ONOMY Science

American journal of Nursing & Practice
ISSN 2688-3120

Research article Open Access

Nurses Coping with the First Wave of the Coronavirus Pandemic: Feelings, Attitudes, Beliefs and Expressions of Behavior

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Citation: Nurses Nurses Coping with the First Wave of the Coronavirus Pandemic: Feelings, Attitudes, Beliefs and Expressions of Behavior. Am J Nur & Pract. 2020; 3(2): 01-11.

Submitted: 14 September 2020; **Approved:** 17 September 2020; **Published:** 19 September 2020

Abstract:

Background:

Nurses play a vital role in treating the Corona disease. Therefore it is extremely important to understand how they are coping with the situation.

Objectives:

The study aim were to identify the feelings, attitudes, beliefs, and behaviors of the nurses regarding Corona disease.

Design: Quantitative method

Setting: General hospital in central Israel

Participants: 350 nurses from various departments in the hospital

Methods:

The study tool was a constructed questionnaire included 29 items. It was distributed after receiving the approval of the institutional ethics committee. The data were analyzed using descriptive and analytical statistics. The internal reliability was 0.82.

results:

The main concern of most participants was infecting their families. Most of them had no doubt they would treat corona patients, even at the cost of endangering themselves. 92.4% felt proud to be nurses during the corona outbreak. More of the participants answered that they were prepared to reinforce the staff in the corona departments. Of these there were more men than women (p=0.001), the more senior the position, the higher was the willingness to act as backup (p=0.006), the higher the educational level the more willing were participants to augment the staff. More participants said they would feel more comfortable working 12-hour shifts; There was particularly high consensus with the decisions of the Ministry of Health (MOH), which were intended to control the spread of the pandemic and to prevent the collapse of the healthcare system. Most of the participants (61%) believed the virus was engineered in a laboratory and spread by mistake or on purpose. About half believed individuals at low risk should return to routine to encourage herd immunity. A similar rate believed that the coronavirus would disappear in summer.

Conclusion:

Despite the difficulties in coping with the coronavirus, nurses continued treating patients regardless of the shortage of equipment and despite the danger of infection.The first wave of the corona pandemic did have secondary benefits for the caregivers, amongst them public

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appreciation and support, and improvement in the perception of nursing as well as in nurses' self-image. At the time of writing (June 4, 2020), a disproportionately high rate of infection was reported due to the almost complete opening of the lockdown placed on the country. One of the limitations of this study is that future of the corona pandemic cannot be foreseen.
Keywords: Attitudes, Beliefs, Behavior, Coping, Coronavirus, Nurses.

BACKGROUND

Since the first reports of the outbreak of COVID-19 in Wuhan City, China, the virus has spread among millions of people worldwide, and has taken the lives of hundreds of thousands. On January 30, 2020, the World Health Organization (WHO) declared coronavirus a global health emergency, and on March 11, 2020 it was described as a pandemic of international dimensions (1-3) Despite worldwide efforts to find a vaccine, no specific antiviral drugs or vaccine against coronavirus has been found to date, and potential treatment focuses on the relief of symptoms and supportive care (4-7).

Following reports of the spread of COVID-19 worldwide, the Israel Ministry of Health (MOH) prepared for widespread morbidity. At first, they focused on an attempt to prevent the arrival of the virus in Israel, including quarantine for individuals returning from contaminated countries. Later, restrictions were imposed on community gatherings, and the restrictions were increased to a complete lockdown during the holidays (Pesach and Shavuoth). On April 12, 2020, the MOH published an order obligating the use of face masks outside (8-12).

Along with the spread of the virus in Israel the pattern of hospital activities changed. Because of their close contact with patients all hours of the day, nurses began to work 12-hour shifts, they learned to protect themselves and to undress carefully, to remain updated with MOH guidelines daily, to adhere strictly to the directions of the infectious units, to transfer staff to back up nurses in the corona departments, to use new technologies for communication, observation and robotics, and to use applications such as ZOOM.

However, the dark cloud continued spreading its gloom, with no clear direction. This was accompanied by grim theories of a catastrophe from hospitals in Italy, as well as numerous reports on infection and death of medical staff while treating corona patients. Most had been infected because of a shortage of suitable personal protection, and fatigue as a result of treating a disproportionate number of patients (13). The general atmosphere indicated the need to prepare for the worst scenario, masses of patients, many of whom required mechanical ventilation.

