Analysis of the experiences of patients in the rehabilitation period related to the COVID-19 disease and assessment of the impact of this disease on the disability in convalescents

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Abstract

Objectives: The aim of the article is to present the experiences of patients who were infected with the SARS-CoV-2 virus in 2020 and 2021-2022, and then underwent in-patient rehabilitation at the Specialist Hospital of the Ministry of Interior and Administration in Głucholązy.

Material and methods: The study included three groups of patients staying in 2020-2021 and 2022 on post-covid rehabilitation. People from group I contracted COVID-19 in 2020. People from group II fell ill in 2021. In groups I (127 people) and II (68), respectively, the research was conducted in the form of questionnaires. The results obtained from the questionnaires were enriched with the opinions of the third group of patients, collected at the end of 2021 by means of an unstructured interview using the method of free conversation.

Results: The results are compatible with the state of research in which similar issues were addressed. There was no conflict between trusting the doctor and having to reject his recommendations (or even diagnosis). The methods of clinical rehabilitation offered to patients after COVID-19 were based on scientific grounds. An individual rehabilitation program implemented in the hospital environment corresponded to the characteristics of such therapy.

Conclusions: The subjects experienced COVID-19 as a somatic and private experience. The incidence of COVID-19 was not associated with the possibility of losing a job. Social rights have been recognized as natural security for living conditions in the event of an illness. The respondents found the views disseminated by doctors in the media to be useful and credible. The general standard of reporting the epidemic by official state institutions was negatively assessed. All respondents positively assessed the rehabilitation program offered to them. The results may constitute the basis for a change in the way information on epidemic threats is presented by the official state media.

Introduction

The research on how patients experience the COVID-19 epidemic [1] is an important addition to clinical study on the disease. The aim is to gain insight into the patients' perspective on how they define the risk and then implement individual protection strategies. The analysis of these issues may become a basis for the formulation of effective epidemic prophylaxis programs and state epidemic management strategies based on the clinical standard (Evidence Based Medicine). The developers of these programs and strategies should take into account the state of health awareness of the patients and adapt the recommendations to the possibility of their assimilation by laymen in order to conduct accordingly. The possibility of examining the health awareness of laymen creates a modern standard of medical sociology [2], oriented, inter alia, to the analysis of the experience of the disease by the patients [3]. It takes into account the fact that for the patient the disease is not only a somatic experience, but above all an existential one significantly changing the way he or she functions in a society. It is also a source of suffering from which the patient wants to protect themself by creating individual defence strategies to a
greater or lesser extent consistent with the clinical standard. In the case of communicable diseases, this
type of compliance is essential to the health safety of the population, so care should be taken to ensure
that epidemic threat content is communicated to the public in a timely and understandable manner.
Members of the population defining the epidemic risk in clinical terms follow the prophylactic
recommendations of specialists, do not avoid undergoing treatment and recover more easily after the
disease. They experience less anxiety related to the disease, which may contribute to the development of
symptoms of reactive depression. Those who do not understand how to define an epidemic risk in clinical
terms negate the risk itself or create ways of defining it that are not in line with the clinical standard. As a
result, they do not implement the methods of prophylaxis recommended by specialists, avoid undergoing
clinical treatment, and when symptoms of an infectious disease occur they fight them with the self-
treatment methods. With severe symptoms of the disease, they feel a strong fear, hence the disease that
they reject and do not understand becomes a serious disturbance in their life. By failing to comply with
anti-epidemic recommendations, they also pose a threat to other members of the population.

The aim of the article is to present the experiences of patients who were infected with the SARS-CoV-2
virus in 2020 and 2021, and then underwent in-patient rehabilitation at the Specialist Hospital of the
Ministry of Interior and Administration in Głuchółazy. The ways of experiencing the disease by patients
before and after the diagnosis, patients' relations with the medical personnel providing care for them,
expectations towards rehabilitation and the assessment of the benefits obtained were analyzed. The
conclusions from the research can be used to improve the effectiveness of post-covid rehabilitation and
adjust its standard to the patients' expectations. They can also be useful in the process of creating a
state information strategy for the prevention of serious infectious diseases.

Material And Methods

The study covered three groups of patients, staying on post-covid rehabilitation at the Specialist Hospital
of the Ministry of Interior and Administration in Głuchółazy named after St John Paul II in the years 2021
and 2022. This facility, since September 2020, as the only one in the country, has been implementing a
pilot program in the field of therapeutic rehabilitation for the beneficiaries with a history of COVID-19
disease [4]. People from group I fell ill with COVID-19 in 2020 before the introduction of vaccinations or
did not have time to be vaccinated at the beginning of 2021. People from group II fell ill in 2021 after the
introduction of preventive vaccinations in Poland. They stayed in rehabilitation for up to 12 months after
suffering the disease. In groups I and II, including 127 and 68 people respectively, the research was
conducted in the form of questionnaires. About 20% of the patients completed them. The participation of
patients in the studies was anonymous and voluntary. The results obtained from the questionnaires were
enriched with the opinions of the third group of patients collected at the end of 2021 by means of an
unstructured interview using the method of a loose conversation.

Quantitative and qualitative methods were used in the analyzes of the statements, which seem to be
particularly useful in the studies of patients' experiences related to the disease [5], in studies of the level
of patient satisfaction with the obtained medical help [6] and in their evaluation of the quality of
treatment and rehabilitation services [7]. In contemporary medical sociology, the analysis of the patient's experience related to the disease is considered an important element in the diagnostic process [8]. It can also be useful in the course of therapy. The possibility for the physician to get to know the patient's perspective related to overcoming of the disease, mainly in the case of chronic diseases [9], may also be useful in the treatment of infectious diseases with a serious course and consequences requiring rehabilitation, including COVID-19. This justifies the purposefulness of undertaking multidisciplinary research [10] on the experiences of the patients. Within the standard of the so-called narrative medicine [11], the possibility of the patient's insight into the essence of their own disease is considered prognostically favorable. Such an insight allows the patient to understand and accept the real parameters of their clinical condition, which increases compliance with their preventive and therapeutic recommendations based on trust in the doctor. In this way, it is possible to limit the occurrence of the non-compliance effect and reduce the general sense of anxiety in patients. The method allowing the patient to gain an insight into the essence of the disease is creating an individual narrative about the disease [12] which gives the possibility of shaping the experience related to the disease in the form of a structured story. Presentation of these experiences by the patients is possible during formal psychotherapy, in informally created groups of patients and in a written form [13]. Research on the experiences of the patients related to COVID-19 has not yet been published - apart from one monograph [1] in the Polish specialist literature. Therefore, this study is original.

