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Self-Assessed Health Level (SF-36) of the Social Services Users, in the Region of East Macedonia and Thrace in Greece

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Abstract

The definition of health by the WHO, contributes to the acceptance of the concept that health is directly related to the social-economic environment as well as to the living conditions of the individual. The aim of this article is to highlight the health problems faced by the users of the social services of the Region of Eastern Macedonia and Thrace and also to highlight the perception that the respondents themselves have about their health. The use of the SF-36 questionnaire helped to capture these issues. There was great interest in the effect that demographic, social and economic factors have on the health of the individuals in the sample, on the one hand, in the way they themselves assess their health, and on the other hand, the effect it has on the use of health services. The survey data showed that both sexes show higher and lower values on the same self-esteem scales (Physical Functionality and Vitality). Regarding age, it appears that the 18 - 24 years old age group shows higher values in the scales of Physical Functioning (PF), Physical Role (PR), Physical Pain (PP) and Emotional Role (ER). Regarding marital status, it appears that singles show the highest values in the scales of Physical Functioning (PF), Physical Role (PR), Physical Pain (PP), Emotional Role (ER) and Social Functionality (SF). Regarding the number of children in a family, it seems that those who have no children show higher values in the scales of Physical Functioning (PF), Physical Role (PR), Physical Pain (PP) and Social Functionality (SF). Those who have five or more children subsequently have lower values in the Physical Role (PR), Mental Health (MH) and Emotional Role (ER) scales. The level of grammatical knowledge is mostly associated with higher values in the higher schools for the scales of Physical Functioning (PF), Physical Pain (PP), Mental Health (MH), Social Functioning (SF) and Vitality (V).

Subject Areas

Sociology

Keywords

Social Exclusion, Poverty, Social and Demographic Characteristics, Self-Assessed Health Level, SF-36 Questionnaire

1. Introduction

This specific research effort was implemented as, as has been observed in the last decade, the number of population groups facing issues of social exclusion has increased. Social integration and labor market integration programs are considered increasingly important for ensuring social cohesion. At the same time, Greece presents a high rate of aging of its population, resulting in the future need to create new support units. In order for there to be a timely and valid reversal of the phenomenon, appropriate family and child support policies should be implemented [1].

The development of skills, the acquisition of resources/knowledge and formal qualifications, or the state of the individual's health are several times associated with higher incomes. Poverty should also be considered the prevention of people's participation in goods such as work, education, health, entertainment, social relations and culture. The above must be considered a constituent element of the poverty situation, because exclusion limits the real possibilities of people to shape their lives, takes away goods of significant value from people and leads to a lack of motivation for personal development and the search for a better quality of life [2].

One of the characteristics of modern economies is that population groups that were not previously considered to be at risk of poverty are now exposed to poverty and social exclusion. The new economic and social framework that has formed in Greece, both during and after the period of the financial crisis and its consequences, as well as the fact that poverty is passed from generation to generation and is linked to economic factors, led to the formation of "new urban forms of poverty" through interconnected negative factors such as loss of work, income, housing, a divorce, exclusion from insurance coverage [3].

Through the social intervention programs combined with the social reality, it is possible to determine all the factors associated with poverty as well as the different degree of contribution of each factor to the specific poverty situation. An integrated intervention, regardless of successful or unsuccessful results, must have full knowledge of all the dimensions and factors that shape the specific situation of poverty.

In recent years, social inclusion is referred to in a multitude of texts and action programs to address and strategically plan the inclusion of vulnerable population groups. For the E.U. the challenge is to develop the tools to combat poverty and

exclusion but also to address the structural elements linked to inequalities and the perpetuation of poverty.

The income and the way the person himself perceives the situation he is in, through the social role and the image he has of himself are factors that significantly affect health. Modern societies are multicultural and more complex. Approaching specific population groups requires careful interventions, as there is social exclusion and discrimination based on national, religious, racial and cultural criteria.

The relations of dominance between majority and minority are important. The main features of these relations are discrimination, oppression, subjugation and dominance towards the minority group. The state plays a key role in perpetuating discrimination, through unequal laws and policies or through the oppression of communities and the socio-economic degradation of members or the violation of rights.

The conceptual content surrounding the concept of health and illness changes over time and is directly related to the current social-historical-political-economic environment. With the passage of time and the evolution of humanity, various approaches to health, illness and death were developed which were linked to religious beliefs, metaphysical-philosophical and scientific interpretations, the acceptance of which is linked to the prevailing conditions [4].

The factors that determine health acquire broader social implications, as health equates to the preservation, improvement and development of human life. The conceptual definition of health approaches the social interests, economic and political priorities linked to the organization and distribution of the provision of health services. There is a connection with the agencies and financing mechanisms of the health system, with the population's access to health services, with the way services are distributed and with the decision-making process [5] [6].