Like many others, nurses also had to cope with children who remained home for many hours, aged parents with whom they could not meet, etc. In particular nurses who cared for patients with corona were forced to face new and unfamiliar challenges in their professional and personal lives, challenges to which they had not been exposed before the outbreak of the coronavirus. Nurses play a vital role in combatting the coronavirus, in preparing, treating and preventing the spread of the disease. It is therefore of the utmost importance to observe how they are coping with the situation.

In preparation for a possible second wave of the coronavirus, and assuming that the virus might be with us for an extended period, it would be interesting to examine nurses' attitude regarding strategies such as the turnover of staff treating corona patients, their willingness to work in departments with corona patients, to work in 12-hour shifts, etc.

These answers might shape future nursing policies, taking the nurses' points of view into consideration. The results of this study could impact the human resource management in nursing in similar situations. Insights from the results of this study might also help bring fulfil the needs of the staff, as well as promote their strength and empower them.

Based on all of the above, the purpose of the study were to identify the feelings, attitudes, beliefs, and behaviors of the nurses regarding Corona disease. Therefore, the research questions were:

a. Do nurses have fear the illness? Is this fear affected by personal and professional characteristics?

b. Do nurses feel that the image of the nursing profession has changed as a result of the coronavirus?

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c. What are the attitudes of nurses about the personnel management issues in the days of corona (12-hour shifts, work in the corona department, etc.), and are their attitudes affected by personal and professional characteristics?
d.To what extent do the nurses agree with the policy of the MOH during the corona period?
e. What are nurses' sources of information and level of knowledge about the coronavirus?
f. What are the beliefs held by the nurses about the coronavirus? (engineered virus, Hard immunity)

METHODS

The study was a quantitative study.

Population

350 nurses responded to the questionnaire (Table 1). 83% were women, average age was 43.9 years. Most respondents were married (72.9%); one-third worked in corona departments. Average professional seniority was 17.3 years.

Table 1: Demographic and professional variables

	N=350	
Gender	Male female	17% 83%
Age (years)	Average SD range	43.9 (±10.6) 24-67
Marital Status	Married Single divorcee Widow	72.9% 11.9% 11.9% 1.8%
Number of children	Average SD range	2.43 (±2.7) 1-4
Religion	Jewish Moslem Christian	80.4% 14.8% 4.8%
Education	Registered Nurse bachelor's degree master's degree	12.2% 66.7% 21.1%
Role	Nurse Team Leader Deputy Nurse in charge Head Nurse Nursing management	77.8% 4.1% 6.7% 7% 4.1%
Division	Internal maternity surgery Emergency Room Children Clinics Operating room	34.6% 21.5% 15.4% 9.7% 7.5% 6.3% 5%
Professional seniority (years)	Average SD range	17.32 (±10.6) 1-39
Job percentage	Average SD range	88% (±18.5) 50-100%
Nurse working in the corona ward or surgeon		30.4%

Study Tool

In the absence of previous research tools in the field, a questionnaire was constructed based on a review of the literature and our short experience with coronavirus. The questionnaire opened with a brief explanation of the purpose of the study, emphasizing the anonymity of the responders. It contained 29 items: Seven of them verified positive and negative feelings (for example: "I was afraid to catch the illness", "I felt proud to be a nurse in these times"). Four questions related to attitudes of personnel management (such as "There should be a greater turnover of nurses treating corona patients to prevent burnout"). Twelve items verified knowledge and sources of information ("I obtained information about the disease from the World Health Organization"). Five questions were intended to examine attitudes to nationally made decisions (such as "Restricting international travel in the early stages of the outburst will help decrease the import of the virus to Israel"). The last section of the questionnaire contained demographic details, such as gender, seniority, etc. The participants were asked to rate the extent of their agreement with the statements in a range of 4, from 1 = Do not agree at all, to 4 = Agree absolutely. At the stage of data analysis a numerical transformation was performed with the values of the scale, to give the data a clear direction: From a scale of 4 values, a nominal scale of 2 values was derived, where Agree Absolutely and Tend to Agree were combined, and Do Not Agree and Tend not to Agree were the second value.

Procedure

The study was conducted at a general hospital in central Israel that served as a regional hospitalization center for Corona patients.
After receiving the approval of the institutional ethics committee the questionnaire was distributed for eight days (from April 30 to May 20, 2020), via email and WhatsApp, to nurses in the various departments at the hospital. Response was voluntary, and anonymous.

