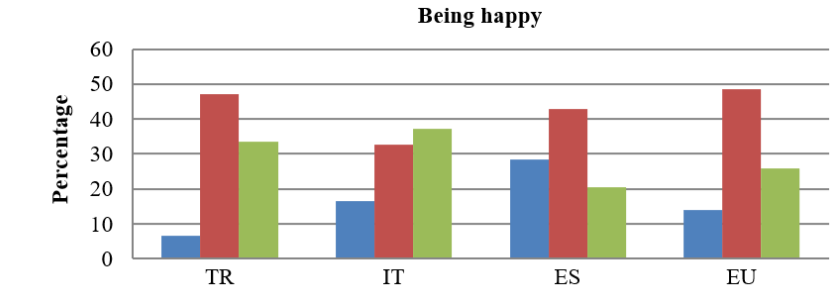
The classification of happiness levels covering the last four weeks in the measurement made on a 5-point scale is as always, most of the time, sometimes, rarely, and never. The first three responses are evaluated as positive and the remaining two as negative. Since numbers are used as one digit after the decimal point, they are rounded up to obtain an exact percentage in total.As seen in Figure 5, while there are two countries with higher values than the EU average in the response “I am always happy”, the unit with the highest value in the response “I am mostly happy” is the EU.

When the distribution of positive and negative responses is analyzed in terms of total values without separating by gender, the distribution of positive levels is seen in Table 5.

It is quite interesting that TR has equal numbers in the positive and negative sums, while other countries and the EU have higher rates of positive males.

Life satisfaction

Under the “overall experience of life” title, 2018 data including people aged 16 and over are collected on a triple scale as high, medium, and low. The distribution of this triple classification by gender is shown in Figure 6.

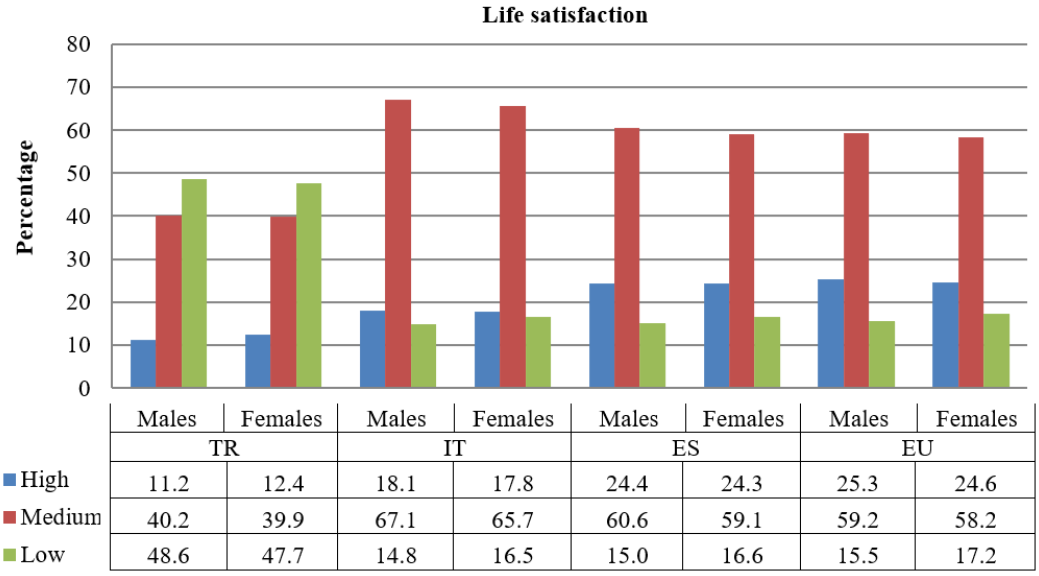


	TR	IT	ES	EU
Always	6.6	16.4	28.5	13.9
Mostly	47.1	32.7	43.0	48.5
Sometimes	33.4	37.3	20.6	25.8

Figure 5. Percentage of being happy with positive responses (Created by the author).

Table 5. Percentage of being happy with the sum of positive and negative responses.

