ORIGINAL ARTICLE

THE INVESTIGATION OF THE PSYCHOLOGICAL BURDEN OF PATIENTS AFTER HOSPITALIZATION FOR COVID 19

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ABSTRACT

The aim: The current Cross-Sectional study investigated the psychosocial effects on recovered Covid 19 patients in a General Hospital in Greece. It was investigated the impact of Covid 19 on levels of social support, loneliness, resilience & PTSD. Furthermore, the correlation between all the above factors was studied.

Materials and methods: 107 adult patients participated. The questionnaire was fulfilled after signature of consensus form. This happened after their discharge from the hospital, without exclusion of infected on previous time. The questionnaire included 5 particular sections: a) Socio-demographic characteristics, b) social support scale, c) IES Covid 19 scale, d) UCLA scale e) CD-Risc scale. In terms of statistical analysis, the comparison between two groups of quantitative variables was conducted through Student's t-test. Related to examination of relationship between two quantitative variables was used Pearson's correlation coefficient (r). The Statistical analysis package used was SPSS 22.

Results: The 55,1% of sample were women, married (57,9 %) and (39,3%) university graduates. Moreover, the rate of overweight was significant (39,3%). Related to psychosocial factors, observed high level of resilience (70,6), moderate level of loneliness (39,1) and 57,9% of participants showed moderate social support. At last, PTSD level as a result of Covid 19 was moderate (33,5). A strong correlation was observed between higher mental resilience and lower feelings of loneliness.

Conclusions: The levels of determining factors of negative psychological effects, reveal the need for a preparation of political improvement policies in relation to mental health of rehabilitated persons, as well as the promotion of actions that would contribute to the development of a more effective supportive framework.

  KEY WORDS: Pandemic, Covid 19, Loneliness, Social Support, PTSD, Resilience

INTRODUCTION

The definition of mental health is not limited to the absence of mental illness, but is a fundamental and interrelated concept of the development and implementation of both individual and collective action as people think, move, interact and interact with each other. enjoy life [1].

The definition of mental health, however, is influenced by some important factors such as biological characteristics, socio-economic conditions, cultural differences, gender and the wider social environment of the individual [2]. More specifically, at the individual level, the factors are located in the context of the biological characteristics of the individual, in the formation of his positive attitude, in his energy, in his self-knowledge and in the abilities of the level of his emotional intellect.

Post-traumatic stress disorder (PTSD) is a type of psychiatric disorder that can occur in people who have experienced or witnessed a traumatic event, such as causing a natural disaster, a serious accident, a terrorist act, a war, or of a rape. It is also associated with the threat of death, experiencing sexual violence or even causing a serious injury [3]. It has been observed that patients with post-traumatic stress disorder (PTSD) are possessed by a web of intense, disturbing thoughts and feelings that are related to the previous experience they have experienced and that last even after it is over. It is also mentioned that

they revive the event through retrospective thoughts or even nightmares. Feelings of sadness, fear and anger are common. People who present with this mental disorder often feel cut off or alienated from other people. More broadly, they avoid situations or individuals related to the traumatic event, and often show strong negative reactions to something common, such as a loud noise or a random touch [3].

Loneliness can be defined as an unpleasant experience, which occurs when the level of social relations of the individual is considered insufficient [4]. The perception of the above experience pushes people to try to strengthen existing social relationships or build new ones, in order to reduce this negative feeling they experience [5].

The causes of its occurrence vary. Specifically, a number of studies have shown that loneliness may be the result of genetic nature [6], cultural factors and lack of meaningful relationships [7]. However, in the scientific world, chronic loneliness is considered to be associated with a number of negative effects on the physical health of individuals, leading to increased rates of obesity, possible occurrence of cardiovascular disease, high blood pressure and high cholesterol [5]. There was also a negative impact of the term on the level of mental health of the population, with particular emphasis on older people [8]. Proportional results emerged from the relationship between loneliness

and mental health in a younger population, in particular it was observed that higher rates of loneliness imply a greater impact on mental health levels [9].

Social support is defined as the exchange of resources between two or more individuals, in which one considers that it is intended to enhance the well-being of the other [10]. Social support is divided into: First in the structural social support that refers to an individual's organizational ties with other people and is measured in various forms such as the size or structure of the social network, the frequency of contact of members and the complexity of the relationships between the members of the network. Second, in functional social support, which is the exchange of emotional, clear or essential, informative and recognizable support [10].

The Covid-19 pandemic has led to an increase in mental health problems in the general population, healthcare staff, Covid-19 patients and quarantined individuals [11]. A number of previous studies have reported that patients with viral respiratory infections, similar to those of Covid 19, experienced varying degrees of mental health problems even after recovery. More specifically, problems such as depression, anxiety, adjustment disorder, acute stress-related disorders, and post-traumatic stress disorder have been reported [12, 13].

THE AIM

The purpose of the study was to investigate the psychological burden of patients after their hospitalization due to Covid 19. In addition, all the psychosocial factors that affect the mental health of patients were studied.