The research was approved by the Bioethics Committee at the Medical University of Piastów Śląskich in Wrocław (research project entitled Analysis of the experiences of patients undergoing rehabilitation related to the COVID-19 disease, registration number of the Center for the Support of Science BW-69/2020) and the Director of the Specialist Hospital of the Ministry of Interior and Administration in Głucholazy named after St John Paul II. It was carried out under the grant of the Rector of the Opole University of Technology in the DELTA competition entitled Analysis of the experiences of patients in the rehabilitation period related to the COVID-19 disease and assessment of the impact of this disease on the disability of convalescents. Participation in the study was voluntary and ensured anonymity of the patients. The respondents gave their written consent to fill in the questionnaires. Expressing their feelings and opinions in unstructured interviews they also maintained anonymity and the voluntary nature of contact with the researcher.

The first group of respondents (I) consisted of patients who contracted COVID-19 in 2020. The group included 127 people (67 women and 60 men). It was dominated by respondents who were currently married (38.6% married men, 33.2% married women) or were in the past (11.0% widowers and widows, 18.1% single persons). The largest group were patients aged 50–59 (40.9%), then 60–69 (26.8%), 40–49 (13.4%), and 70–79 (11.8%), 30–39 years of age (5.5%) and 20–29 years (1.6%). Therefore, the majority of respondents were mature people (aged 40+, 92.9%), staying 10 years or more in the labor market, with a stable professional position. Families with two children (44.9%) dominated, followed by one child (26.8%), three (14.2%), four (0.8%) and five children (1.6%). 11.8% of the respondents were childless. The family model declared by the respondents from the 1st group corresponded to the characteristics from the last period of the Polish People's Republic (a marriage with 1–3 children) and differed from the model...
of contemporary Polish relationships in a higher number of children and a higher percentage of married people. 52.8% of the respondents did not have grandchildren. Having one grandson was declared by 14.2%, two by 12.6%, three by 8.7%, four by 6.3%, five by 3.1%. Six, seven and eight grandchildren were declared by 0.8% of the respondents. The family relations of the respondents from group I predisposed them to express high expectations towards the medical care and rehabilitation system. In their social environment, there were no relatives (apart from their spouse, if they had one) who could take care of them during their illness and during the rehabilitation period.

The second group of respondents (II) consisted of 68 people (34 women and 34 men). It was dominated by married people, currently (35.29% married men, 26.47% married women) and married in the past (10.29% widows, 2.94% widowers). Single people of different status constituted a smaller group (1.47% unmarried, 2.94% single men, 7.35% women and men describing themselves as "free", 1.47% of the respondents declared themselves as divorced, and the status of 1.47% was unspecified. Families with two children (48.53%) dominated, followed by one (22.06%), three (13.24%) and four (1.47%). 10.29% of the respondents had no children, and 36.76% of the surveyed had no grandchildren.17.65% declared having three, 16.18 two, 8.82% one, 7.35% four, 5.88% five, 4.41% seven, 1.47% eight and 0% six grandchildren. The family model and the number of children of the respondents corresponded (as in group I) to the relations characteristic of the last decades of the Polish People's Republic. For the same reasons, the family relationships of the respondents from group II predisposed them to use the medical care and rehabilitation system.

The respondents from both groups represented a higher level of education than the average for the Polish population in the 40+ age group. In the first group of respondents, 3.1% had higher education, and 9.4% had completed post-secondary one, 68% had secondary school-leaving examination, and 15% had vocational qualifications. In total, 81.9% obtained their high school diploma. In group II, the education of the respondents was even higher. 35.29% had graduated from higher education institutions, 7.35% post-secondary schools, 35.29% secondary schools with high school diploma and 19.12% vocational schools. In the second group of respondents, also 81.9% obtained the secondary school diploma, but the percentage of graduates from higher education was almost 10 times greater than in the first group. The level of education of the respondents, higher than the average in Poland, potentially fostered their interest in the surrounding world and understanding of information, as well as their independent search for various sources of information about the epidemic.

The occupations performed by the respondents were of "urban" character. In the first group of respondents only 3.9%, and in group II 5.88% declared agricultural education. A similar percentage of the respondents made their living in agriculture, despite the fact that a large part of the respondents still lived in the countryside - in group I approximately 32.3%, in group II 22.59%. The remaining respondents from group I described their professional profile as economic (11%), service (4.7%) related to transport and communication (8.7%), nursing and social care (18.9%) and mining (3, 1%), 15% of the respondents were teachers in primary and secondary schools, and 1.6% in higher education. 24.4% described their educational profile as different. In group I, we observe an overrepresentative share of employees working
in professions related to health care (20.5%) and education (16.5%). The reason for this was the high incidence of disease among employees of health care institutions, social services and schools. After the introduction of preventive vaccinations, the situation changed and in the second group of respondents there was a different shaping of the occupational profile of the respondents. The majority of patients were people with technical (38.24%), economic (11.76%) and administrative (8.82%) education. 22.06% described their educational profile as different. Education with a medical profile was declared by only 2.94% of respondents, almost ten times less than in group I. This change should be related to the universal introduction in 2021 of preventive vaccinations in medical, social care facilities and schools, which resulted in the decline of the wave of mass cases in them.