2. Research Methodology

The research that follows studies the effectiveness of social services in the region of Eastern Macedonia - Thrace. The data was collected in May-October 2019, through the Community Centers of the social services of the Region's Municipalities. The selection of the Region of Eastern Macedonia and Thrace was made as the largest numbers of Community Center structures are concentrated in this Region, in full and continuous operation for a long time. Specifically, it is a total of 22 Community Center structures in the Municipalities of the Region of Eastern Macedonia and Thrace. Therefore, one reason that this particular Region was chosen is because there are a number of structures that are able to collect a representative sample of the population of their territory. Also, another reason for choosing the specific Region is because these structures, due to the sufficient period of time that they are in full operation, have gained experience in the implementation of social policy measures. Finally, it should not escape our attention that this Region is suitable for this type of research, due to its multiculturalism,

the minorities living in its territory and the low income of its citizens. Moreover, the participants were recipients of the social services who wanted fulfill the questionnaire (random selection). The questionnaire was given to them when they visited the structure.

The research consisted of two questionnaires: a) the questionnaire of the recipients of social services (citizens) that were given to them when they visited the structure for some of their own case and

b) The questionnaire of the social service executives (employees) which concerned both their needs and their views on improvements of the social policy system in the 1st level Local Government.

The main method of analysis was clustering (two step cluster analysis). The choice for this method was made due to the sample number and content of the dataset, which contained a mixture of quantitative and qualitative variables. All analyses were performed using the IBM SPSSV 23 statistical package.

For the concise and effective presentation of the data, the method of descriptive statistics was used. Specifically, the four groups formed were associated with social characteristics (such as age, gender, marital status, contribution to income, role at home, number of children, grammatical knowledge), as well as other characteristics such as occupation stability, type of occupation, monthly family income, main or other sources of the income, main and additional allowances, insurance coverage, the economic level before the financial crisis, decrease in income, monthly financial income.

Cluster analysis is applied in such a way that elements (observations) that are more similar to each other than to any others are included in the same clusters (groups) [7] [8]. In other words, it is a statistical model whose purpose is to find the optimal solution of groups in which the respondents of this research are grouped.

This is achieved by carefully selecting and arranging the elements into groups of observations with related characteristics and with the following properties:

• Each group has a similar composition in relation to some characteristics, i.e. the observations in them have values almost similar to each other

• Each group should differ from the rest in terms of the same characteristics, that is, the values of one group should differ in scale size from the values of other groups.

• A total of 1050 citizen questionnaires and 124 executive questionnaires were sent. They were received 577 questionnaires of accepted social services - citizens and 106 questionnaires of social services executives were received. The results showed that the distribution of the number of observations is 178, 83, 126 and 106 in a total of 493 observations. From the four groups emerges the profile of the people who request help from the Structures [9].

In particular, the following can be mentioned for each group separately:

• **1st Group:** The first group consists mainly of women, aged 35 - 44, married, parents of 2 children, with the main contribution to the family income, they are

high school graduates, without a fixed profession, the work involves agricultural work, the monthly amount income varies between €501 - 800 from salaried work.

• **2nd Group:** The second group is a vulnerable social group with the lowest incomes and probably consists mainly of pensioners and elderly people. The second group consists mainly of women, married, parents of 2 children, with a main contribution to the family income, without any education, without a stable occupation, with a monthly income ranging between €201 - 500 from social benefits.

• **3rd Group:** The third category appears as the group with the least living needs as it appears to consist of young people with a high level of education who are at the beginning of their professional career. The third group consists mainly of women, aged 25 -34, unmarried, with the role of child in the family, without any child, with no contribution to the family income, graduates of HEI/TEI, without a stable profession, work employment is linked to self-employed, the monthly income varies between €501 - 800.

• **4th Group:** The fourth group consists of people who can afford to have preventive tests and are the most educated. It consists mainly of women, aged 35 - 44, married, parents of 2 children, with the main contribution to the family income, are graduates of HEI/TEI, with a stable occupation, employment is connected with public services (civil servants), the monthly amount income varies between >1000€ from salaried work [9].

3. Results

The final calculation of the questionnaire components was done with the help of the SF-36 questionnaire user manual [10] [11]. According to the results the general health and vitality of all four groups was quite low. Also, the third and fourth groups scored higher in all categories and the second group the lowest. The general picture of the sample was that it consisted of people with low motor activity, health and vitality as well as low psychology. The basis of the five-point scale, the mean values of Table 1, for the mean SF-36 subscale scores by group are:

Table 1. Mean values of the subscales of the SF-36 questionnaire.

	Group 1	Group 2	Group 3	Group 4	Total
Physical Functionality (PF)	25.1	19.4	29.4	28.9	26.1
Physical Role (PR)	32.3	20.6	37.2	40.7	33.4
Physical Pain (PP)	33.8	21.0	35.4	39.2	33.2
General Health (GH)	8.8	7.7	10.0	10.2	9.2
Vitality (V)	9.7	9.4	10.3	11.2	10.1
Social Functionality (SF)	13.5	10.7	15.2	15.8	14.0
Emotional Role (ER)	12.6	9.9	14.7	14.3	13.1
Mental Health (MH)	11.7	8.9	13.1	13.9	12.1

For better understanding the visualization of Table 1 is presented below in the graph below (Figure 1)

