

The satisfaction level perceived by Italians during the first phase of the Covid-19 pandemic phase

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Abstract. *Aim of the work:* To survey the degree of satisfaction of the Italian population in reference to the health care provided throughout the national territory in the period of emergency COVID-19. *Methods:* Observational, cross sectional, multicenter study conducted during the first phase of the pandemic (May-June 2020) involving the national population (n=889) subjects, through an online survey. *Results:* 889 people participated in the study. Among the greatest satisfaction perceived about the assistance received during the first pandemic wave, there are those towards the health assistance received in general (p=.049), towards people hospitalized (p=.046), and the treatment received for the COVID-19 test (p=.002). Among the greatest difficulties encountered there is also that of contacting the general practitioner (p=.032), to the treatment received from Local Health Authority (p=.006), to the treatment received from the call center numbers activated during the pandemic, as the toll-free number (p<.001) and the "1500" number (p<.001) and to the treatment received for relative (p<.001). The greatest difficulty for all detected was finding surgical masks to protect themselves from infection, in fact 56.14% of participants declared this difficulty. *Conclusions:* The COVID-19 pandemic has restored the value of our own public and free health system, showing - in a violent way - many of the challenges that have been looking for some time in health services (and not only in Italy) and, for these reasons, it is necessary starting from what has been learned in recent months and drawing new guidelines for the future. (www.actabiomedica.it)

Key words: health emergency, Covid-19, mass media, national health system, nurse

Introduction

In recent years, the international debate on the quality of healthcare has developed bringing new ideas, models, assistance, designed to evaluate and improve the quality of healthcare, medical and nursing care, health and social systems. Throughout history, the

implementation of total quality management (TQM) continuous quality improvement (CQI) have placed the real needs of the customer / user at the center of interest, in order to produce greater efficiency. However, the report of the National Observatory on Health in the Italian Regions, already in 2019 highlighted the strengths and weaknesses, with recognition of the

successes in terms of health and survival with a constant threat linked to the aging process of the population, particularly significant in our country, with an increase in the European population in 2080 (1,2). The current healthcare system centered on acute care services should be oriented towards an organization much more oriented to the management of chronicity, reducing the gap between Northern and Southern Italy. There is a need for safe, effective, efficient, patient-centered healthcare capable of guaranteeing equal access to care. Unfortunately, the health emergency linked to Covid-19 has highlighted the great capacities and resilience and at the same time the structural weaknesses, highlighting the need to reorganize and support with greater resources the role of the territory which in this period could certainly have contained, in the initial phase of the pandemic, the excessive demand for care, avoiding the creation of a hospital stasis (3). The COVID-19 emergency, which is still ongoing, originated in December 2019 in China, specifically in the city of Wuhan, Hubei province, where the first cases of respiratory syndrome later identified as a new coronavirus with etiological agent SARS-Cov-2 are recorded. Exactly one month later, the WHO (World Health Organization) declared a pandemic status. The first pandemic phase generated a health, social and economic crisis all over the world and in Italy (4). Many changes were caused by the COVID-19 pandemic: from economics to health management (5-7), to people's lifestyles and habits (8,9). Throughout the world, the need to intervene to limit the spread of the virus as much as possible has arisen through lockdown periods and with the introduction of new habits, such as physical or "social" distancing and the use of personal protective equipment (PPE), which was lacking especially in the first pandemic phase (8,10-11). The restrictions imposed the fear of contracting infections, but above all the closure during the lockdown period of many health facilities limited access to necessary services (12), accumulating further delay and lengthening waiting lists. This has caused damage in terms of public health whose effects have especially affected the elderly and the most fragile people, at the same time exacerbating the social inequalities that afflict our country, as evidenced by the social differentials found in the excess mortality caused by COVID-19,

with repercussions especially in the cardiovascular field, as shown by some studies in the oncological (13) and orthopedic (14) fields. The pandemic has challenged the process of producing meanings through which we live and know reality. It has dissolved the habitual and natural way of communicating with others through the body. It introduced the use of the mask as a symbol of collective responsibility, of the expression of health as a common good, becoming an inseparable appendage of our everyday life (15). The pandemic has violently affected people with greater fragility while exacerbating significant inequalities as shown in the annual report of ISTAT (16). The year 2020 has represented a watershed in the field of health management and general principles of care; it has wildly reopened the debate on our National Health Service, highlighting its resilience, but also its overall structural weaknesses. The aim of the following study is to detect the perception of the quality of healthcare in the first phase of the COVID-19 pandemic in relation to the incidence rate of the pandemic in the different regions of Italy, given that there are few studies available on the subject and many deal with detecting the state of perception for certain categories of patients (6,14) and not on the general population.