The living conditions of the respondents in both groups were better than in the entire Polish population. In group I, 47.2% had an owner-occupied tenement flat, 12.5% owned a house up to 100 m², and 5.5% a house from 100 to 200 m². 2.4% of the respondents lived in rented flats, and 7.9% in a privately owned flat in a block. 39% lived in a shared household with only one person, 28.3% with two, 11.0% with three, 7.9% with four, 3.1% with five and 1.6% with 6 or more people. As many as 93.7% of the respondents had their own room, 96.9% running water and sewage system, 90.6% central heating, 51.2% of the respondents had a home garden. Most of the respondents from group I lived in cities: 22.8% from 5,000 to 50,000, 20.5% from 100,000 to 500,000, and 10.2% above 500,000, and 5.5% to 5,000. In group II, the housing conditions were considered to be very good too. 55.9% lived in an owner-occupied flat, 23.5% in their own house with an area of more than 100 m², 7.4% in their own house up to 100 m². Only 10.3% lived in accommodation flats. As many as 97% of the respondents had their own room, 100% running water and sewage system, 98.53% central heating, and 39.71% a home garden. 50% of respondents lived together with only one person (most often a spouse), 15% with two, 10% with three, 12% with four, 1% with five, 3% with six. Housing conditions in both groups of respondents potentially favored a positive attitude to lockdown, quarantine and isolation as methods of anti-epidemic prophylaxis. Staying at home would take place in comfortable conditions.

In both groups of respondents, the majority had permanent employment, along with a package of social benefits. In group I, 43% worked in companies employing more than 50, and 12.6% from 10 to 50 employees. Similar values were found in group II. 39.71% worked in companies employing over 50, and 8.82% from 10 to 50 employees. The nature of employment had a large impact on the way the respondents experienced the disease. In most cases, falling ill with COVID-19 was not associated with the fear of losing a job and earnings. After developing more serious symptoms of the disease, the respondents turned to a doctor and started treatment. In both groups, despite experiencing the symptoms of the disease, there was no fear of losing earnings. The same stability in the assessment of one's own financial situation was observed in both studied groups among retirees and pensioners. In group I, their percentage was 29%, and in group II – 41.18%. The sense of stability in their own life situation was confirmed by the statements of the respondents from both groups (group I, discussed in more detail in the monograph of 2021) [1]. In group I, 30% considered their life situation during the epidemic to be good and stable, and relatively good and stable by 35.38% of respondents. In group II, the same answers were
given, respectively, by 50% and 8.82%. In both groups, no one declared that their situation was bad or very bad. Obtaining regular income and the feeling of confidence in receiving it after the onset of the disease influenced the way the respondents experienced the COVID-19 epidemic. Without the fear of collapse of the economic foundations of existence, the respondents sought medical help or went to the hospital after experiencing severe symptoms without hiding the disease from their employer and colleagues. It had a huge impact on reducing further infections. The cessation of work after the onset of the disease symptoms was also related to the way the respondents performed their jobs. Mostly they did them in closed rooms, together with other employees, in direct contact with them or with clients / students / persons entrusted to their care. This was conducive to creating an attitude of a "community of fate" in the face of the epidemic threat. It was expressed in acceptance for the isolation / self-isolation of sick people in order to limit the possibility of infecting colleagues, patients, students or clients. In 98% of respondents from group I, COVID-19 disease was symptomatic, while in group II the percentage was 91.18%. Therefore, the respondents did not experience the negation of the existence of COVID-19 disease, the risks associated with it, and the need to take any protective measures, which is characteristic of many members of the Polish population.

The third group of respondents (III) cannot be characterized in the same way. Obtaining patients' opinions took place in the form of loose conversations conducted in the common space of the Specialist Hospital of the Ministry of Interior and Administration in Głucholazy (corridors, exercise rooms and other physiotherapeutic procedures). Patients were able to describe their illness, treatment and rehabilitation experiences in an untargeted manner by the researcher. The statements collected in this way can, however, make the basis for the creation of a catalog of patients' feelings and opinions.

**Results**

Constructing the picture of COVID-19 disease in the minds of patients was of a social nature [14]. For most of the respondents, the very existence of the disease was unmistakable. In group I, only 2% of it was asymptomatic, 25% considered the symptoms mild, and 71% of COVID-19 was severe. In group II, no one passed the disease asymptotically, 25% of respondents passed with mild symptoms, and 73% with severe symptoms. Despite the fact that in 2020 and 2021 there were differences in the scope of social information reported in the media on COVID-19, information of significant importance did not reach a large group of respondents. Patients from both studied groups were mostly unaware of the seriousness of the situation and the scale of the epidemic threat in Poland, and they did not relate the threat to themselves. After the first symptoms of the disease appeared, 11% of the respondents in the 1st group thought it was a cold, and 12.6% - the flu. 33.1% of respondents, even after the appearance of more serious symptoms of the disease, did not think that it could be COVID-19. They only began to worry as their symptoms worsened. 38.6% of respondents, even after experiencing severe symptoms that started to develop rapidly, still did not think that they got COVID-19. In the second group of respondents, despite the fact that the epidemic had already lasted in Poland for two years, as many as 26.47% of respondents were very surprised by the disease ("because no one was ill in my environment"), a further 25% were surprised ("because before I was never ill with anything serious"), and 10.29% of the disease surprised
them, because they had not been interested in it before and did not know anything about it. This result can be considered shocking on the background of the high level of education of the respondents which should help them comprehend the world and receive the information with understanding. Only 35.29% of the respondents from group II were aware of the real possibility of infection and they were not surprised. 25% because they got infected from a person who was known to be sick, and 10.29% because they realized that at the age of 60 + and suffering from various chronic diseases they were particularly at risk of contracting the disease. It can be concluded that the information disseminated by the Ministry of Health reached only this group (less than 10% of respondents) and was internalized by them.

The reactions to the diagnosis of COVID-19 in the first group of respondents were characterized by fear. In the surveyed group, 41 people (32.28%) chose the statement "I felt a lot of fear, I was afraid of what would happen next", 30 people (23.62%) "I was afraid that the disease would cause some complications", 21 people (16.53%) "I worried that my relatives would not cope without me", 10 people (7.87%) "I was afraid that the disease would last a long time and I would suffer", 12 people (9.44%) "I thought that I would die", 6 people (4.72%) "I was afraid that my children would become orphans", 6 people (4.72%) "I was paralyzed, for several days I did not believe that I would survive" and 5 (3.93%) "I worried that I would be left without a respirator and help". Only a few, after obtaining the diagnosis, were able to control negative emotions (the statements "I decided to stay calm" – 21 people (16.53%) and "I was not afraid, I trusted the doctors" – 10 people (7.87%). Among the group II respondents suffering from COVID-19, symptomatic reactions expressing the fear of the disease were also the most common, but it seems to be a bit more channelized. 36.76% of respondents chose the answer "I was afraid, based on information from the media, that it could be COVID-19", and 17.65% answered "I was very afraid because the disease started to develop so quickly that I knew it was COVID-19". However, there were not as many statements with a dramatic personal overtone as in group I. After a year of the COVID-19 epidemic, it turned out that most of the patients were recovering, which the patients in group II seemed to relate to themselves as well. As many as 22.06% of respondents declared that after noticing the first symptoms of COVID-19 they considered them to be a common cold, and 14.71% to be flu. The percentages were higher than in group I, which proves that the information about the epidemic had not reached the respondents or they treated it as irrelevant to themselves. For some of the respondents from group II, the COVID-19 diagnosis was a surprise because they were undergoing the disease asymptotically. They (5.88% of respondents) found out from health care workers that they were sick with COVID-19 after people who fell ill gave their name as contact persons (2.94%) and in other ways (14, 71%). For respondents in this group, the information about the serious course and effects of COVID-19 was inconsistent with their personal experience.