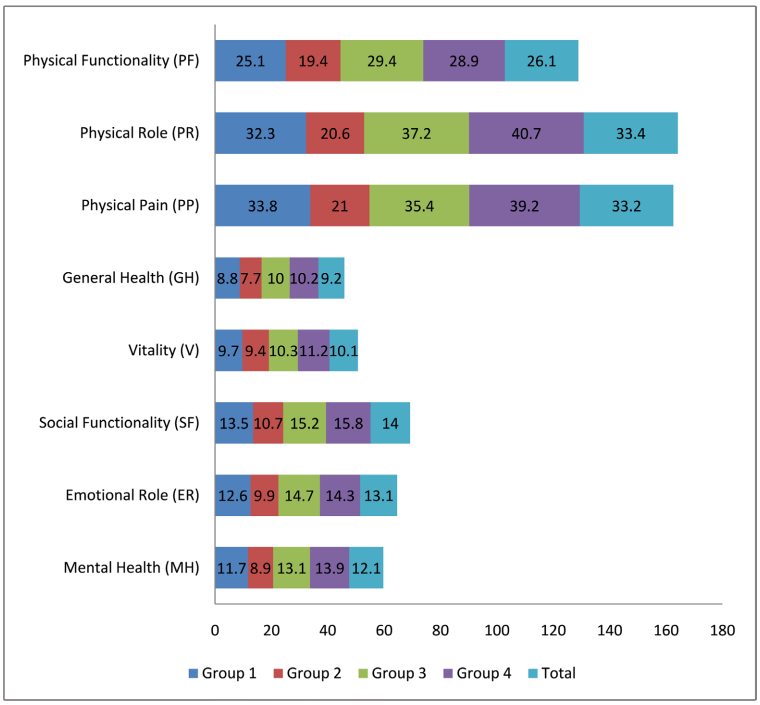

Figure 1. Mean values of the subscales of the SF-36 questionnaire.

According to the SF-36 self-rated health level questionnaire, the lowest value a scale can take is "0" (poor health) and the highest value "100" (excellent health). The first four scales are related to physical health while the rest are related to mental health [11].

In Table 2 below it can be seen that the highest value has the scale of Physical Functionality (75.15) and the lowest value has the scale of Vitality (41.78).

Table 2. The mean value (mean) and standard deviation (Std. Deviation) of the level of self-assessed health of the sample (n = 577).

SF-36 Scales	Mean Value (mean)	Standard Deviation (Std. Deviation)
Physical Functionality (*PF*)	75.15	28.665
Physical Role (*PR*)	63.63	42.890
Physical Pain (*PP*)	59.82	37.331
General Health (*GH*)	60.47	48.136
Vitality (*V*)	41.78	18.194
Social Functionality (*SF*)	62.97	43.188
Emotional Role (*ER*)	43.91	22.069
Mental Health (*MH*)	40.83	19.881

Table 3 illustrates the mean value of the Summary Scales of Physical and Mental Health.

Table 3. The mean value and standard deviation of the physical and mental health summary scales (n = 577).

Summary Scales	Mean Value	Standard Deviation
Physical Health Scale	64.22	26.284
Mental Health Scale	46.67	19.327

In Table 4 below concern the Primary category (without finishing it) for the scales of Physical Functioning (PF), Physical Pain (PP), Mental Health (MH), Social Functioning (SF) and Vitality (V). We see that both sexes show higher and lower values on the same self-esteem scales (Physical Functionality and Vitality). Regarding age, it appears that the 18 - 24 years old age group shows higher values in the scales of Physical Functioning (PF), Physical Role (PR), Physical Pain (PP) and Emotional Role (ER). The age group 25 - 34 shows higher values in the scales of Mental Health (MH), Social Functionality (SF) and Vitality (V). The age group of 65 years and older shows lower values in most scales, i.e. in Physical Functioning (PF), Physical Role (PR), Physical Pain (PP), Emotional Role (ER), Social Functionality (SF) and Vitality (V). While the 18 - 24 age group shows lower values in Mental Health (PSH) and the 35 - 44 age group in the General Health (GH) scale.

Regarding marital status, it appears that singles show the highest values in the scales of Physical Functioning (PF), Physical Role (PR), Physical Pain (PP), Emotional Role (ER) and Social Functionality (SF). Widowers show the lowest values in the scales of Physical Functioning (PF), Physical Role (PR), Physical Pain (PP), Mental Health (MH), Emotional Role (ER) and Vitality (V).

Regarding the number of children in a family, it seems that those who have no children show higher values in the scales of Physical Functioning (PF), Physical Role (PR), Physical Pain (PP) and Social Functionality (SF). Those who have one child show higher values on the scales of Mental Health (MH) and Emotional Role (ER), while those who have five or more children have higher values on the scales of General Health (GH) and Vitality (V). Those with four or more children show lower prices. Specifically, those who have four children have lower values on the scales of Physical Functioning (PF), Physical Pain (PP) and Vitality (V). Those who have five or more children subsequently have lower values in the Physical Role (PR), Mental Health (MH) and Emotional Role (ER) scales. Finally, the existence of two children in one family is associated with lower values in the General Health (GH) and Social Functionality (SF) scales.

The level of grammatical knowledge is mostly associated with higher values in the higher schools for the scales of Physical Functioning (PF), Physical Pain (PP), Mental Health (MH), Social Functioning (SF) and Vitality (V). While lower values.

Table 4. Health self-esteem scales and social and demographic characteristics (n = 577).