	Positive		Negative		Total
	Males	Females	Males	Females	Male/Female
TR	87.1	87.1	12.9	12.9	100
IT	87.6	85.2	12.4	14.8	100
ES	92.9	91.2	7.1	8.8	100
EU	89.9	87.6	10.1	12.4	100



	TR		IT		ES		EU	
	Males	Females	Males	Females	Males	Females	Males	Females
High	11.2	12.4	18.1	17.8	24.4	24.3	25.3	24.6
Medium	40.2	39.9	67.1	65.7	60.6	59.1	59.2	58.2
Low	48.6	47.7	14.8	16.5	15.0	16.6	15.5	17.2

Figure 6. Perceived life satisfaction by gender (Created by the author).

According to these data, which is one of the indicators of personal well-being, TR is at very low levels. Considering this distribution without gender discrimination; TR is 11.8 for high, 40.1 for medium, and 48.1 for low. Secondly, IT has 18 percent for high, 66.3 for medium, and lastly 15.7 for low; while ES has 24.4 for high, 59.8 for medium, and 15.8 for low. The mean of the EU levels is 25 for high and 58.6 for medium and finally 16.4 for low.

Occupational dimension

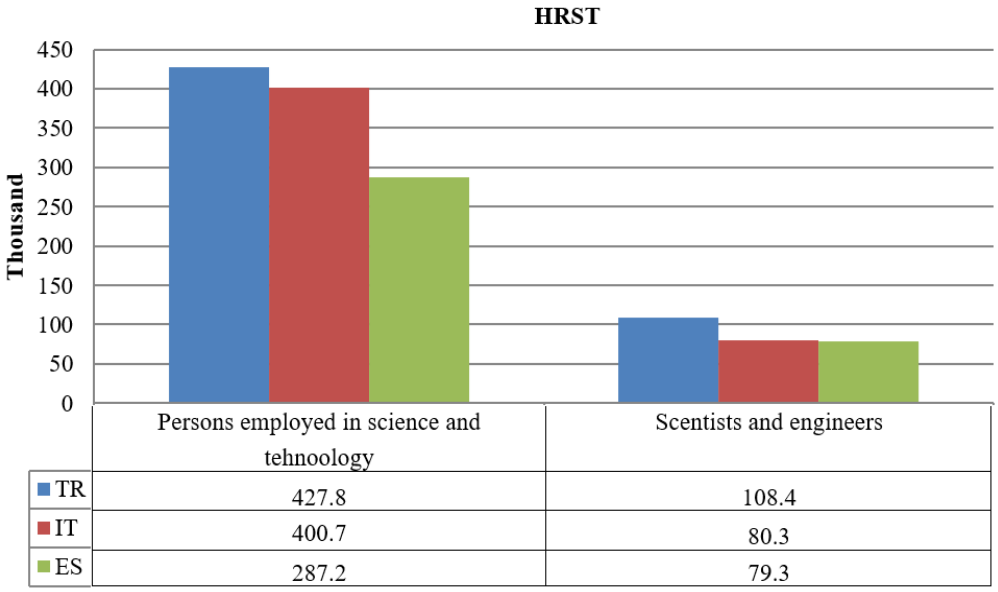
The occupational dimension includes two factors the Human Resources in Science & Technology (HRST) and the working at home.

Human Resources in Science & Technology (HRST)

Although human resources in science and technology (HRST)is considered in binary classification in Figure 7, the database actually contains over a thousand calculations as follows:

- Persons with tertiary education (ISCED) and/or employed in science and technology
- Persons with tertiary education (ISCED)

- Persons employed in science and technology
- Persons with tertiary education (ISCED) and employed in science and technology
- Scientists and engineers



	Persons employed in science and tehnoology	Scentists and engineers
TR	427.8	108.4
IT	400.7	80.3
ES	287.2	79.3

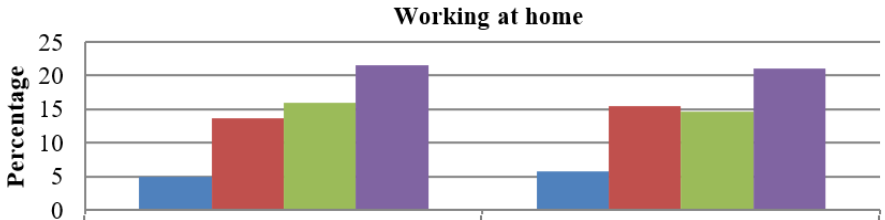
Figure 7. Human resources in science and technology (Created by the author).