The feelings and fears of patients from both study groups related to contracting COVID-19 were private and personal. Their dominant feature was the fear of the unknown. The patients from group I feared death, suffering, complications, and the consequences of their illness and death for their relatives. In those who survived the disease in the hospital (36.22%), the most painful experiences were the fear of death, suffering caused by the disease, fear of its consequences and the death or disability of relatives. Some also mentioned the feeling of isolation and the dry disinterested attitude of the staff to the
patients in some hospitals. For those who survived COVID-19 at home, fear, a sense of abandonment, and even hunger were the dominant experiences. Only 50% of the respondents from this group could count on the help of adult children during the disease. The statements of patients from group II were similar. For those who stayed in the hospital, the worst experience was the illness itself ("I had little strength to think about anything else" – 33.82%), strict sanitary regime (10.29%), no close personal contact with the doctor (2, 94%). For those who stayed at home, the most common feeling was fear of deterioration of health ("I was afraid that the disease would start to worsen, and I would not be able to call a doctor and die without help" – 20.59%), feeling of loneliness and isolation (19.12%), experiencing the nuisance of quarantine (10.29%), fear of death ("fear that even if they take me to the hospital, they will not cure me there anyway" – 8.82%). For 4.41% of respondents, the perceived problem was the lack of information about the disease ("I did not know what could really happen to me" – 4.41%). Objectively, however, most of the respondents from both groups did not sufficiently understand the information about COVID-19 provided by public institutions in the years 2020–2022.

The statements of the respondents from both groups significantly differ from the interpretations of the psychological effects of the epidemic published in the press and disseminated in the media in 2020–2022. In the first group of respondents, where 98% had full-blown COVID-19, only slightly more than half of them considered that the disease would have an impact on their further life. This was declared by 40% of the respondents, and further 14.2% considered it to be a serious impact. Respondents who declared such a position derived this influence from measurable clinical and social facts (severe level of dysfunction that occurred in them after COVID-19, death or serious health complications in the spouse). The remaining respondents in this group did not recognize the incidence of COVID-19 as an issue that would have a serious impact on their future. The explanation of this position is the sense of material security, obtaining satisfactory medical help during the disease and the possibility of undergoing stationary rehabilitation. As many as 33.9% of respondents from this group did not return to work since they had been diagnosed with COVID-19 undergoing long-term treatment and rehabilitation, which they obtained free of charge while on a paid sick leave. Further 29% of respondents expressing this view were retirees and pensioners, also receiving treatment and rehabilitation free of charge and maintaining their pre-disease income level. Contrary to the opinions published in the years 2020–2021 in the Polish press and expressed on the Internet, patients from group I did not recognize COVID-19 as a "milestone" in their existence. Experiencing the serious symptoms of the disease and its effects, most of them, however, expressed the conviction that they could recover. At the same time, they were aware that they may not return to their previous physical condition or that it would be a long process. This created the basis for the involvement of patients in the implementation of the proposed exercise program and faith in its potential effectiveness.

Answers regarding the current health condition of the respondents starting rehabilitation were important. Among the most common symptoms (multiple answers possible), the most frequent were breathing difficulties (66.18%), followed by physical weakness (60.29%), symptoms of brain fog (lack of concentration, memory and cognitive impairment – 50%), muscle aches (39.71%), headaches and other physical symptoms (22.06%). 8.82% of the respondents had no complaints. Among the symptoms that
accompanied the respondents before starting rehabilitation, the most frequently mentioned were: trouble sleeping and waking up several times a night (58.82%), difficulty falling asleep and waking up in the early morning without being able to fall asleep again (30.88%), insomnia (19.12%). Other problems were related to: drowsiness (17.65%), apathy (11.76%), lack of joy (anhedonia − 11.76%), symptoms related to the mental state (11.76%), increased nervousness (8.82%) and nightmares (5.88%).