Sex	PF	PR	PP	GH	MH	ER	SF	V
Men	76.02	62.79	61.87	61.42	41.94	62.82	46.22	41.32
Women	74.44	64.32	58.14	59.70	41.64	63.09	42.02	40.44
Age	PF	PR	PP	GH	MH	ER	SF	V
18 - 24	87.52	76.98	75.95	63.60	36.51	74.60	46.31	38.57
25 - 34	84.47	72.18	72.13	61.05	43.49	69.14	47.06	44.61
35 - 44	76.47	64.66	57.09	53.64	42.93	64.05	44.46	40.06
45 - 54	75.83	64.65	57.88	62.89	41.31	62.63	42.12	41.57
55 - 64	61.66	51.34	47.32	61.39	41.61	56.55	43.13	39.70
65 και άνω	37.83	29.17	33.50	85.10	37.67	35.56	33.92	33.00
Marital status	PF	PR	PP	GH	MH	ER	SF	V
Single	84.48	74.19	71.34	57.41	41.81	69.52	46.11	40.67
Married	74.33	61.90	58.29	59.96	43.05	63.21	45.03	42.39
Engaged	68.42	68.75	58.75	64.63	38.19	66.67	40.63	41.25
Divorced	67.37	57.26	49.35	57.19	39.25	56.45	37.78	36.77
Widowed	38.75	26.04	26.67	93.88	34.17	30.56	34.58	32.50
Customary marriage/ Informal Cohabitation	83.75	56.25	37.50	76.75	38.75	50.00	30.00	42.50
Number of children	PF	PR	PP	GH	MH	ER	SF	V
1	79.29	69.12	60.92	59.45	43.07	71.71	42.79	41.65
2	71.70	60.77	55.81	52.86	41.46	56.49	40.39	41.65
3	66.30	52.61	50.15	71.16	41.84	63.18	43.13	38.28
4	58.73	52.88	46.54	70.21	41.99	48.72	45.67	35.00
5 and above	72.67	50.00	61.00	76.07	38.67	46.67	41.33	47.67
None	82.80	71.25	70.11	60.33	41.69	67.79	48.13	41.05
Grammatical Knowledge	PF	PR	PP	GH	MH	ER	SF	V
No school	55.59	25.00	41.08	64.05	41.67	30.63	41.49	40.95
Elementary (without finishing it)	55.39	45.97	36.61	78.03	33.60	43.01	35.32	30.86
Primary school graduate	71.25	69.97	56.76	62.97	41.96	68.63	43.05	39.49
High school (without finishing it)	78.11	66.67	59.44	59.83	39.63	64.81	37.78	44.44

Continued

High school graduate	77.73	64.29	59.60	50.86	41.72	61.38	45.04	40.63
Graduate	77.13	68.23	62.87	57.39	42.49	67.80	44.76	39.08
Higher Schools	82.37	68.97	67.39	62.12	42.69	68.01	46.64	44.78
Stable Occupation	PF	PR	PP	GH	MH	ER	SF	V
Yes	78.51	68.10	64.65	59.14	41.15	68.35	42.65	42.68
No	72.33	58.42	55.18	59.31	42.48	56.44	44.07	40.14
Occasional Employment	79.47	70.92	64.51	63.51	42.88	72.83	47.09	40.83
Type of Occupation	PF	PR	PP	GH	MH	ER	SF	V
Farmer/Land Cultivator	66.05	61.05	49.77	61.08	41.94	64.34	43.95	38.26
Municipal/ Public Servant	78.72	71.39	63.44	60.43	43.59	70.74	42.94	45.46
EU. (steady trade)	73.23	58.13	62.00	50.44	41.42	65.00	43.06	44.13
EU. (Street trade)	74.44	71.88	65.00	50.63	33.13	68.75	50.16	33.13
Construction worker/Craftsman	77.61	68.18	59.39	76.06	40.76	61.62	49.92	36.31
Scientific staff/ Freelancer (doctor, lawyer, engineer, pharmacist, etc.)	84.89	76.39	71.39	71.92	38.33	68.52	41.39	42.08
Artist/Musician	83.57	50.00	55.71	40.00	44.29	33.33	41.79	36.43
Collector of Recycling Materials	47.50	50.00	47.50	34.00	47.50	50.00	48.75	30.00
Domestic/Retired	56.43	49.61	44.20	62.98	44.77	51.52	44.03	41.02
Industry worker	76.88	62.00	67.40	67.64	32.20	77.33	42.80	36.07
Unable to work	46.50	25.00	35.50	85.10	37.50	20.00	30.00	37.50
Unemployed	77.31	60.20	58.54	55.96	42.60	59.64	42.55	39.66
Other	83.97	72.07	68.18	58.66	44.39	66.67	47.50	44.32
Income	PF	PR	PP	GH	MH	ER	SF	V
0 - 200€	67.24	46.69	51.03	68.23	35.22	42.65	36.91	35.15
201 - 500€	65.32	50.00	51.03	58.46	41.65	50.33	41.32	40.54
501 - 800€	76.46	60.75	55.46	54.21	45.61	63.59	45.44	40.97
801 - 1000€	78.82	70.39	64.74	62.05	46.89	66.67	47.76	42.63
1000€ and above	75.75	64.18	60.39	60.62	42.08	63.55	44.12	41.05

Having a stable occupation shows higher values in the casual employment category for the majority of scales except for Physical Pain (PP). The lowest values appear in the majority in the "no" category in the existence of a stable occupation for the scales of Physical Functioning (PF), Physical Role (PR), Physical Pain (PP), Emotional Role (ER) and Vitality (V).