Data Analysis

SPSS was used for data analysis. Categorical variables were described using percentages, and sequential variables were described by averages and standard deviation. Comparison of the groups was performed with the chi-

square test for categorical variables, and with t-test and ANOVA for sequential variables. A p-value less than 0.05 was considered statistically significant. Internal reliability on the Cronbach alpha measure, in all questionnaire parts, ranged from 0.58 to 0.91, and after excluding five items with reliability lower than 0.6, the measure increased to 0.82. Content validation of the questionnaire was conducted using a group of experts (the scientist who performed the questionnaire analysis and two specialized nurses from the corona department, who examined the tool's compatibility to the research questions. To examine clarity, the questionnaire was handed as a pilot to 20 subjects, and was adjusted according to their comments.

RESULTS

Feelings Expressing Fear

The main fear of most of the participants was infecting family members with the virus (84%). About 60% feared being infected with the disease. Approximately half (52%) reported that neighbors, friends and family members were distancing themselves because of their work at the hospital. Over half (57.4%) of the participants felt that those treating corona patients required courage. Despite this, most of the participants (76.6%) had no doubt it was their duty to treat corona patients, even at the price of self-endangerment. There were no sig nificant differences in items expressing fear as a dependent variable in personal and professional characteristics. There were also no significant differences between participants who worked in corona departments and those who did not work in these departments.

Perception of the Nursing Profession

Very high agreement was found between participants of the study in relation to pride in being a nurse during the corona period (92.4%) as well as the sense that they are gaining public appreciation for taking the risk in treating Corona patients (81.8%)

Issues in Administration of Nursing Personnel

There was particularly high consensus (87.6%) regarding the need for turnover of the staff treating corona patients to prevent burnout. Almost half of the participants (48.8%) responded that they were prepared to reinforce the staff in the corona departments. Professional and personal characteristics of those who were willing to reinforce the staff in the corona departments if asked to do so revealed the following significant characteristics: More men (81.8%) than women (54%), p=0.001; the more senior the position, the higher (p=0.006) was the willingness to help in the corona departments (nursing administration, headquarters and general – 92.9%, head nurses – 78.3%, deputy head nurses – 77.3%, nurses – 53.9%. Despite the fact that the differences were not significant, it is interesting to note that the higher the level of education, the more willing the nurses were to support staff in the corona departments (nurses with no degree – 50%, nurses with a bachelor's degree – 57.8%, nurses with a master's degree – 64.8%). Personal and professional characteristics of those who volunteered to reinforce the staff in the corona departments showed a significant increase in the following characteristics: those who already working in the corona departments (68.1%) compared to those who do not work in corona departments (31.8%), p=0.003. As most of the staff in the corona departments come from the internal division, it was not surprising that nurses from this division were significantly more willing (p=0.05) to volunteer in the corona departments, compared to operating theater and maternity wing nurses (64.4% internal versus 23.1% operating theater, and 25.8% maternity wing). Here too we see that the more senior the position, the higher was the willingness to volunteer and support the staff in the corona departments (p=0.03) (nursing administration – inspectors, headquarters and general – 64.3%, head nurses – 63.6%, deputy head nurses – 59.1%, nurses – 32.8%).

More participants (56.1%) responded it would be more convenient for them to work 12-hour shifts. Characteristics of those for whom it was more convenient to work in 12-hour shifts revealed: More men (72%) than women (52.2%), (p=0.015); more single nurses (70%) than married (51.7%), p=0.01; ages 30 and under (70%) compared to other age groups, (p=0.034); respondents from operating theaters were significantly more eager to work 12-hour shifts (92.3%) compared to other participants; the more children participants had, the less convenient it was for them to work 12-hour shifts (r=0.76).

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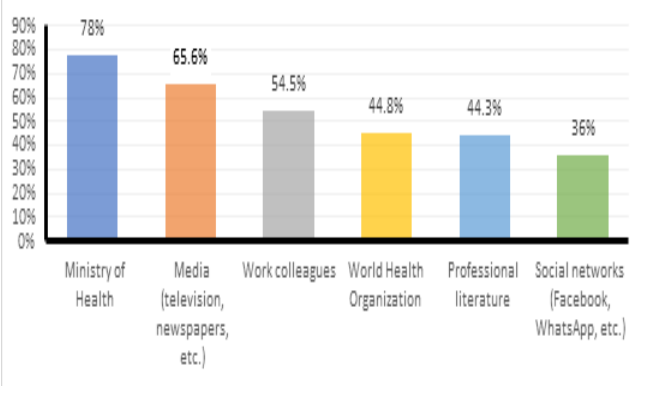
Agreement with MOH Policies