The respondents were also asked about the evaluation of the rehabilitation methods used in the facility in Głucholaz. In this section, they could choose multiple answers. The highest were evaluated activities such as training on a stationary bike (69.12%), group improvement exercises (61.76%), breathing exercises (58.82%), group walks (51.47%), inhalations (47.06%), exercises to develop cognitive functions, short-term memory, hand-eye coordination (25%), exercises using virtual reality (VR) (20.59%). Less popular were the classes with Nordic walking poles (11.76%), learning how to cough effectively (10.29%) and training on a treadmill (8.82%). 11.76% of the responses concerned the interest in other forms of rehabilitation, such as training with the use of stochastic resonance, high-intensity magnetic field, relaxation classes with the use of VR. The subjects responded positively to the possibility of using other rehabilitation methods related to motor organ dysfunctions during their stay in the hospital in Głucholaz. This fact was accepted by 47.06% of the respondents, and 35% were of a different opinion. Among the methods of psychological rehabilitation, the respondents would most likely use individual psychotherapy during rehabilitation (35.29%), art therapy (23.53%), group psychotherapy (17.65%). 5.88% expected other forms, such as access to a library, workshops with a psychologist, classes with the use of therapeutic coloring books with mandalas. The respondents positively assessed the fact of providing them with help / pastoral care appropriate to their needs during the rehabilitation period after COVID-19 (64.71%). 11.76% of the respondents were of the opposite opinion. 80.88% were satisfied with medical care during their stay in the hospital in Głucholaz, while 10.29% expressed a different opinion. At the same time, the respondents saw the need for changes in this area. 42.65% would like more frequent medical visits and tests of family members with a pulse oximeter, blood pressure and temperature tests, 20.59% pointed to the need for thorough examinations during admission and to establishing additional procedures. 17.65% did not have an opinion on this subject. The results regarding satisfaction with physiotherapy care were even better. 89.7% positively assessed the care of physiotherapists, and 2.94% disagreed. The results concerning the level of satisfaction of the respondents with the conditions of stay during rehabilitation in the hospital in Głucholaz seem interesting. The standard of offered physical exercises was rated the best by 82.35%, with 14.71% negative. Food order: 80.88% positive and 16.18% negative. Standard and availability of additional rehabilitation treatments: 66.18% and 32.35%, respectively. Pastoral assistance / care: 51.47% and 45.59%. Accommodation standard: 50% and 47.06%. Psychological help was assessed positively by 35.29% and negatively by 61.76%. In general, the respondents assessed the rehabilitation program offered by the hospital in Głucholaz as satisfactory (54.41%) or effective (30.88%). 7.35% found it very effective, and no one assessed it as ineffective or not meeting their needs. At the same time, the respondents saw the need to enrich the current post-covid rehabilitation program with new, additional elements, which would make it more effective. This fact was confirmed by 80.88% and the opposite was confirmed by 2.94%. Among the new elements in the rehabilitation program after COVID-19 they would
see: organized transport of patient groups for swimming in the pool (61.76%), organized bus trips around the area (44.12%), thematic talks on the management of COVID-19 (30.88%), organized discussion groups working under the supervision of a psychologist (25%), art therapy classes (17.65%). The smallest number of respondents recognized the need to organize meetings for patients with pension and disability pension advisors from the Social Insurance Institution, advisors from employment offices, etc., while 25% mentioned other elements. Most often these were additional physical exercises after 4 p.m. (26.47%), talks on respiratory methods of combating post-covid ailments (25%), ENT and phoniatic (22.06%) classes (rehabilitation) and more physical exercises and going out to the fresh air (8.82%). When asked how the respondents imagine their return to work after the end of rehabilitation after COVID-19 and whether they would like to return to work at all, they most often answered that they want to return to work and pursue their passions in it (26.47%), and also, that they want to go back to work and start earning as before the epidemic or more (22.06%). 8.82% of the respondents decided that they wanted to return to work in order to work out the years of employment needed for retirement and that they had to return to work to earn a living for themselves and their families. 25% were not interested in returning to work because of the age or as disable pensioners. When it comes to the question of whether and to what extent rehabilitation after COVID-19 at the hospital in Glucholazy created better opportunities for the respondents to return to work, 60.3% of respondents assessed the rehabilitation program positively, and 14.6% had a different opinion. The remaining respondents had no opinion on this subject as they had not planned to return to work.

In the second group, 29.41% of respondents considered that having COVID-19 would have a large impact on their further life, 8.82% of respondents said that it would have little impact and nothing special would change, and 51.47% had no opinion. Again, their opinion was influenced by their family and social situation, on the basis of the same parameters as in group I (serious complications, loss of a spouse). However, the majority of the respondents were not afraid of losing their jobs and livelihoods. Comparing the responses obtained from members of both groups, we can conclude that the impact of COVID-19 on further life was due to biological and clinical factors (post-sickness complications, death of a loved one), and not related to the socio-occupational situation of the respondents. Before, during and after the disease, it was equally stable. This attitude distinguished the way the COVID-19 epidemic was experienced by members of both study groups from that part of the Polish population which saw the effects of this epidemic primarily in socioeconomic terms (loss of income, work, orders, supplies, outlets, recipients' interest in their activity that was previously a source of earnings, etc.) and whose feelings were extensively reported in the media and on the Internet in 2020–2021.

In both groups of respondents (apart from people who lost their loved ones as a result of an epidemic), the intensification of symptoms of depression, a sense of a collapse in life prospects, etc., was not observed, which was often reported in the Polish media. There were, however, feelings that can be characterized in terms similar to post-traumatic growth. In all respondents from group I, a sense of joy and gratitude towards their fate was noted that resulted from the fact that they managed to survive such a serious illness. Confronting the possibility of one's own death and observing the disease and death of other patients became an impulse for most of the respondents from group I to increase the affirmation of
life and to have plans for the future. Their common feature can be distinguished as restoring the sense of agency and control over their own biography. For the employed, this was to be achieved by returning to work, for retirees and pensioners due to the possibility of implementing the existing lifestyle elements (gardening, social contacts, renovation of the apartment, travel, etc.). The resumption of the current activity and the return to the lifestyle from before the disease were considered as restoring the normal trajectory of the biography by all the respondents. The most important thing for the subjects was the ability to independently plan their own activity and carry it out in accordance with this plan. The sense of agency was associated in the respondents from the first group with the intention to resume the social roles they had performed before the illness and which were a source of satisfaction for them. After their recovery, the respondents intended to occupy the same (or a similar) place in the social structure as in the pre-illness period. They strove to do so even when, due to emerging dysfunctions, they could no longer work so intensively or in the same position. Similar trends also occurred in the second group of respondents, the more so as the financial situation of the respondents was even better there and almost 20% did not have a severe form of COVID-19 (therefore no serious dysfunctions were revealed).

Among the respondents, 10.2% from group I thought that their life after COVID-19 would be better than before, because they would appreciate life more, take more care of their health, express a more positive attitude towards the future, re-evaluate their life priorities, change jobs. This is possible because they have gained more faith in the effectiveness of treatment and rehabilitation. As many as 63.8% of respondents from group I believed that COVID-19 would not change anything in their lives or it is difficult to say what it would change. 74% of respondents in this group said that having COVID-19 would not affect their future prospects. This way of experiencing the disease has a very favorable prognosis. It can be a good basis for patient involvement in the process of long-term clinical rehabilitation, when it is needed, or for a successful return to work interrupted by an illness. The patients' attitude towards their own disease is based on their internalization of the clinical standard. They perceive the risks associated with the disease in a realistic manner, which directs them towards constructive resolution of health and social problems [15]. In the second group of respondents, a similar attitude was also represented by a majority of the respondents. Among the respondents, 5.88% believed that life would be better, 20.59% believed that after the epidemic their life would be worse, 8.82% that nothing would change, and 54.41% of the respondents did not have any opinion.