Regarding the type of profession, scientific staff has higher values in Physical Functioning (PF), Physical Role (PR) and Physical Pain (PP). Construction workers/artisans show higher values in General Health (GH), recyclers in Mental Health (MH), industrial workers in Emotional Role (ER), street vendors in Social Functionality (SF) and municipal/civil servants in Vitality (V). Lower values are shown by those unable to work on all scales except General Health (GH) and Vitality (V) (recycling material collectors) and industrial workers.

Finally, regarding the monthly family income, it appears that the category 801 - 1000€ per month has the highest values in all categories except General Health (GH), which is linked to the category of 0 - 200€ per month.

In Table 5, of the summary scales of physical and mental health that follows, it can be seen that in both summary scales of self-rated health men show higher values. Regarding the age group, the 18 - 24 years old have higher values on the physical health summary scale, the 25 - 34 years old age group on the mental health summary scale, while the 65 years and older show the lowest values on both summary health scales. Regarding marital status, singles show the highest values on both summary health scales, while widowers show the lowest values on both summary scales. Regarding the number of children in a family, it appears that those who have no children have higher values on the summary scale of physical health, while those who have one child have higher values on the summary scale of mental health. Those who have four children show lower values on both summary scales.

The level of grammatical knowledge shows higher values in both summary health scales, for the higher education category, while the lowest values appear in the summary scale of physical health for those who have never attended school and in the summary scale of mental health for those who went to primary school without to finish it. Having casual employment has higher values on both summary scales, while not having a stable occupation has lower values on both scales. Regarding the type of occupation, higher values are shown by scientific staff in the summary scale of physical health and "other" in the summary scale of mental health, while the lowest values are associated with those unable to work in both summary scales. Finally, the monthly family income has higher values in both summary scale categories for those receiving 1000 euros and above, while the lowest income groups the lowest, i.e. 0 - 200 euros per month for the mental health summary scale and 201 - 500 euros for the summary physical health scale.

Table 5. Summary scales of self-rated health and socio-demographic characteristics (n = 577).

Sex	**Physical health scale**	**Mental health scale**
Man	65.03	47.45
Woman	63.56	46.04
Age	**Physical health scale**	**Mental health scale**
18 - 24	75.64	49.00
25 - 34	71.89	50.08
35 - 44	62.32	47.22
Age	**Physical health scale**	**Mental health scale**
45 - 54	65.30	46.25
55 - 64	54.50	44.07
65 and above	46.47	35.03
Marital status	**Physical health scale**	**Mental health scale**
Single	70.93	48.79
Married	63.49	47.66
Engaged	59.58	46.16
Divorced	57.02	41.91
Widowed	46.42	32.95
Customary marriage/Informal cohabitation	63.50	40.31
Number of children	**Physical health scale**	**Mental health scale**
1	66.74	49.47
2	60.03	44.57
3	60.15	46.61
4	55.73	41.88
5 and above	65.00	43.58
None	70.24	48.44
Grammatical Knowledge	**Physical health scale**	**Mental health scale**
No school	46.46	38.68
Elementary (without finishing it)	54.03	35.70
Primary school graduate	65.37	48.28
High school (without finishing it)	65.17	44.42
High school graduate	61.38	46.08
Graduate	65.94	47.93
Higher Schools	69.57	49.49

Continued

Stable Occupation	Physical health scale	Mental health scale
Yes	67.62	47.92
No	60.46	45.00
Occasional Employment	69.10	50.57
Type of Occupation	**Physical health scale**	**Mental health scale**
Farmer/Land Cultivator	60.14	44.32
Municipal/Public Servant	68.59	50.29
EU. (steady trade)	59.85	48.40
EU. (street trade)	65.50	46.29
Construction worker/handyman	69.30	44.54
Scientific Staff/Freelancer (doctor, lawyer, engineer, pharmacist)	75.72	47.58
Artist/Musician	57.57	38.96
Collector of recycling materials	45.00	44.06
Domestic/retired	51.16	45.34
Industry worker	69.60	46.85
Unable to work	48.00	31.25
Unemployed	62.20	45.23
Other	70.38	50.72
Income	**Physical health scale**	**Mental health scale**
0 - 200€	57.37	37.11
201 - 500€	54.93	41.48
501 - 800€	61.43	48.30
801 - 1000€	69.08	50.99
1000 € and above	74.13	51.37

Decision trees in the Mental and Physical Health Scale

The reason why decision tree analysis is done is to investigate which groups are formed so that a policy can be designed which will be able to solve the problems of groups with these characteristics. The analysis of the research results showed that correlations are created between the Mental and Physical Health Scales with some of the characteristics of the sample. This is an important element that should be taken into account in order to design a targeted social policy to strengthen social groups with specific characteristics. That is, if the state attempts to design a targeted social policy to improve the mental and/or physical health of citizens, it should take into account specific characteristics with which these two Health

Scales are associated.