Methods

Design

An observational, multicenter, cross-sectional study using snowball-sampling method was conducted from March to June 2020.

Sample

The study was conducted on a sample of 889 subjects, 232(26.1%) of male gender and 657(73.9%) of female gender, in an age range of 18 to over 75 years, who were in the Italian territory during the first phase of the COVID-19 health emergency.

Data collection procedures

Data collection was carried out through an ad hoc constructed questionnaire, subsequently

computerized through the Google forms platform. The questionnaire, placed on an online platform and sent through the most common social platforms (WhatsApp, Facebook and Instagram) allowed participants to answer the questions directly from their own devices, as the purpose requires reaching a large number of participants. The questionnaire consists of three sections, the first structured to capture the socio-demographic data of the participants (gender, age group, marital status, educational qualification, residence). The second section explores the relationship between health services received and the degree of satisfaction, expressed through a Likert scale 1-5 (not at all satisfied; not very satisfied; quite satisfied; satisfied; very satisfied), in the Covid-19 emergency period. This section contains detailed questions on the type of services, characteristics of the services and structures used. The following questions ask whether the subject experienced flu-like symptoms indicative of Covid-19 infection and the behavioral response of the subject in relation to these, (*I voluntarily quarantined myself; I continued working; I physically left my family/ loved ones; I went to the emergency room; I went to or called my general physician; I started medical treatment; I tried to call the relevant health service but got no response; I had no Covid-19 symptoms; Other...*); (*If a test was carried out to detect its positivity and if you were hospitalized or received home health care during the period of emergency, indicating also the relative degree of satisfaction*). During the period under review, various home health monitoring and surveillance systems were activated, which is why we ask participants who received home healthcare if they were included in these systems and the number of times they were contacted during the day. Among the items of particular interest in the questionnaire, we find the indication of the need to contact the general practitioner, the pediatrician and the ASL of reference and the relative degree of satisfaction with the treatment received. In relation to the social impact of the pandemic, the various government bodies have also activated various emergency numbers, the public utility number 1500; also, here it is requested to indicate the degree of satisfaction received. A further aspect of this time span is the psychological one, since the social isolation that became compulsory in

order to stem the contagion undoubtedly accentuated the psychological problems of the population and we are therefore going to investigate those who felt it necessary to contact a psychological support service by telephone. In addition, they are asked to indicate whether they have had individuals with Covid-19 in their family and what their level of satisfaction is with the treatment their family member received. In conclusion, they are asked to indicate the greatest difficulties they perceive among a list consisting of several options (*I had symptoms but had difficulty getting tested for Covid-19; I had difficulty getting prescribed medication; I had difficulty contacting my general practitioner/general practitioner; I had difficulty contacting the Covid-19 hotline; I did not have adequate information about the Coronavirus; I had difficulty finding masks and protective gloves; I had difficulty maintaining safe distances in public places; I had difficulty contacting a relative of mine who was hospitalized; I had difficulty contacting a psychological support service*) or writing in the "Other" entry).

Criteria for inclusion and exclusion from the study

All those who lived or stayed in Italy during the Covid-19 emergency period and agreed to participate voluntarily were included in the study. Minors under 18 years of age were excluded.

Ethical considerations

Within the questionnaire presentation, the ethical characteristics of the study were stated. Since this was an online questionnaire on the only difficulties encountered during the first pandemic wave from Covid-19, no consent was requested from the Ethics Committee, but it was emphasized that participation was voluntary and that the participant could decline participation in the protocol whenever they wished. Those interested in participating were given an informed consent form, which reminded them of the voluntary nature of participation, as well as the confidentiality and anonymous nature of the information. In addition, to ensure that the questionnaires were anonymous and to allow for identification of participants, a sequential identification (ID) number was

given to each registered participant. Each questionnaire, therefore, had an ID number that corresponded to the database ID.

