

Original Article: Clinical Experiences During the COVID-19 Pandemic: An analysis of Strategies and Experiences in Managing Patients with COVID-19

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ABSTRACT

The disease of Covid-19 has increased anxiety in both the general population and the treatment staff. The attention of therapists to the factors that because anxiety can play an important role in the treatment of anxiety disorders of clients during the covid-19 pandemic. In the face of the critical situation caused by the spread of Covid-19, health care workers and hospital treatment staff, who were on the front line of fighting this disease, were directly involved in the diagnosis, treatment and care of patients with Covid-19 and were exposed to the risks of Some of them are especially psychologically distressing. For most service providers, many issues are stressful during times of crisis. Among them: the risk of disease, high work pressure, seeing the suffering and pain of patients and their families, separation from family, difficult decisions in life and death situations and providing support in medical care. In many researches, psychiatric disorders such as depression, anxiety and post-traumatic stress disorder have been reported in healthcare workers. In addition, female nurses and health care workers who are dealing with patients with covid-19 face a higher risk of depression, anxiety and increased distress than male nurses do. Medical staff, especially nurses who deal with the disease of Covid-19, or are exposed to patients with this disease, may experience suicidal thoughts. In Rogers et al.'s research, the prevalence of suicidal thoughts in hospital staff was reported from 2.4% to 13.9% during the Covid-19 pandemic.

Introduction

The disease caused by the corona virus, which is called the 2019 coronavirus disease (COVID-19), was first identified in Wuhan, China [1]. CO stands for corona; VI stands for virus and D means disease (in English). Most flu-like symptoms are the common cold. For this reason, to confirm that someone has contracted Covid-19, they must be tested [2]. Symptoms

may appear between 2 and 14 days after exposure to the virus and range from very mild to severe illness. Some infected people have no symptoms. The most common symptoms include fever, cough and fatigue. Other symptoms include shortness of breath, chest pain or pressure, body aches and muscle aches, headache, loss of sense of smell or taste, confusion, sore throat, stuffy or runny nose, diarrhea, nausea and vomiting, abdominal pain

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[3]. In addition, skin rashes. In addition to these symptoms, babies may have difficulty breastfeeding. Children of any age can get corona disease. While children and adults experience similar symptoms, children are generally less seriously ill than adults are [3]. Symptoms that require immediate medical attention include shortness of breath, rapid breathing, bruising of the lips or face, chest pain or pressure, confusion, inability to stay awake, unresponsiveness, inability to drink or swallow liquids, severe abdominal pain. The virus is mainly spread through the respiratory droplets of an infected person when coughing, sneezing, talking, reading or breathing [4].

These droplets may be large or very small, and people can be carriers even without having symptoms of the disease. From what we know now, the evidence suggests that the coronavirus spreads mainly through people who are in close contact, typically within one meter of each other [5]. Inhalation of respiratory droplets or particles infected with the virus or direct contact with the eyes, nose or mouth can infect anyone.

The virus can also spread in poorly ventilated or closed and crowded places, where people have to be together for long hours. Indoor places, especially with poor ventilation, are more dangerous than open spaces. People can also get the virus by touching their mouth, nose or eyes after coming in contact with contaminated surfaces [6]. Experts are still researching how the virus is transmitted and spread and the most dangerous places and situations. The Covid-19 pandemic has created unprecedented challenges and poses a disproportionate threat to humanity, especially the lives, relationships and well-being of the elderly [7]. Given the spread of the novel coronavirus and its effects on human health, no one knows how long this pandemic will last,

and the long-term toll on older adults living in a confined environment will be significant. At the time of quarantine at home, holidays and having an unnatural lifestyle, many people in the society have to stay at home and prolonging the quarantine will definitely have psychological and social economic reactions [8].

Chong et al showed that factors such as year of education, physical inactivity and family crisis in the past year had a significant relationship with depression. Unbalanced diets are significantly associated with anxiety. From an experimental and clinical point of view, financial problems and lifestyle factors can increase the level of depression and anxiety and stress symptoms of nursing students. A study conducted in Israel on nursing students showed that gender, lack of personal protective equipment and fear of getting infected were associated with a higher anxiety score.

In 2019, Saadati Rad et al showed that students who were in contact with a person infected with Covid-19 have lower mental health [9].

Another study in Spain showed that nursing students experience high levels of anxiety during the covid-19 pandemic, and factors affecting anxiety include being a woman, studying in the final year of a bachelor's degree, and living in a house without a garden [10].

Qi et al conducted a nationwide survey of 52,730 people in China during the Covid-19 pandemic (Figure 1) and found that about 35% of participants had psychological disorders [11].

Huang and Zhao conducted a web-based survey of 7236 people in China and reported overall prevalence of generalized anxiety disorder, depressive symptoms, and sleep abnormalities to be 35.1%, 20.1%, and 18.2%, respectively [12].