According to the following analysis of the Decision Trees for the Mental Health Scale (Figure 2), the following groups with specific characteristics are developed.

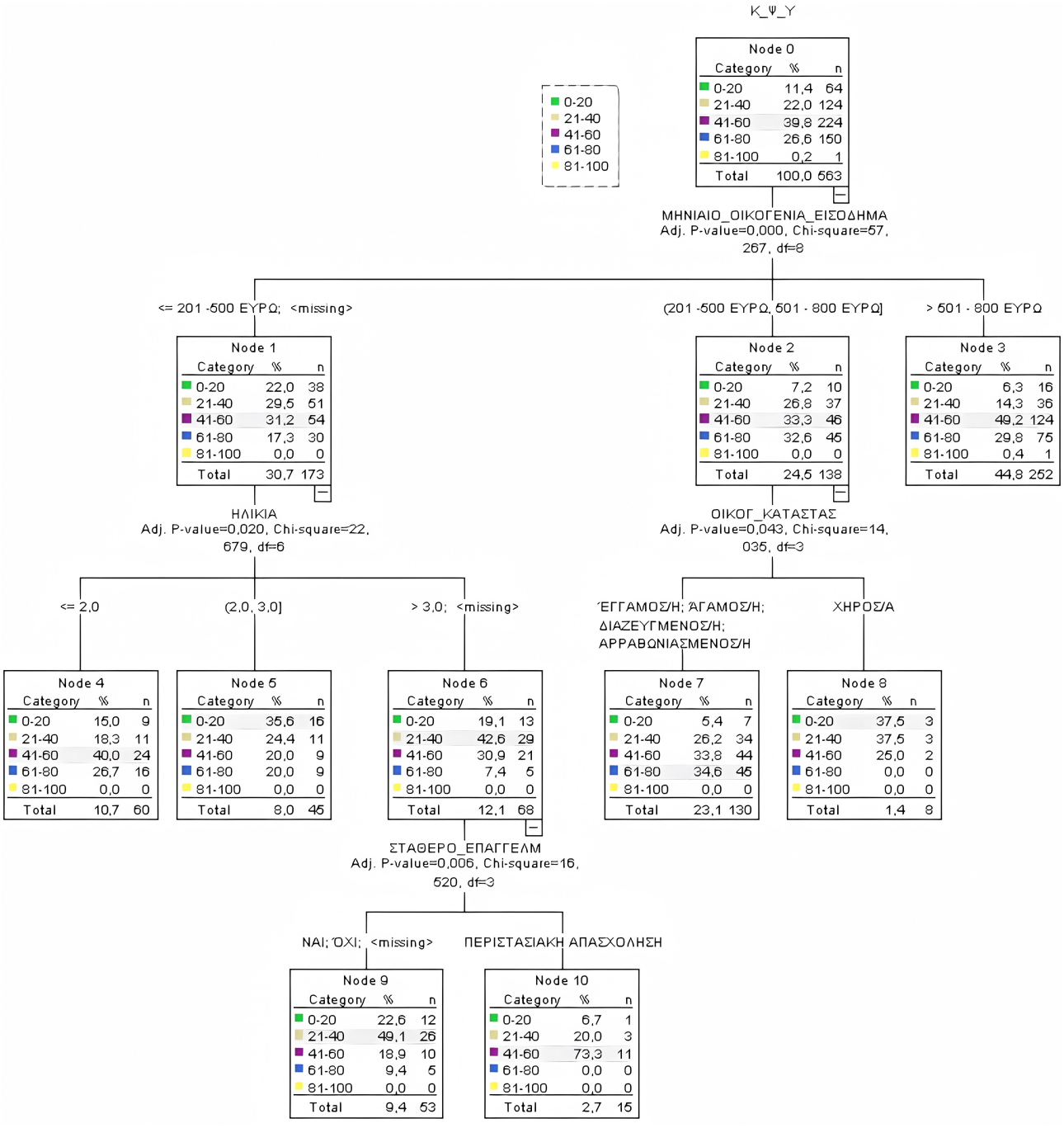

Figure 2. Decision trees for the mental health scale.

• People with a monthly income of €201 - 500 who belong to the 25 - 34 age group at a rate of 40%;

• People with a monthly income of €201 - 500 who belong to the 35 - 44 age

group at a rate of 35.5%;

• People with a monthly income of €201 - 500 who belong to the age group older than 45 with a fixed income at a rate of 49.1%;

• People with a monthly income of €201 - 500 who belong to the age group older than 45 with occasional income at a rate of 73.3%;

• People with a monthly income of €201 - 500 and €501 - 800 who belong to all family situations except widows at a rate of 34.5%;

• People with a monthly income of €201 - 500 and €501 - 800 and are widowed at a rate of 37.5%;

• People with a monthly income greater than €501 - 800 at a rate of 49.2%.

According to the following analysis of the Decision Trees for the Physical Health Scale (**Figure 3**), the following groups with specific characteristics are developed.