In the first group of respondents, 18.1% believed that their life after COVID-19 would be worse than before. The respondents expressed concerns about the destruction of their body by the disease, the occurrence of complications, lack of strength to work and mental disorders caused by isolation. They were also concerned about the factors related to a wider social context, such as permanent loss of interpersonal contacts, economic crisis, financial problems for many people, and the fact that the COVID-19 epidemic would remain with us forever. These fears reflect the fundamental threads present in 2020 in the Polish press and media discourse, which the respondents internalized and they became a source of fears and suffering for them [1]. In the second group of respondents, as many as 75% considered the presence of persistent symptoms of reduced physical fitness after suffering from the disease, 25% the constant fear for their own health and life, 23.53% death of close friends, 22.06% depression, 14.71% death of other
In the respondents’ experiences, the course of COVID-19 focuses on the level of satisfaction with the help provided to them during the disease. 52.8% of the respondents from group I considered that the medical assistance provided to them during their illness was appropriate and that they were properly cared for. 20.5% stated that they had problems with obtaining it (it was difficult to reach the doctor or the Sanitary Inspectorate), but nevertheless made further attempts and finally received the expected help. 36.2% of respondents waited at home for the disease to develop or subside, and only when symptoms worsened did they start seeking medical attention. None of the respondents in this group tried to deny the occurrence of serious disease symptoms or to self-medicate. Nobody had used para-scientific methods or those characteristic of the so-called alternative medicine. The respondents correctly addressed the people and institutions in which they intended to obtain help, they also expected that it would be provided to them in accordance with the current medical standard. Even when, due to the organizational inefficiency of the Polish anti-epidemic protection system, they faced problems with meeting these expectations (impeded contact with a doctor and the health officer), they made systematic and sometimes even persistent efforts to obtain medical help. Most of the subjects in this group were eventually admitted to a hospital that had a rise in COVID-19 patients under professional care. In the assessment of hospital experiences, there were only sporadic instances of bad, "cold" and harsh treatment of the patients. The respondents also indicated examples of behavior full of care and warmth (Kłuczbork, Kędzierzyn-Koźle). They appreciated the efforts of the medical and nursing staff and the general atmosphere in these hospitals, which gave them confidence and faith in survival. In the second group of respondents, when asked what the most difficult during their stay in hospital was, 10.29% considered the strict sanitary regime, including personnel in special costumes and isolation, 2.94% no close and warm contact with a doctor. 33.82% of respondents indicated the disease itself and the lack of strength to think about anything else, while 7.35% mentioned other factors, such as, for example, no contact with the family, no visits from relatives, awareness of what was happening around that such a large number of patients died after contracting the virus, a sense of danger in the ICU, black bags in the corridor and others.

Patients' experiences related to COVID-19 were significantly influenced by the manner of reporting the epidemic in the Polish media, which is discussed in more detail in the monograph devoted to it [1]. Overall, it can be said that the way of informing was not correct. Until the announcement of the state of the epidemic alert, and then the state of the COVID-19 epidemic in Poland (March 2020), information about it was sparse and biased, and the possibility of spreading the epidemic to Poland was minimized, even when in February 2020 it was already spreading in Europe. An appropriate standard of information about the epidemic was not developed, nor presented to Poles in an unambiguous and understandable way. As a result, the respondents from both surveyed groups were not aware that the epidemic could threaten them, and when they fell ill with COVID-19 they did not have an effective management strategy. The official information obtained until October 2020 from the public television minimized the threat, after which the epidemic got out of control. When the introduction of anti-epidemic restrictions turned out to be necessary during the successive waves of the epidemic, they were not understood and accepted by the
majority of the society. The respondents from both groups, due to the high level of education, expressed a higher than average level of acceptance for presenting the epidemics in clinical terms. They were independently seeking information about COVID-19 from various sources, including 15% from foreign television. In January 2020, the Internet was the main source of the news for only 3.1% of them. When the epidemic broke out in China, only 65.4% of respondents considered the information about COVID-19 to be alarming. When the epidemic moved to Europe in February 2020, 88.9% were worried about this fact, and at the end of February, already 92.1% of respondents. The official information strategy on COVID-19, which was present in the Polish media from January to March, was assessed negatively by the respondents. They stated that they had not been adequately prepared by the country's authorities for the outbreak of the epidemic in Poland. As many as 24.4% were completely surprised by the outbreak of the epidemic in Poland, and 9.4% by its dynamic development in our country. The government media dominated by the "official optimism" was blamed for the Poles' unpreparedness for the epidemic. Therefore, the respondents still searched for information from various sources, including 48.0% from the Internet. However, only 9.44% of respondents drew information about COVID-19 only from this source. This explains the maintenance of a high level of trust in the standard of clinical medicine among the respondents from group I and the lack of popularity of alternative treatment and prophylaxis methods among them.

The respondents from group I expressed specific expectations towards the information on COVID-19 stating that it should be professional, regular and useful. Despite the fact that they considered the information available in the Polish media insufficient, they still found it useful. 48.8% of respondents said that they felt better informed about what was going on, 30.7% found it useful in practice and allowing them to better organize their lives during the epidemic. 28.3% of respondents said that the information about COVID-19 should be provided regularly by doctors, not politicians. 20.5% felt that more information in the media would allow people to prepare well for the epidemic, 18.1% that the information should be more consistent. Only 14.9% of respondents said that it would have been better if Poles had received less information about COVID-19, because then people would have been calmer and taken care of their own matters. In the second group, there were no longer extended expectations of the respondents regarding the information on COVID-19. They were being widely reported in the official media. Their social credibility turned out to be a problem, because those communicated in the clinical standard were opposed by the alternative "internet" standard. Parascientific and overtly anti-scientific views on COVID-19 became popular in the Polish society. Against this background, the confidence in the clinical standard among the respondents from the second group seems to be higher than the average in the Polish population. However, this was not tantamount to sufficient awareness of the threats related to COVID-19 and relating the epidemic's dangers to oneself. This is clearly visible in the responses to the question: Will the COVID-19 epidemic affect Poland? In the first group of respondents, the individual course of the disease did not affect the construction of the projections by the respondents regarding the impact of the epidemic on the situation in Poland. Over 50% of the respondents were not able to clearly assess ("hard to say" – 56.56%) or did not give an answer at all (7.87%). The situation that would change for the worse was chosen by 17.32%, 10.23% said that it would change for the better, and 7.87% that nothing would change. In the
second group, the assessment was completely different. As many as 61.76% of respondents considered that the epidemic would be of great importance for Poland, 1.47% that it would be of little importance, and 26.47% could not make an unambiguous assessment ("hard to say"). It can be hypothesized that the cause of this change was the prolonged duration of the epidemic and the information reaching respondents from the media every day. That information was not in line with their personal experience.