Most of the respondents agreed with the decisions of the MOH, which were meant to decrease the spread of the disease and to prevent the collapse of the healthcare system, for example: The use of masks in community settings decreases the spread of the virus by patients and carriers – 94% agreement; prevention measures taken, like imposing movement restrictions, extended tests and isolation of patients moderate the spread of the disease – 94%; social distancing and isolation of patients with the spread of the virus locally enables reduction of local outbursts – 95%; imposing a general lockdown reduces the spread of the disease significantly – 95%.

Sources of Information and Extent of Knowledge about the Coronavirus

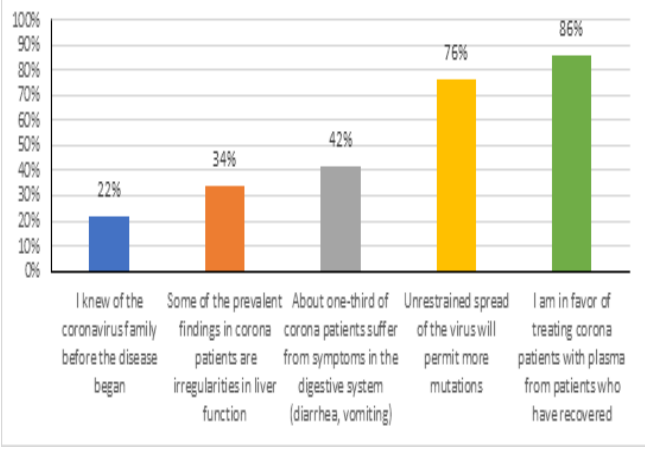
As depicted in Graph 1,

Graph 1: Sources of Information



most of the nurses' information about the coronavirus came first from the MOH, and then from the media. Only 44.3% said their information was obtained through professional literature. As described in Graph 2,

Graph 2: Knowledge of the Coronavirus



a significant number of the nurses had not been aware of the coronavirus before the emergence of the disease. Similarly, only few of them knew about the existence of symptoms in the digestive system, which were reported less in the media.

Beliefs about the Corona Disease

Most of the participants (61%) held the belief that the virus was engineered in a laboratory and distributed accidentally or on purpose. About half of them believed that the return to a normal routine of low-risk individuals and thus infecting more patients would lead to herd immunity (48%). A similar percentage believed that the coronavirus would disappear in summer (47%)

DISCUSSION

While countries panicked and closed their borders, and when restrictions were imposed on tens of millions of human beings in an attempt to stop the spread of the coronavirus, nurses stood in the frontlines of the battle and contended with hospitalized corona patients. As shown in the findings of this study, they experienced fear. The sources of their fear lay in the uncertainty that existed with the outburst of the corona pandemic, and the number of morbidity and mortality that increased exponentially and almost doubled daily. Given the manner of the disease transmission, the World Health Organization (WHO) determined that employees of the healthcare system were more likely to contract corona because of their increased exposure (14). However, medical staff worldwide as well as in Israel spoke of a shortage of protective equipment (15). There were numerous reports worldwide of the contagion and death of medical staff while treating corona patients. Most of them contracted the virus because of a shortage of personal protective equipment, as well as a result of fatigue caused by the need to treat a disproportionate number of patients (13). Furthermore, by the end of March 2020, the MOH granted lower precedence for corona testing of medical staff, compared to other groups at risk. Medical staff was placed fifth on the list of priorities (16).

All these were compelling reasons for the fear that was recognized in this study, as well as for the feeling that nurses required courage to treat corona patients. The gap between the professional obligation to help patients and self-endangerment created a considerable dilemma amongst caregivers. One of the basic elements

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in Jewish ritual is "Your life precedes your friend's life". "; in contrast, "The medical staff duty to heal" in the Torah is perceived as the ob ligation to heal. As many lives must be saved in a pandemic, if medical staff do not heal, a general public disaster will occur. Therefore, according to Halacha medical staff status is similar to that of soldiers (17).