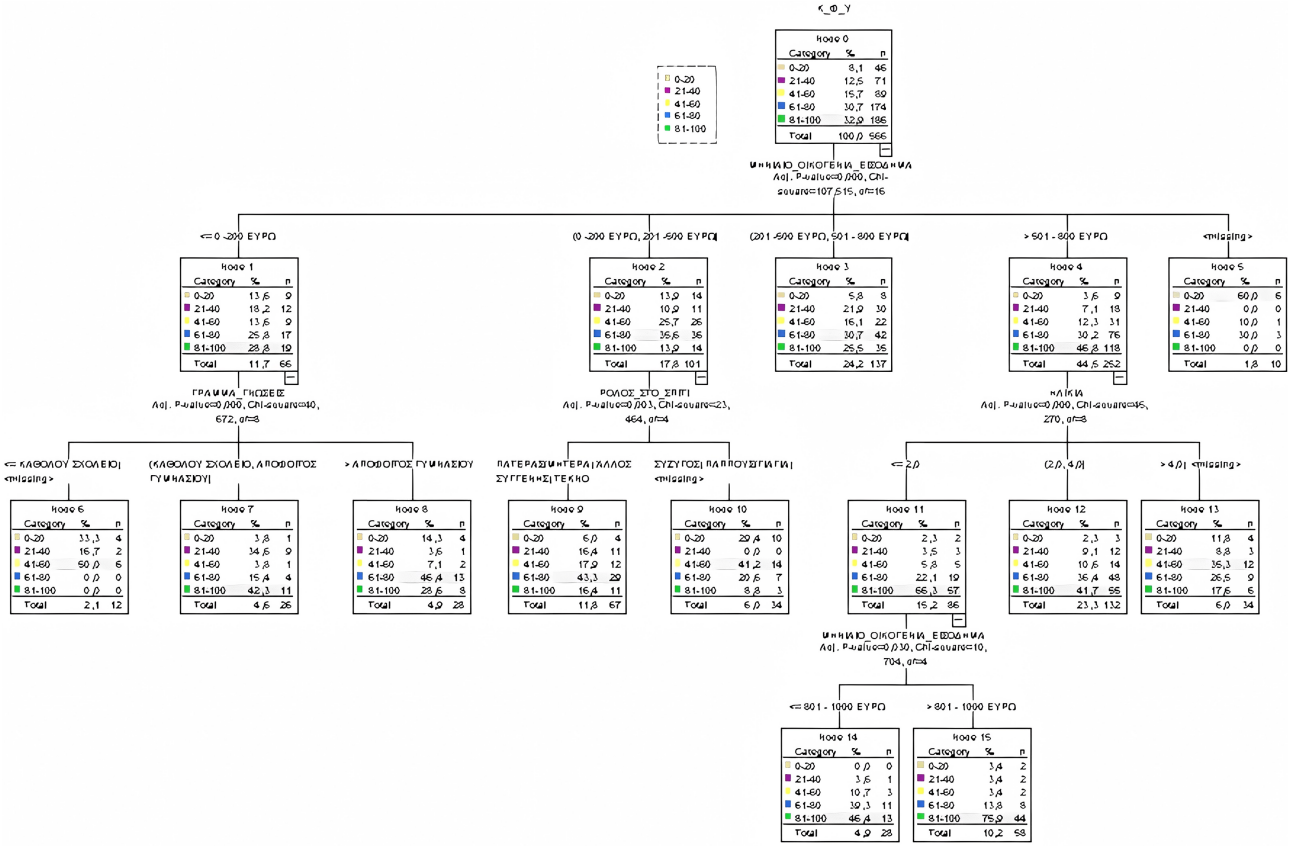

Figure 3. Decision trees for the physical health scale.

• 50% of people with a monthly income of €0 - 200 who did not go to school at all;

• People with a monthly income of €0 - 200 who are up to high school graduates at a rate of 42.3%;

• 46.4% of people with a monthly income of €0 - 200 who have knowledge higher than high school;

• People with a monthly income of 0 - 200€ and 201 - 500€ whose role at home is father, mother and other relative at a rate of 43.3%;

• People with a monthly income of 0 - 200€ and 201 - 500€ whose role at home is grandparent and spouse at a rate of 42.3%;

• People with a monthly income of €201 - 500 and €501 - 800 at a rate of 30.7%

• People with a monthly income greater than €501 - 800 at a rate of 49.2%

• People with a monthly income of €801 - 1000 who belong to the 25 - 34 age group at a rate of 46.3%;

• People with a monthly income of more than €1000 who belong to the age group 35 - 44 and 45 - 54 at a rate of 41.7%.

4. Discussion

The purpose of this research was to investigate the interconnection of the socio-economic characteristics of the general population visiting social services in combination with the self-assessment of their health level. The SF-36 questionnaire was a reliable tool for assessing the health level of users of social services, which can also be used in cross-sectional comparisons, both between the general population and vulnerable population groups.

An important element of the research results is the fact that social needs are now covered by population groups that in the past would not have turned to social services, i.e. on the one hand we have people with skills (60.7%), with a motivation for personal development for which a social inclusion policy should be formulated and which individuals will "give back" to society the help they received, as they have a motivation for development. On the other hand, those vulnerable population groups still appear who lack skills and live in a repeated cycle of poverty. In this case, different social policy measures should be implemented for integration and integration into the social fabric, e.g. a different kind of policy should be followed for the unemployed person who owns a home than for a homeless person [12].