Data Analysis

The collected data were sorted into an Excel spreadsheet and processed with SPSS version 20 program. All socio-demographic characteristics of the sample were collected as categorical variables and processed as frequencies and percentages. For the items of the questionnaire related to the levels of perception of the quality of health care received during the first pandemic wave by COVID-19 all items were weighted in relation to the origin of the respondent, i.e. in relation to the incidence rate of the pandemic (17), and multivariate analysis was evaluated in order to determine statistically significant differences between the levels of perception in relation to geographical area. All $p < .05$ values were considered statistically significant. Finally, all responses regarding the difficulties encountered in relation to the pandemic incidence rate were collected and presented as frequencies and percentages.

Results

Demographic characteristics of the sample

A total of 889 people consented to participate in the study. Of these, 73.9% were female and 26.1% were male. Approximately half of the respondents were between 18 and 30 years old (50.1%), 52.2% were single and (51.1%) had a diploma. 61.3% have their residence in Southern Italy (61.3%) and, finally, at the time of completing the questionnaire, they were in Southern Italy (60.1%) (Table1).

Degree of user satisfaction with the health care received

From the data, it can be said that the degree of satisfaction was higher in areas with pandemic incidence of 200-500/ 100.000 population.

Among the greatest satisfaction perceived about the assistance received during the first pandemic

Table1. Socio-demographic characteristics of the sample (n=889)

Characteristics	n(%)
Gender:	
Female	657(73.9)
Male	232(26.1)
Age:	
18-30 years	445(50.1)
31-40 years	152(17.1)
41-50 years	145(16.3)
51-60 years	101(11.4)
61-70 years	44(4.9)
>71 years	2(0.2)
Marital status:	
Single	464(52.2)
Married	391(44)
Divorced/Separated	28(3.1)
Widow	6(0.7)
Education Level:	
Elementary/Lower Middle	85(9.6)
Diploma	454(51.1)
Degree	289(32.5)
Post-Graduation	61(6.9)
Residence:	
North	263(29.6)
Centre	81(9.1)
South	545(61.3)
Where were you at the time of completing the questionnaire:	
500/100.000ab.	268(30.1)
200-500/100.000ab.	87(9.8)
100-200/100.000ab.	482(54.22)
50-100/100.000ab.	52(5.85)

wave, there are those towards the health assistance received in general ($p=.049$), towards people hospitalized ($p=.046$), and the treatment received for the COVID-19 test ($p=.002$). Among the greatest difficulties encountered there is also that of contacting the general practitioner ($p=.032$), to the treatment received from Local Health Authority ($p=.006$), to the treatment received from the call center numbers activated during the pandemic, i.e. the toll-free number ($p<.001$) and the "1500" number ($p<.001$) and to the treatment received for relative ($p<.001$). In Table 2, in addition to the significance values, the descriptive values of each item for each geographical area according to the intensity of the pandemic were reported.

Table 2. Multivariate Analysis according to Covid-19 pandemic incidence and satisfaction levels among participants (n=889)

Items/Covid-19 incidence	>500/ 100.000ab. $\mu\pm s.d.$	200-500/ 100.000ab. $\mu\pm s.d.$	100-200/ 100.000ab. $\mu\pm s.d.$	50-100/ 100.000ab. $\mu\pm s.d.$	F	p
Item no.1: Please indicate your level of satisfaction with the healthcare offered to the Italian population during the Covid-19 Emergency period, in general	3.31±1.09	3.57±1.02	3.28±1.02	3.12±.96	2.637	.049*
Item no.2: Please indicate your level of satisfaction with the healthcare offered to people admitted to the hospital during the period of the COVID-19 emergency.	3.63±1.08	3.84±1.02	3.53±.98	3.44±1.00	2.674	.046*
Item no.3: Please indicate the degree of satisfaction with the treatment received for the COVID-19 test	5.59±1.16	5.80±.76	5.83±.77	5.94±.42	5.130	.002*
Item no.4: Please indicate the degree of satisfaction with the treatment received at home	5.75±.93	5.70±1.10	5.83±.75	5.94±.42	1.525	.207
Item no.5: Indicate the degree of satisfaction with respect to the difficulty of contacting the treatment received from the general physician by telephone	4.89±1.55	5.15±1.39	5.02±1.47	5.52±1.09	2.948	.032*
Item no.6: Please indicate the degree of satisfaction with the treatment received from the pediatrician.	5.84±.76	5.82±.76	5.74±.83	5.77±.83	1.194	.311
Item no.7: Please indicate the degree of satisfaction with the treatment received by your ASL	5.35±1.36	5.41±1.43	5.65±1.09	5.69±.92	4.122	.006*
Item no.8: Please indicate the degree of satisfaction with the treatment received by the toll-free number	5.52±1.26	5.56±1.15	5.81±.79	5.88±.61	6.046	>.001*
Item no.9: Please indicate the degree of satisfaction with the treatment received by the number 1500	5.52±1.35	5.48±1.35	5.81±.86	5.94±.42	6.200	>.001*
Item no.10: Please indicate the degree of satisfaction with the treatment received from psychological support	5.89±.61	5.64±1.03	5.95±.34	6.00±.01	9.126	>.001*
Item no.11: Please indicate the degree of satisfaction with the treatment you received for a relative.	5.32±1.40	5.67±1.06	5.84±.71	5.58±1.36	14.416	>.001*