In the experience related to COVID-19 in both groups of the respondents, the possibility of undertaking inpatient post-covid rehabilitation in a hospital ward played an important and positive role. Patients who experienced COVID-19 symptomatically expected that rehabilitation would eliminate the related dysfunctions, such as reduced respiratory efficiency of the lungs, disorders of the nervous system and cognitive disorders (the so-called post-covid fog). The subjects also expected an overall improvement in well-being, an improvement in physical condition, a return to full physical condition and obtaining instructions on how to do so. They expected an improvement in the parameters related to mental and social functioning, that is reducing or eliminating the so-called post-covid fog, stress and anxiety. They also wanted to learn more about recovering from the COVID-19 disease and preserving health. Patients' expectations regarding inpatient rehabilitation should be considered realistic and adjusted to their knowledge of the nature of COVID-19 and the complications associated with this disease. Patients were aware of the biological causes of the disease, as well as its effects, which they also defined in clinical terms. They expressed their readiness to actively participate in the proposed exercise program and believed that their individual rehabilitation would prove effective. A similar attitude was found in the second group of respondents.

The presented opinions of the respondents based on the results of the survey may be supplemented with statements obtained in the form of an unstructured interview. The respondents (group III) expressed a high level of approval for the model of stationary rehabilitation proposed by the Specialist Hospital of the Ministry of Interior and Administration in Glucholazy. The approval grew as the course progressed, along with the gradual improvement of the patient's physical capacity and the observation of the progress of rehabilitation in other patients. Patients highly rated the personalized rehabilitation model, based on assigning each patient to a group with specific performance parameters. By doing exercises together with patients with a similar degree of physical capacity, the respondents did not develop a sense of disability and physical incompetence. They did not assume the role of an outsider during the exercises, supported both by physiotherapists and people doing the exercises together. Patients downplayed (as insignificant) the restriction of personal freedom associated with undergoing rehabilitation under the hospital regime. In their opinion, the serious physical dysfunctions that motivated them to come to rehabilitation balanced the need to comply with the hospital regime, as well as a fairly average standard of accommodation. The respondents expressed a positive opinion of the possibility of using the religious service in the hospital and attending the Holy Mass. They also assessed very well the communication skills of nurses and physiotherapists who would find time for individual talks with patients and provide them with support.

Some of the patients undergoing rehabilitation in the hospital regime perceived the proposed model negatively. They considered the expectations related to the possibility of free walks, establishing contacts
with other patients and getting closer to them on a social basis as insufficiently satisfied. There were no special spaces for this purpose in the hospital. The expectations of this group came close to the spa treatment model, in which the above-mentioned needs are successfully met in specially designated facilities and places. Some patients who underwent COVID-19 asymptptomatically and did not develop serious physical dysfunctions critically referred to the rehabilitation model proposed in Głucholaz for other reasons. They did not feel any decline in physical condition or any measurable ailments. These patients were not interested in doing many exercises each day as part of the individual rehabilitation program that was offered to them. This applied to both exercises with the use of modern equipment and typical gymnastic activities. Patients treated them with reluctance because they did not feel any limitation in their physical fitness, so they did not see the need for physical improvement.

Discussion

The results obtained in the research on the disease experiences by patients suffering from COVID-19 in the first year of the epidemic in Poland are compatible with the state of research in which similar issues were addressed. It is stated in the literature that properly planned and implemented social policy [16] enables patients to fully concentrate on matters related to the disease and procedures enabling recovery or rehabilitation without fear of losing their social position before the onset of the disease or means of subsistence, as well as ensuring the existence of the family. In the conditions of social security provided by the law, during the period of illness the patients rehabilitated in Głucholaz could properly respond to the diagnosis made by the doctor and accept the individual rehabilitation program offered to them [17].

There was no conflict among the respondents between trusting the doctor and the necessity to reject their recommendations (or even diagnosis) resulting from the lack of social security during the period of illness and rehabilitation. Patients’ health awareness could be formed in the circle of rational views expressed by specialists and be based on the modern scientific standard, so it had a chance to become effective [18].

The methods of clinical rehabilitation offered to patients after COVID-19 were based on the scientific grounds. An individual rehabilitation program carried out in the hospital setting corresponded to the characteristics of such a therapy [19], and activated various areas of the patient’s identity, not only their physical fitness, but also the area of aesthetic and emotional experiences (music therapy, exercises integrated with the use of modern equipment) [4]. The effectiveness of the methods of clinical rehabilitation offered to the patients was for many of them an sufficient barrier against discouragement related to the persistence of post-covid dysfunctions and the search for the methods to overcome them in the area of the so-called alternative medicine and self-medication that allowed to avoid the related health risks [20].

For many patients, the availability of religious service in the hospital was also very important, such as contact with the hospital priest (also by phone), the possibility of participating in the Holy Mass and individual prayers in the hospital chapel. This helped some patients to eliminate certain religious
practices that were prognostically unfavorable [21] and misconceptions [22] leading to increased anxiety, guilt and loneliness [23]. Properly implemented pastoral support offered to the patients is beneficial in the future [24]. It can also lead to a reorientation of a patient's life after suffering a serious and fatal illness. That period in life does not have to run under the influence of post-traumatic stress disorder, but it can - with properly provided help - take on a new, satisfying form.

The conducted studies also confirm previous analyzes of the experiences of chronically ill [25] patients, in which the type and scope of social support provided to them had a significant influence on the way they experienced the disease. When it was supported in a sufficiently wide range and in a timely manner, the patient could develop an effective strategy enabling the internalization of the disease in their individual biography, could learn to live with it and achieve many possible types of satisfaction. Trauma resulting from the disease may become the basis of post-traumatic growth for many patients undergoing appropriate treatment and rehabilitation. Life after illness, even despite persistent dysfunctions, can be a source of satisfaction and happiness for the patient.