5,252.3 for the persons employed in science and technology, while it is 1,039.7 for the number of scientists and engineers. Turkey is seen here with different results as in other graphs. However, whether these differences are statistically significant will be analyzed with the d-value in the next title.

Working at home

Due to the last pandemic, 2020 is one of the years in which remote or hybrid work is offered as a solution to a vital problem and the work in this direction has increased suddenly. Similarly, the effort made to prevent the disruption of education has brought the issue of distance education to the agenda during the pandemic period (Ince, 2020; 2021b). Therefore, when evaluating the data here, it is necessary to take into account what happened during and after the pandemic.

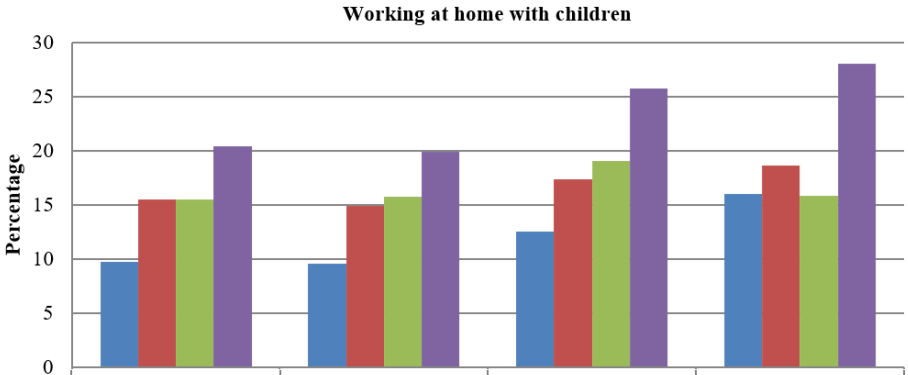
While Figure 8 shows the segment actively involved in work life, the next graph (Figure 9) shows the status of having children of women over the age of 18 working from home.



	25-54 years	55 and over
TR	5.0	5.8
IT	13.7	15.4
ES	15.9	14.7
EU	21.6	21.0

Figure 8. Percentage of employed adults working at home by age groups (Created by the author).

The most recent description of the percentage of women working at home by the number of children shows that these rates have increased significantly and have almost doubled in 2021. This increase may be triggered by the pandemic, but the decline in Serbia may be a country-specific situation.



	No children	1 child	2 children	3 children or more
TR	9.7	9.5	12.5	16.0
IT	15.5	14.9	17.3	18.6
ES	15.5	15.7	19.0	15.8
EU	20.4	19.9	25.7	28.0

Figure 9. Percentage of employed females working at home by the number of children (Created by the author).

Results

According to the Kolmogorov- Smirnov test result, since the number of data is over 30 and p>0.05, there is no difference between the normal probability distribution and the distribution of the available data. That is, the hypothesis that the data are normally distributed is accepted.Since the data are normally distributed, the effect size of the one-sample t-test can be calculated with the d value. The d statistic redefines the difference in means as the number of standard deviations that separate those means (Cohen, 1988). T-test conventional effect sizes or in other words, the rough interpretations of the d-value are 0.2 for the small effect and 0.5 for the moderate effect, and 0.8 for the large effect (Morgan, Leech, Gloeckner, & Barret, 2004). Moreover from 1.20 to 2 is considered as strong, while above 2 is extremely strong. The details of these calculations are as seen in Table 6.

Table 6. One sample t-test results and d-values of the countries.