Another element of interest is the fact that in the research sample, both citizens with a low educational level and citizens with skills and academic studies turn to the services to meet social needs. This means that the scope for meeting needs has widened, as it now seems that more and more people cannot meet their needs. But someone without skills and education needs a different kind of intervention and with a different kind of policy the welfare state should deal with a citizen with skills. This is because people with skills and qualifications can more easily break the cycle of poverty. There appears to be a link between income and improved health, as higher income means more resources for prevention, care and access to social services. At this point there is a convergence of the literature with the findings of the thesis based on which, the general picture that exists is that it consists of people with low motor activity, health, vitality and low psychology, while higher income is associated with higher values on all scales physical and mental health [13].

The factor of unstable work seems to affect health, a fact that is consistent with the literature, as modern forms of poverty include people with precarious work

(i.e. the working poor, the self-employed, those employed part-time), households with medium and low work intensity with or without dependents. One of the characteristics of modern economies is that population groups that were not previously considered to be at risk of poverty are now exposed to poverty and social exclusion [12].

In the above, the analysis of decision trees can be useful, as it can be investigated which groups are formed so that a policy can be designed that will solve the problems of groups with specific characteristics. Decision trees have been empirically proven to be one of the best ways to describe a problem as they clearly and simply present the respective directions. The analysis of the research results showed that correlations are created between the Mental and Physical Health Scales with some of the characteristics of the sample. This is an important element that should be taken into account in order to design a targeted social policy to strengthen social groups with specific characteristics. That is, if the state attempts to design a targeted social policy to improve the mental and/or physical health of elderly citizens, it should take into account specific characteristics with which these two Health Scales are associated.

Also, the Two-Step Cluster Analysis used in this thesis is based on statistics and not on subjective criteria and results in the optimal number of groups that characterize the research data, while it aims at the hierarchical organization of the clusters with sequential grouping so that the clusters that belonging to the same group to be more similar to each other than to those belonging to other groups.

5. Conclusions

The new economic and social context that has formed in Greece, both during and after the period of the financial crisis and its consequences, as well as the fact that poverty is passed from generation to generation and is linked to economic factors mainly led to the formation "new urban forms of poverty" through interconnected negative factors such as loss of work, income, housing, a divorce, exclusion from insurance coverage [3].

The inability or limited ability of the welfare state to protect vulnerable social groups, the prolonged recession, as well as the crisis of informal support networks create favorable conditions for individuals not to escape from long-term poverty. It has been observed that children who grow up in poverty may be affected in terms of their development, future opportunities, socio-political behavior and may not be able to "escape" poverty as adults. In addition, as mentioned above, the vulnerable social group of the elderly seems to be unable to access social services to meet their needs, despite the fact that in Greece the population is aging and the informal support networks of the elderly have been affected by the economic recession and the crisis of the COVID-19 pandemic [14].

An important element of the research results is the fact that social needs are now covered by population groups that in the past would not have turned to social services, with a motivation for personal development for which a social inclusion

policy should be formulated and which individuals will "give back" to society the help they received, as they have a motivation for development.

Another element of interest is the fact that in the research sample, both citizens with a low educational level and citizens with skills and academic studies turn to the services to meet social needs. This means that the scope for meeting needs has widened, as it now seems that more and more people cannot meet their needs. A person without skills and education needs a different kind of intervention policy than the citizen with skills. This is because people with skills and qualifications can more easily break the cycle of poverty.

There appears to be a link between income and improved health, as higher income means more resources for prevention, care and access to social services. The factor of unstable work seems to affect health, as modern forms of poverty include people with precarious work (i.e. the working poor, the self-employed, those employed part-time), households with medium and low work intensity with or without dependents.

The analysis of decision trees can be useful, as it has been empirically proven to be one of the best ways to describe a problem as they clearly and simply present the respective directions. The analysis of the research results showed that correlations are created between the Mental and Physical Health Scales with some of the characteristics of the sample. This is an important element that should be taken into account in order to design a targeted social policy to strengthen social groups with specific characteristics.

The aforementioned statistical tools used in this research can contribute to decision-making or the planning of social policy measures, as in the modern reality with the multitude of changes that characterize the information society, decision-making is linked to data processing and the evaluation of alternative proposals.

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Authors' Individual Contribution

Conceptualization—S.A.T., S.C. and E.D.; Methodology—S.A.T., S.C. and E.D.; Software—S.A.T., S.C. and E.D.; Validation—S.A.T., S.C. and E.D.; Formal Analysis—S.A.T., S.C. and E.D.; Investigation—S.C., S.C. and E.D.; Resources—S.C., S.C. and E.D.; Data Curation—S.A.T., S.C. and E.D.; Writing—Original Draft—S.A.T., S.C. and E.D.; Writing—Review & Editing—S.A.T., S.C. and E.D. Visualization—S.A.T., S.C. and E.D. Project Administration—S.A.T., S.C. and E.D. Funding Acquisition—S.A.T., S.C. and E.D.

Conflicts of Interest

The authors declare no conflicts of interest.

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