Throughout history there have been medical staff who chose to "escape from patients" rather than treat them. During the SARS epidemic which was caused by a virus from the corona group, about 40% of those who died were medical personnel, mostly nurses. The Canadian healthcare system was on the verge of collapse with the outbreak of SARS, and the health of hospital workers posed a serious ethical dilemma: should they return and face contamination by the lethal disease? Should they place the health of their families at risk, or avoid work for own their safety and health? To a large extent, medical caregivers in countries coping with SARS abandoned their positions and left hospitals. During the current coronavirus period there have also been reports from Britain and from the United States about caregivers who have refused to treat corona patients because of the lack of appropriate protective equipment. It is interesting to note that the absconding is a two-way street; in times of epidemic, the public has been known to grow suspicious, and to flee for fear of infection (18-19). Despite the moral dilemma, no legal mechanism exists which can prevent individuals from withholding treatment or force them to treat patients against their will. Those who prefer to escape from the burden of treating patients will always find a way to abscond. Therefore we cannot but wonder at the dedication of medical personnel worldwide, behavior that cannot be taken for granted in present times (18).

The current study shows that most of the participants had no doubts about treating corona patients. A review of the literature reveals many teams with no motivation to work more than their regular routines in normal times, but who played a leading role, working harder without complaining, and motivating others during the pandemic. They possess great inner powers, abilities, the willingness and courage that they had not used previously and that they were not even aware they possessed. This gave them a sense of transcendence growth when coping with this unique situation (20-21). It might thus be assumed, albeit with caution, that this is a secondary benefit of the corona pandemic.

The Perception of the nursing profession

The public support and appreciation for the medical staff worldwide is connected with a subconscious understanding that one could not take for granted that medical caregivers would continue treating patients despite the risk of infection (18). Hence public appreciation for the healthcare system, expressed by various gifts from citizens and companies, the hand-clapping of millions of Israelis on their porches, the lighting of a torch on Independence Day in honor of nurses in the frontlines fighting the coronavirus, greetings to nursing staff from the Prime Minister on Nurses' Day – is a secondary benefit of the corona pandemic (22-23). Under the concealed cover of an umbrella of empathy and public acknowledgment of the difficulties and dangers with which medical staff cope, it is no wonder that participants in the study felt proud to be nurses today. Public appreciation might also have given them the power and the mental strength required to cope with their fears.

Issues in Managing Nursing Personnel

In a study conducted during the first stages of the corona outbreak in Hubei, China, doctors and nurses who treated patients with COVID-19 were asked how they cope with the situation. Despite the fact that they perceived themselves to be responsible for the lives of their patients and did the best they could to treat them, they reported that the intense work exhausted them both emotionally and physically. Their fatigue was caused by the burden of work, by the protective clothing they wore, by working in unfamiliar conditions, the fear of infection themselves and of infecting others, as well as the difficulty to communicate in a situation filled with pressure and anxiety (21).

We assume that for these reasons the present study shows great consensus regarding the need for turnover of the staff treating corona patients, with the objective of preventing burnout. Thus, more participants (more men than women, unmarried and under the age of 30 responded that it would be more convenient for them to work in 12-hour shifts, which might provide more days of rest per week. However,

the more children participants had, the less convenient they felt it was for them to work 12-hour shifts. Despite the risk and discomfort working in the corona departments, more than half of the respondents were prepared to support the staff in these departments. Most of them were nurses from internal medicine who worked in corona departments, or staff who had previously helped out in these departments. As a great part of those who worked in corona departments came from the division of internal medicine, it is not surprising that they were significantly more willing to volunteer in the corona departments, compared to nurses from the operating rooms and from the maternity ward. Moreover, treating corona patients is based on internal medicine, and therefore nurses from the division of internal medicine probably felt more confident in their abilities to treat these patients. It was surprising to discover that the more senior the position of the nurses, the more willing they were to volunteer and back up the staff in the corona departments (administration and head nurses twice as much as other nurses). This might be explained by the fact that the administrative ranks felt more responsibility, wanted to set a personal example, and perhaps they also had a greater sense of awareness of the catastrophe to come.