MATERIALS AND METHODS

Quantitative data collection was performed with anonymous questionnaires. The sample consisted of 107 patients treated in Covid clinics of a General Hospital in Greece. The period of approach of the members was defined as the period of discharge from the hospital units. The research did not exclude people who had been ill in a previous period, had recovered and wanted to answer in relation to how they experienced this experience of Covid 19.

For the conduct of the research, permission was obtained from the Scientific Council of the General Hospital, as well as from the head and the director of the respective unit of treatment of patients with Covid 19. The participants were informed about the purpose of the research, the preservation of their anonymity, the voluntary nature of their participation and the right to refuse. Written consent was sought from all participants.

QUESTIONNAIRE

The questionnaire included:

a. Demographics of respondents (age, gender, level of education, etc.) and clarifying questions about patient's health status and Covid 19

b. The Social Support Measurement Scale (OSSS-3) which investigates the level of social support of individuals and is suitable for epidemiological studies. It consists of 3 questions and the sum of calculations ranges from 3 to 14. From 3 to 8 it is interpreted as low level of social benefit, from 8 to 11 moderate level of social benefit and from 12 to 14 high level of social benefit [14, 15].

c. The Post-Traumatic Disorder Scale modified in the context of COVID-19 (IES-COVID 19), according to Vanaken et al [16], is a self-report scale that assesses subjective discomfort, which is associated with a specific life event. It consists of 15 elements and was developed to evaluate two dimensions that characterize the responses to traumatic stress: seven elements related to the measurement of invasions (intrusive ideas, images, emotions or nightmares) and eight elements related to the measurement of avoidance (self-reported avoidance of ideas), emotions or situations).

d. The Scale for Measuring the Loneliness (UCLA Version 3), is a measuring scale designed to measure subjective feelings of loneliness and social isolation, consists of 20 questions to explore the aforementioned factors. Participants rate each item on a scale from 1 (Never) to 4 (Frequently). UCLA 3 is a revised version of both the initial scale of loneliness, with the aim of being understood by the majority of the population, so that it can be perceived by individuals with a basic / compulsory level of education [17].

e. The Connor - Davidson Resilience Scale (CD-RISK) which is related to mental resilience and measures five factors, personal ability and competence, control, confidence in personal instinct and tolerance of negative events, the positive attitude towards change, secure relationships and spiritual influence. This scale then includes 25 statements, which the respondents rate on a 5-point Likert scale according to the degree to which each statement expresses their emotional state, most recently, taking into account their experience after hospitalization, due to Covid 19. The score ranges from 0 to 100. The higher it is, the higher the level of mental resilience [18].

ANALYSIS

Mean values and standard deviations (SD) were used to describe the quantitative variables. Absolute (N) and relative (%) frequencies were used to describe the qualitative variables. Student's t-test was used to compare quantitative variables between two groups. The Pearson parametric correlation coefficient (r) was used to control the relationship between two quantitative variables. The correlation is considered low when the correlation coefficient (r) ranges from 0.1 to 0.3, moderate when the correlation coefficient ranges from 0.31 to 0.5 and high when the coefficient is greater than 0.5. Linear regression analysis was used to find independent factors related to the Resilience Scale, UCLA Scale, and the Post-Traumatic Disorder Scale with respect to Covid-19, from which their standard errors (standard errors = SE). Accordingly, in order to check the internal reliability of the questionnaires, the Cronbach's-a

Table I. Post-Traumatic Stress Scale for Covid-19 (IES COVID-19)

	min	max	mean(SD)
Intrusion	0	35	15.7(10.2)
Avoidance	0	36	17.9(8.7)
Total IES COVID-19	0	71	33.5(17.5)

Table II. Correlation of dimensions of post-traumatic disorder, with a score of subjective loneliness and mental resilience of the participants

		UCLA-3	Resilience
Intrusion	R	0.21	-0.13
	P	0.030	0.175
Avoidance	R	0.10	-0.12
	P	0.326	0.219
Total IES COVID-19	R	0.17	-014
	P	0.080	0.161

Table III. Correlation of post-traumatic stress disorder with social support of the participants

	OSSS-3		P Student's t test
	low	Medium/highή	
	mean(SD)	mean (SD)	
Intrusion	18.3(10.6)	14.6(9.9)	0.090
Avoidance	19.2(9.9)	17.4(8.2)	0.327
Total IES COVID-19	37.5(19.3)	32(16.6)	0.140

coefficient was used. Significance levels were bilateral and the statistical significance was set at 0.05. The statistical program SPSS 22.0 was used for the analysis.

RESULTS

Our sample consists of 107 people, 44.9% of the participants were men and the mean age was 47.1 years (SD = 15.1 years). 57.9% were married and 39.3% were university graduates. In addition, 14% of participants were smokers, with an average number of cigarettes of 13 per day (SD = 10 cigarettes) and 39.3% were overweight. 94.4% of the participants were hospitalized in the clinic for COVID 19 with their average length of hospitalization being 11.2 days (SD = 11 days) and 47.7% evaluating the provision of health services by medical / nursing staff during their treatment as very good. In addition, 38.3% said they had had a flu shot since the beginning of the year, 14% said they had had an asthma attack or symptoms of chronic bronchitis or emphysema since March 1, 2020, and 16.8% said that for more than 5 years, had some respiratory illness. 71% of participants had someone provide them with support and care after returning home from COVID treatment.