Variables	TR	IT	ES	EU	d value-TR	d value-IT	d value-ES
Health (very good)	6.5	15.9*	19.6	22.4	t(35)=0.75; p=0.45**	t(35)=2.05; p=0.04; d=0,34	t(35)=8.16; p=0,00; d=0.63
Unmet needs (great difficulty)	3.5	8.2	10.0	7.4	t(35)=3.12; p=0.04 d=0.51	t(35)=0.69; p=0.49**	t(35)=-2.15; p=0.03 d=0.35
Income (mean of net income as Euro)	3.128	18.067	16.043	18.237	t(35)=6.45; p=0.00 d=1.07	t(35)=-1.23; p=0.22**	t(35)=-1.91; p=0.84**
Happiness (always)	6.6	16.4	28.5	13.9	t(35)=6.13; p=0.00 d=1.02	t(35)=-4.55; p=0.00 d=-0.75	t(35)=-17.73; p=0.00 d=-2.95
Life satisfaction (high)	11.8	18.0	24.4	25.0	t(35)=8.31; p=0.00 d=1.39	t(35)=4.60; p=0.00 d=0.76	t(35)=0.69; p=0.48**
HRST (thousand)	1,882.8	1,282.4	1,567.6	16,505.9	t(35)= -1.89; p=0.06**	t(35)= -0.61; p=0.54**	t(35)= -1.22; p=0.23**
Working at home (percentage)	4.8	13.7	15.,2	20.7	t(35)=5.6; p=0.00 d=0.93	t(35)=1.45; p=0.15**	t(35)=0.75; p=0.45**

* Data from 2019, while the others are 2020. ** The difference is statistically insignificant, while the others are significant.

The percent of very good responders to the perceived health variable is highest in the EU, while differences between countries are valid for those other than TR. The difference between those who say they have great difficulty among the households that make a living is significant without IT. In terms of income calculated as the mean of net income in Euro, the sharp difference between TR and other countries is statistically valid and the impact factor is greater than 1, so it has a strong effect.

While the proportion of people who say that their life satisfaction is high in Spain is similar to the European Union, it is different in the other two. One of the variables with the highest effect size is perceived happiness. Spaniards, who answer the perceived happiness question as "always" have an impact rate of almost 3 which means that it has an extremely strong size effect. HRST dimension includes the persons with tertiary education (ISCED) and employed in science and technology as thousand, and has no significant difference. Lastly, the percentage of people aged 18 and over working at home shows a significant difference only for TR and the impact rate is strong.

Conclusion and recommendations

In the study, in which basic data such as unemployment and population are shared, the concept of national well-being is discussed in 7 sub-dimensions as the physical, financial, emotional, and occupational dimensions. Since psychological changes are as important as economic, technological, and environmental developments, it is useful to know the reactions of societies and the direction of these reactions. There are statistical differences between countries in terms of welfare values in the comparisons made based on the data of Turkey, Italy, and Spain, which are the three countries with a coast on the Mediterranean within the scope of the European Union. It has been determined that Turkey, which is one of the most densely populated countries among the countries compared, is far behind the European Union countries in almost every dimension. While significant differences in income and difficulties in meeting needs are statistically significant, they can also explain low rates in variables such as life expectancy and happiness. While the highest increase in working from home during the pandemic process is seen in Spain, it also takes the lead in the variable of life satisfaction and happiness. According to Eurostat data, this rate is even higher in developed countries. The results obtained are compatible with previous studies in the literature in terms of the increase in the unemployment rate (Eichhorst and Neder, 2014), economy (Zisopoulos et al., 2022), and other variables (Phinnemore and İçener, 2016).

In addition to the statistical data obtained from the institutions, perceptual measurements based on the personal statements of the individuals create the limitation of the data, while one of the biggest advantages is that it provides a wide comparison opportunity among 36 countries within the scope of EU. This comparative analysis made in the light of data is expected to contribute to researchers and practitioners. Since changes made without considering psychological and sociological factors can have devastating consequences, societal trends should be closely followed and steps should be taken for the benefit of humanity. With this viewpoint, the most important research proposal that can be made in this area is to make pre- and post-pandemic comparisons after the publication of 2022 data. It is predicted that the 2022 data, which has not yet been announced, will present sharp ups and downs in comparison to previous years. The gap between different groups, such as rich and poor, men and women, urban and rural, and highly educated and uneducated, tends to widen in extreme cases. For the sustainability of national or social welfare, research in this field and policies to be developed based on these data are also important for future generations.

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