Extent of Consensus with Policy of the MOH

Participants in the study supported the decisions of the MOH in handling the pandemic, such as isolation, social distancing, lockdown, and the obligation to wear masks in community settings. As the predicted scenario was that hundreds of patients, including ventilated patients, would be admitted to hospital, and the nurses knew they would not be able to cope with such quantities, all the decisions made by the MOH which were intended to minimize the pandemic and prevent the collapse of the healthcare system were perceived to be correct by respondents in the study. While many countries took the far-fetched steps of a general lockdown, isolation of patients and of those who had come in contact with patients, disinfection, etc. At the time of writing this paper, only few countries were enforcing the wearing of protective masks in community settings, and Israel was one of them. Other countries made do with a recommendation to wear a mask when leaving home, whereas the Center for Disease Control (CDC) in the United States recommends that the entire population use cloth face coverings to help slow the spread of COVID-19 (24). The WHO was satisfied with a recommendation to wear a mask only after corona symptoms appeared, or while treating an ill individual (25).

Sources of Information and Knowledge

Nurses should be a reliable source of information to educate patients and the community about the disease. Withholding information might cause fear and anxiety, rumors, denial, and other dangerous behavior. Therefore it is important that the knowledge of the nurses rely on reliable sources (26). A study which comprised 75 nurses was conducted in Iran at the beginning of March 2020. This study found that more than half the nurses had good information about sources, transmission, symptoms, signs, prognosis, treatment and mortality rates of COVID-19. The sources of information for the nurses were the WHO, the Ministry of Health, social applications, and the media (27).

Similarly, the current study also shows similar sources of information, at the top of which were the MOH and the media. It is of some concern that information based on professional literature was not rated to be of greater value by the participants. It seems that a considerable number of nurses had not heard of the coronavirus before the appearance of the disease.

SARS-CoV-2 is the seventh strain of the coronavirus that is known to affect humans. Three strains which might cause severe illnesses are SARS-CoV (which caused the outbreak of SARS), MERS-CoV (which caused MERS), and SARS-CoV-2 (which is responsible for the COVID-19 pandemic), and more strains exist which generally cause milder symptoms (28).

Researchers worldwide are trying to understand COVID-19 and the virus that causes it. We currently know that risk factors that might require hospitalization include older age and chronic medical conditions such as diabetes, pulmonary diseases, and coronary, cardiac and vascular diseases. Most COVID-19 cases are mild, and the main symptoms are fever, cough, fatigue, and shortness of breath. COVID-19 patients are also likely to complain of symptoms in their digestive systems, such as nausea and diarrhea. Only few of the participants in the

present study were aware of the existence of symptoms in the digestive system, as less of these were covered in the media.

Newer studies show that the frequency of reports of diarrhea in COVID-19 patients is about 33%. Furthermore, some of the more prevalent symptoms in COVID-19 patients are irregularities in laboratory tests and liver function (37%). A study of 204 COVID-19 patients in Hubei, China showed that almost half reported that digestive problems were their most severe symptoms. A comparison of patients with digestive symptoms to patients with respiratory symptoms showed a significantly longer time between appearance of the symptoms and hospitalization (9 versus 7.3 days). This might have been because physicians did not relate to digestive problems as a symptom relevant to the disease. Patients without digestive symptoms were also discharged earlier than patients with these symptoms. Researchers recommend that patients at risk with problems in their digestive systems should perhaps be examined earlier, without waiting for respiratory difficulties, so as not to miss potential COVID-19 patients (7). Most of the participants in the current study were unaware of these data, as they could not have known about them from publications by the MOH or from the media, but only if they had read professional literature.

Particularly high consensus in this study was with the possibility of treating corona patients with plasma from patients who had recovered. Treating a viral illness with convalescent plasma is not a novel idea. It was used in swine flu as well as in Ebola patients. A pioneering study on corona patients showed that administration of convalescent plasma lowered fever, decreased viral loads to below detection threshold, and increased antibody level. However, further research is required to prove that administration of convalescent plasma is beneficial and safe (29).

Nurses Beliefs about the Coronavirus

A short time after the outbreak of the pandemic various rumors spread in the community about an engineered virus, perhaps even a biological weapon, which had been distributed mistakenly or on purpose. This was the belief of most of the participants in this study. However, evidence points to the fact that the virus came from the animal world and adapted itself naturally. Researchers from the United States and Europe who attempted to determine the source of the novel virus focused on the prominent features of its genome and discussed scenarios by which they could have arisen. Their studies clearly show that SARS-CoV-2 was not a laboratory construct or a purposefully manipulated existing virus. Researchers are of the opinion that if it had come from a laboratory for biological warfare, available methods and tools that had already been developed for fighting similar coronaviruses could have been used. Moreover, their computational analysis suggested that the interaction between the virus protein and receptors in the virus is not ideal. In other words, if somebody had wanted to design a virus that would easily infect human cells, they would easily have been able to design a protein that would be optimal for receptor binding (28).