*p<.05 is statistically significant.

Perceived difficulties with health care received during the first pandemic wave

In Table 3, the most frequently encountered difficulties are reported, subdivided by the incidence rate of the pandemic. In general, reasons for dissatisfaction include finding surgical masks to protect against infection, in fact 56.14% of participants declared this difficulty.

Discussion

The main objective of the study was to investigate the degree of satisfaction with the health care received during the first phase of the COVID-19 health emergency. The study was conducted on a sample of 889 subjects, in an age range between 18 and over 75 years and shows a prevalence of the female gender compared

Table 3. Main difficulties faced by the Italian population during the first wave of the COVID-19 pandemic (n=889)

Difficulties encountered /COVID-19 incidence	> 500/100.000ab. (n;%)	200-500/100.000ab. (n;%)	100-200/100.000ab. (n;%)	50-100/100.000ab. (n;%)
None	26(2.92)	7(.79)	28(3.15)	3(.34)
Contact your general practitioner	15(1.69)	7(.79)	32(3.60)	2(.22)
Drug Prescription	7(.79)	2(.22)	11(1.24)	0(0)
Purchase emergency masks	153(17.21)	47(5.29)	260(29.25)	39(4.39)
Contacting pandemic management numbers	26(2.92)	8(.90)	33(3.71)	4(.45)
Have information about the pandemic	24(2.70)	7(.79)	50(5.62)	3(.34)
Respect the safety distance	10(1.12)	7(.79)	50(5.62)	1(.11)
More	7(.79)	8(.90)	12(1.35)	0(0)

to the male one. Most of the sample resides in Southern Italy. From the results of the study it can be stated that the degree of satisfaction was greater in areas with an index of 200-500/ 100.000 inhabitants. The first wave of the pandemic had as its epicenter the North, but the socio-health crisis has also spread to the South where it has become a social emergency, due to a fragmented health system and a more fragile society. This is what emerges also from the Svimez report (18). From the data of our study, it can be seen that there is a broad satisfaction with the hospital services in Italy. There remains, however, a certain dissatisfaction with the vision of the territorial service as a whole. Contacting the general practitioner, obtaining prescriptions for drugs, buying masks, receiving information on the pandemic and respecting the safety distance were the main difficulties expressed by the Italian population during the first pandemic phase, with a prevalence in areas with 100-200/100.000 inhabitants. These aspects also emerge from various studies or surveys, such as the one by “Feder Consumers” and the “Ania Consumers Forum” on “Costs and Effectiveness of the National Health Service”, which in an online survey found a good quality of professionalism encountered in the health service but at the same time complained about the excessive costs incurred to access care (19). In addition, the difficulty in finding PPE and its global shortage has led to the drafting by the WHO, in February 27, 2020, of guidelines on the rational use of PPE, in which it advises against its use for asymptomatic individuals because “wearing surgical masks when they are not indicated may cause unnecessary costs, a burden