The score of resilience ranged from 19 to 100 points with the average value being 70.6 points (SD = 17.6 points).

28% of participants had low social support, 57.9% had moderate levels of social support, and 14% had high social support.

The Score of the Subjective Feeling of Loneliness (UCLA), can range from 20 to 80 points with a higher score indicating a greater feeling of loneliness. The score of subjective feeling of loneliness of the participants in the conducted research ranged from 21 to 65 points with the average value being 39.1 points (SD = 10.6 points).

The score in the "Intrusion" dimension ranged from 0 to 35, with 5 participants (4.7%) scoring the lowest score and 2 (1.9%) scoring the highest. The average value in this dimension was 15.7 points (SD = 10.2 points) (Table I). In the "Avoidance" dimension the score ranged from 0 to 36 points with 4 participants (3.7%) scoring the lowest score and none the highest. The average value in this dimension was 17.9 points (SD = 8.7 points). Finally, the overall post-traumatic stress disorder score for Covid-19 ranged from 0 to 71 points with the mean being 33.5 points (SD = 17.5 points).

A significant positive correlation was found between the "Intrusion" dimension and the Score of subjective loneliness. Therefore, the more loneliness the participants felt, the higher the psychological impact of Covid-19's condition on the "Intrusion" dimension. (table II)

Table III gives the Post-Traumatic Disorder scores for Covid-19 depending on the level of social support of the participants. The degree of social support of the participants was not found to be related to Post-Traumatic Disorder in relation to Covid-19.

DISCUSSION

The purpose of this study was to investigate all psychosocial factors and how they affect the mental health of Covid-19

patients after their hospitalization. The present study was conducted during the 2nd National Lockdown and involved 107 patients, who had been treated with Covid-19 etiology, in the respective clinics of a General Hospital in Greece. Regarding the Socio-demographic characteristics of the participants, it was observed that the majority of the sample consisted of women (55.1%), the average age was 47.1 years, most were married (57.9%). The percentage of overweight (39.3%) and obese patients in the sample (26.2%) is also considered important, as it is a finding of a number of clinical studies as well as ours, which shows that obesity is an aggravating factor in terms of infection of individuals with Sars-Cov 2 [19-21].

A sufficient number of characteristics of the patients were also studied, which are related both to their clinical status and to their hospital conditions. The patients were treated at the Covid 19 clinic with an average length of 11.2 days. In the ICU, only 5.6% of the sample was hospitalized. It was recorded that a significant percentage of patients suffered from a chronic or underlying disease.

Of key importance, in addition to the socio-demographic and clinical characteristics of the participants, was the shaping of the level of factors related to their mental health. Specifically, the level of subjective loneliness of the sample was investigated, which was found to be moderate. A small number of studies have been observed to study loneliness in Covid-19 patients and patients. Only one comparative study related to the reference population was identified, which was related to patients with or without Covid 19. More specifically, higher rates of loneliness were recorded in Covid-19 patients, which were reported after their relative hospitalization [22]. More generally, the risks of developing mental disorders were also associated with patients who developed Covid-19 but were not hospitalized. Nevertheless, the risk factor for the occurrence of mental disorders was higher for patients [23]. Regarding the relational model of demographic characteristics and this mental parameter, it was observed that the older patients of our sample as well as those who lived alone, showed higher levels of loneliness. This finding is confirmed worldwide, in a context of research that has reported on the mental health of the general population in the midst of a pandemic and the introduction of measures such as that of Lockdown and quarantine [4, 24-26].

The majority of patients recovering after hospitalization, as it turns out, had a moderate level of social support, while only a small percentage of them had a high supportive framework. Regarding the resilience of the sample, it was observed that it was high. Nevertheless, participants who had grandchildren were associated with a lower level of mental resilience.

It was also observed that the score of mental resilience was higher in patients receiving moderate / high social support. In addition, participants receiving moderate / high social support experienced less loneliness than those with low social support. However, participants' degree of social support was not found to be associated with Covid-19 Post-Traumatic Stress Disorder. Result supported by the findings of other previous research [11]. In addition, it was noted that the greater the mental resilience of Covid-19 patients, the less the feeling of loneliness they experienced.

CONCLUSIONS

In the present study, it was observed that the majority of participants were women, graduates of Higher Education, while a large proportion of them were married with children. It was observed that a large part of them were overweight / obese, while at the same time the proportion of participants who reported that they were living with a chronic or underlying disease was significant. Regarding the factors that have an aggravating effect on the level of mental health of the recovered patients, moderate levels were observed, both in terms of the level of loneliness they experienced and in terms of the level of PTSD. It was also observed that women, older patients and those who lived alone, experienced greater loneliness. In addition, the relationship between the quality evaluation of the medical services provided during the treatment and the corresponding level of loneliness of the patients was considered important.

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Conflict of interest:
The Authors declare no conflict of interest.

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A - Work concept and design, **B** – Data collection and analysis, **C** – Responsibility for statistical analysis, **D** – Writing the article, **E** – Critical review, **F** – Final approval of the article