As there is not yet a vaccination against the virus, some think that if the virus was allowed to spread in the general community, mainly among the lower-risk individuals, a natural immunity would develop, making it difficult for the virus to find more vulnerable people to infect. This was the opinion of about half our respondents. It might sound like a good idea; in Sweden, for example, the government decided not to impose lockdown and thus to cause "herd immunization". Until the end of April 2020 a local study showed that only 7.3% of the population in Stockholm developed antibodies to the virus. The findings did not concur with models that foresaw that one-third of the population in Stockholm would develop immunity. The total amount of mortalities there was one-third more than in neighboring Scandinavian countries, where lockdown was imposed. The WHO also warned against over-confidence in herd immunization (30-31).

Herd immunization places a great amount of the population at risk. This is not an appropriate method of preventing a disease, but rather of spreading it. To attain herd immunization against the novel coronavirus, over 82% of the population would have to be infected and to become immunized.

In Israel this would mean that millions of individuals would have to be infected with the virus. It is estimated that 0.66% of all those

infected would die, resulting in a fatality of tens of thousands of individuals, with approximately 3,000 under the age of 60. Of all those infected, hundreds of thousands would be hospitalized, and amongst them around 100 thousand would be severely ill. In this situation, the healthcare system could not possibly cope and would most likely collapse (32).

Furthermore, it should be taken into account that unrestrained spread of the virus will permit more genetic changes (mutations). In a new study with no peer-review, scientists identified even more mutations in the virus with its spreading. These changes could create more or less violent strains, and even change the infectious ability of the virus (33).

The high cost of herd infection also points to the fact that this is not the desired solution to the current pandemic. The most secure method to stop the virus is currently vaccination, and until a vaccination is found, social distancing should be enforced.

Despite the fact that half the respondents believed the pandemic would disappear in summer, it appears that in some warm countries, such as India and Africa, the coronavirus has spread. Thus, summer did not eliminate the disease, but probably made it worse. Cognitive bias about the coronavirus makes us prefer information that suits our thoughts, beliefs and desires. Examples for this are that the virus was engineered, that herd infection is a solution, and that the coronavirus would disappear in summer. We want to believe, but have no evidence-based facts for proof.

CONCLUSIONS AND RECOMMENDATIONS

While countries closed their borders in panic and lockdown was imposed on tens of millions in an attempt to stop the spread of the coronavirus, there were nurses who fought in the frontlines and treated hospitalized corona patients. Despite the difficulties in coping with the disease, the medical staff continued treating patients, even in light of a shortage of equipment and the danger of infection. This is proof that the human spirit of caregivers rose above the obstacles. We conclude that the more protection the caregivers have, both physically and emotionally, the lower their risk of infection would be when treating patients, and this in turn would make it ethically possible to expect and even to demand they provide more treatment in other situations that involve danger.

We therefore recommend the staff be given professional emotional support. We also advocate working in 12-hour shifts, thus permitting more days of rest a week. We suggest that there should be a turnover of caregivers every three months to prevent burnout. We also strongly recommend promoting nurses' professional knowledge about symptoms and means of treatment. The results of the study show that the first wave of the corona pandemic did have secondary benefits for the caregivers, amongst them public admiration and support, an improvement in the perception of nursing as well as in nurses' self-image. We hope that the last aerial demonstration of the Israel Air Force over hospitals on Independence Day showed that some of the country's resources should be directed to strong support of the healthcare system.

In conclusion, corona is a novel illness that spread globally in a rapid manner and turned into a modern pandemic. We do not yet have sufficient information about this novel virus: the meaning of morbidity, percentage of mortality, early and late complications. We have only just started to understand the pathological processes caused by the disease, which does not yet have either medication or a vaccination. Hence we must take the utmost care not to be infected. At the time of writing these last sentences (4.6.2020), it has been reported that as a result of almost complete cancellation of the lockdown there has been a dramatic rise in coronavirus infections.

We remain with many unanswered, such as: is the second stage currently being composed? Will there be another wave of corona come winter? How much time will it remain with us? As there is no way to foresee the future of the corona disease, we must wait and see.

Cite this article: Nurses Nurses Coping with the First Wave of the Coronavirus Pandemic: Feelings, Attitudes, Beliefs and Expressions of Behavior**.** Am J Nur & Pract. 2020; 3(2): 01-11.

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