of purchase and create a false sense of security, which may lead to the abandonment of other essential preventive measures” (20). This shortage and rationing of stocks has led to a media confusion in which there has been a move first to the use of PPE only in strictly necessary cases until their compulsoriness from 4 May 2020 in closed places accessible to the public, including means of transport, to all occasions in which it is not possible to continuously ensure the maintenance of the safety distance (21). The lockdown due to the Covid-19 emergency was a critical moment with high emotional impact. During this period, access to routine care services was reduced, which was followed by the suspension of the provision of non-essential health services, with specialist visits and surgeries postponed or cancelled (14,22). The healthcare system has had to deal with major changes such as job transformation with greatly increased pressures and stress (4,23-24), changes in procedures and amplified risks, as well as Covid-19 has become the main enemy, absorbing most of the resources allocated to care, prevention and research (25). Among the sudden changes also had to face the blocking of outpatient services, except for urgent ones, and a downsizing of the activity of mental health and substance abuse services. For these services, in fact, an emergency plan was developed by the individual departments, with reduced access hours, restriction of activities to psychiatric examinations only for serious cases, a marked reduction in other activities, and a redirection of the population concerned to remote contacts (video calls, telephone calls, etc.) (26). Assistance on the territory struggled to promptly

contain and circumscribe the spread of the contagions and the pressure quickly fell on the hospitals, which risked collapse, especially in the intensive care units. Health workers were also under intense stress, due to heavy shifts and serious risks, due to the high probability of infection (4,24,27-29). A price that public health has paid to austerity has also been that of failing to ensure uniformity of health and opportunities to access care for all social groups. Unfortunately, this is a circumstance that disregards one of the principles that inspired the very law that instituted the National Health Service, Law no.833 of 1978 (articles 2 and 4). Moreover, fundamental to reduce the psychological impact of the pandemic was the investment in mental health. Several studies have shown an increase in the prevalence of anxiety disorders, depressive disorder and suicidal ideation in the period directly attributable to the pandemic, compared to the same period in the year 2019 (30,31). In parallel with these, other studies were conducted on samples of the Italian population that showed high rates of depression (17.3%), perceived stress (21.9%), anxiety (20.8%), and sleep disturbance (7.3%) (32). What is common to the results of most of these research studies is that women have a greater predisposition to the development of mood disorders related to the condition in place as found for people living with or acquaintances of a subject affected by Covid-19 (33-35). To demonstrate this, the first studies on the subject have been published; in particular, a systematic review has examined numerous studies conducted in 17 different countries, both on health professionals and on the population but on patients with higher risk of Covid-19 and confirming the presence of an important social discomfort (4,14,23,31). Physical pathology can also cause severe psychological symptoms, e.g. Severe Acute Respiratory Syndrome (SARS, 2003) led to an overall incidence of psychiatric disorders of 58.9% in 30 months, post-traumatic stress disorder (PTSD) rates of 44.1% in 4 years and increased suicides at 1 year in survivors. (36,37).

Limitations of the study

The results should be interpreted taking into account some limitations. The use of online platforms

to collect responses could have led to possible bias selection; the sample is not representative of the entire Italian population. Additionally, the questionnaire administered was created *ad hoc*, without any validation study before.

Conclusions

The Coronavirus emergency has highlighted the lights and shadows of the National Health Service: critical points and strong points that were present well before the outbreak of the pandemic, but that the Covid-19 has put in evidence. We could also say that this pandemic has restored the value of our own public and free health system or it has only highlighted the large number of flaws that this has, organizational, economic or related to the low number of health workers. The pandemic has taught us that we could change quickly and efficiently. It is necessary to think about a health reform making the territory homogeneous at a national level by integrating the existing structures, making them visible to the citizens. It is necessary to draw up new guidelines for the future, without forgetting that, in the light of the period of crisis we are experiencing, the 'principle' recognition that everyone must be treated, placing the needs of each individual at the center of care becomes a priority. The present study also underlined the need for institutions to implement an integrated assessment and support involving psychological and medical assistance together. What is evident is that the work carried out by the health system in the period under review was unprecedented, given the uniqueness of the pandemic event, but also that it was not exempt from missteps and exacerbations of the already known flaws in the system, even if some gaps were resolved in them on this following phase one, think of the absence of PPE for health workers and for the entire population and the scarcity of diagnostic tests. The need for a step change in the enhancement of the national health system is clear, as well as the importance of a less "hospital-centric" and territorial, community-based vision of care. In this phase, the social, educational-behavioral and, we can say, civic plan is intertwined and merged with public health, especially through information. In a period in

which everything and the opposite of everything has been said, where it is difficult not to be influenced by the web, by platforms without equal in the ease with which they convey information, the legally recognized educational role of health professionals is and must be the spokesman of correct information.

Conflict of Interest: Each author declares that he or she has no commercial associations (e.g. consultancies, stock ownership, equity interest, patent/licensing arrangement etc.) that might pose a conflict of interest in connection with the submitted article.

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