Conclusions

The analysis of the experiences of patients in inpatient hospital rehabilitation related to COVID-19 allows us to formulate the following conclusions:

1. All patients experienced COVID-19 as a somatic and private experience. Their concerns focused on the symptoms of the disease, the suffering associated with it, and the complications that could possibly arise as a result of it. They were also concerned about the health of their relatives, especially their spouses, whose death was an event that would forever change the further life trajectory. Only by those respondents who lost a spouse or other close person, the COVID-19 epidemic was considered an event in their lives that significantly influenced their further existence. All the others did not consider this epidemic to be a "milestone" in their biography.

2. Due to the good financial situation and stable employment ensuring sickness and social benefits, none of the respondents associated the incidence of COVID-19 with the possibility of losing a job, livelihood and worsening of the social position held so far. The lack of such fears was also due to the fact that the majority of the respondents were employed in enterprises that they did not own, had a contract of employment and performed jobs objectively considered socially useful (doctor, teacher, economist, clerk, skilled worker, farmer, etc.). They were not afraid that, after their recovery, the demand for their work would cease or be drastically reduced. This significantly differentiated the experiences of respondents related to COVID-19 from the experiences of people running an individual business or artistic activity presented in the Polish press and television during the epidemic. These reports showed the effects of the epidemic mainly in the market terms (loss of earnings, lack of demand for services provided so far, disruption of the supply chains, lack of interest of recipients in artistic work, etc.), and not clinical or family ones. The vast majority of respondents, in their responses to open survey questions and in unstructured interviews did not consider the market approach to the epidemic as characteristic of their own experiences, nor was it considered important.
At the beginning of the epidemic, the respondents did not think that the epidemic would be of significant and lasting importance for Poland. More than a year after its outbreak, the percentage of people who believed that it would be of great importance for Poland increased significantly, but it did not correlate with the increase in the percentage of respondents who believed that the epidemic would be of great importance in their own lives. This change should be explained by the respondents' absorption of information repeated in the media every day, and not drawing conclusions from their personal experience that they would extrapolate to the situation in the whole country.

3. All the respondents recognized their social rights (the possibility of obtaining paid sick leave, permanent payment of the current pension) as natural guarantees of living conditions in the event of an illness. There was no such perspective, however, in the press and on television, and the experiences of private individuals presented in them differed significantly from the respondents' own experiences. Therefore, the respondents considered the press and media messages to be unreliable and useless for them in constructing their own defence strategy against the epidemic.

4. The respondents found the views disseminated by doctors in the media to be useful and credible. They considered them to be the main source of orientation in the epidemic situation and the starting point for developing their own protection strategies. Less than 10% of respondents considered the Internet to be the main source of information about the epidemic, most searched for the news from various sources on their own, including 15% from foreign television. The respondents trusted the official messages provided by specialists (doctors, epidemiologists), but considered them insufficient. They wanted systematic information that could provide instructions for them on how to protect themselves and their families.

5. The respondents negatively assessed the general standard of information about the epidemic provided by the official state institutions. They recognized that it was dominated by "official optimism", which was not adequate neither to the scale of the threat nor to the real epidemic situation in the country. Almost 80% of respondents felt that the government should have provided more of this information and presented the real threat of COVID-19. Only a few decided that the information policy based on minimizing the risk would be better, as it would not contribute to increasing the anxiety and fear.

6. In the first year of the epidemic, all respondents were surprised by the fact that they contracted COVID-19, they were unable to properly identify the risk after the onset of the symptoms, and only sought help when the symptoms became serious. In the second year of the epidemic, half of the respondents found themselves in the same situation. This could be considered a failure of the official COVID-19 information strategy. Minimizing the risk in the official media meant that the respondents did not implement the preventive recommendations formulated by the doctors in their private lives, even though they had been perceived by them and considered reliable. The understanding of information about COVID-19 was conditioned by the high level of education of the respondents (80% had at least a high school diploma). The lack of their implementation in private life and the lack of a sense of personal danger resulted from the fact that the respondents did not feel sufficiently and credibly warned by the authorities about the dangers that may befall them.
7. All respondents (except for those who did not lose their spouse or relatives during the epidemic) did not have any permanent psychological issues related to COVID-19, which were extensively described in the media in 2020–2022. Most of them showed elements of post-traumatic growth. It was based on the return to physical fitness giving the opportunity to control one’s life. The subjects planned various types of post-covid activity based on their sense of individual agency. The main type of emotions experienced by the respondents was joy due to the preservation of life, which was not obscured by physical and mental dysfunctions (e.g. the so-called covid fog). The respondents hoped to reduce these dysfunctions during the inpatient rehabilitation.

8. All the respondents who underwent symptomatic COVID-19 positively assessed the rehabilitation program offered to them at the Specialist Hospital of the Ministry of Interior and Administration in Glucholaz. The statements collected in the form of unstructured interviews turned out to be particularly valuable in this respect. Observing the improvement of physical capacity in the consecutive days and weeks of exercise became a very positive experience for the respondents, as was watching the recovery of fitness in other patients. Patients with asymptomatic COVID-19 took a different position. Many expressed disappointment with the standard of rehabilitation offered to them based on the hospital regime. They expected to be offered a sanatorium standard with a much greater degree of freedom.

9. The respondents’ statements may constitute the basis for a change in the manner of presenting information on epidemic threats by the official state media. This information should clearly refer the potential risk to an individual recipient and instruct them what they should do to stay safe. General information about the world, Europe and the whole of Poland for many recipients, even with a high level of education, is too abstract to form the basis for developing individual protection strategies. Creating an individualized information message on the epidemic threat may constitute a real barrier to the dissemination in the population of the information based on the alternative to clinical standard or clearly contradictory to it being spread via the Internet and the so-called whispering propaganda. Limiting this type of messages is very important for maintaining the health safety of the population. When its members assimilate the plain and consistent official message of an epidemic that is kept to the clinical standard, they will not base their epidemic protection strategies on any other basis. Therefore, this message should be developed, and in the event of an epidemic threat, it should be applied without any delay.

References