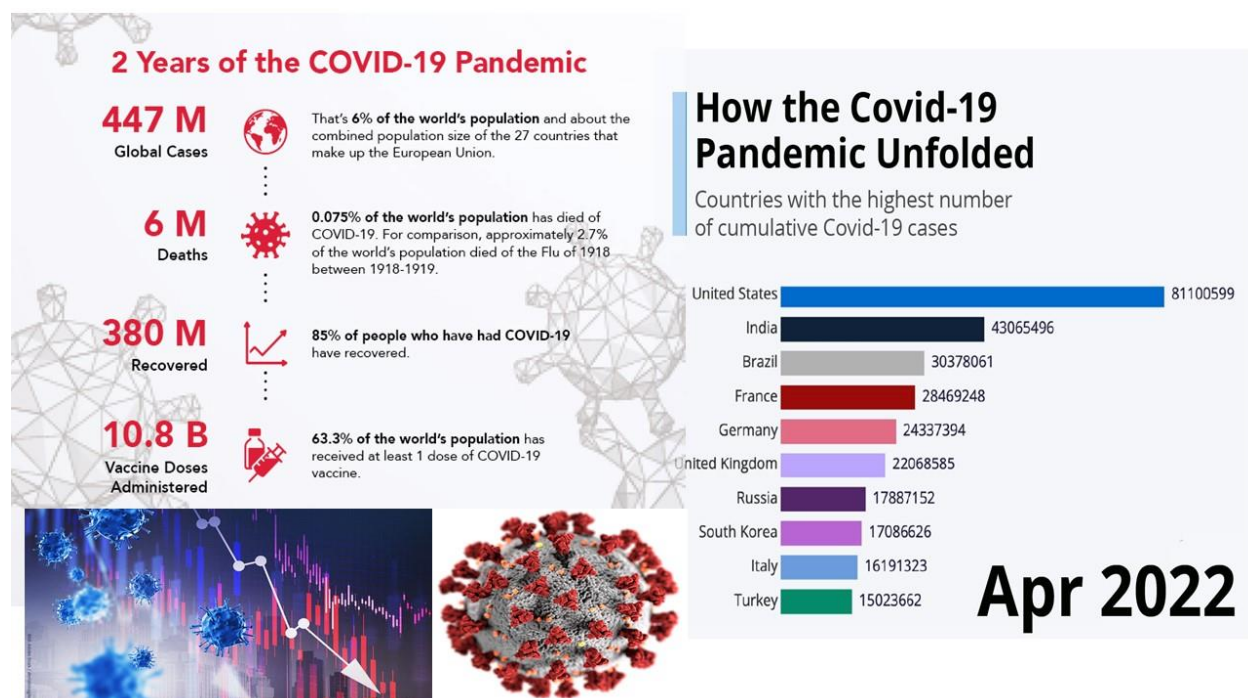


Figure 1. Clinical experiences during the COVID-19 pandemic: An analysis of strategies and experiences in managing patients with COVID-19

In addition, Hao et al. compared the psychological impact of the Covid-19 pandemic on people with and without mood and anxiety disorders. They observed, concern about physical health, anger and suicidal ideation were significantly higher in mental patients than healthy people. Several suicides related to Covid-19 have also been reported in the US, UK, Italy, Germany, Bangladesh, India and other countries in the mass media and psychiatric news during the Covid-19 pandemic. For example, a 66-year-old man suffering from throat cancer hanged himself after learning that he tested positive for the coronavirus in a hospital in New York City. In another case, a 36-year-old man living in Bangladesh committed suicide due to having cold symptoms and the possibility that he may have been infected with Covid-19. In addition, the head of the emergency department of one of the New York City hospitals, who was a 49-year-old man, ended his life by committing suicide because he witnessed the suffering and death of patients

while caring for patients with the corona virus [13].

The Irish Longitudinal Study showed that social isolation and loneliness are associated with depression and generalized anxiety disorder. In addition, it was reported that both objective social isolation (living alone) and the subjective feeling of being alone are related to suicidal ideation and behavior [14].

Anxiety and fear during the Covid-19 crisis may be related to lack of confidence, fear of unknown and frightening stories on social media. These factors may lead to the creation or exacerbation of stress-related disorders and suicide in vulnerable populations such as people with a history of psychiatric disorders, people with a sensitive temperament, people who live in areas with a high prevalence of Covid-19, and people who have a history of losing loved ones. due to covid-19. The reduction of economic activities during and after the Covid-19 pandemic is likely to have a detrimental effect on mental health and lead to

an increase in the prevalence of psychiatric disorders and suicidal behavior [15].

Braden and Sullivan reported that any increased risk for suicidal behavior in chronic pain conditions is largely due to the presence of pain-related depression or anxiety [16].

The findings of Asgari et al.'s research showed that the experiences of corona patients are classified into three main themes: negative thoughts, feelings and emotions caused by the disease, changes in the behavior of family members, and changes in the behavior of others. The results of this research showed that the spread of the corona disease strongly affects the personal, family and social relationships of people, and in order to prevent and control the damage caused by it, the cohesion and strength of the family structure must be strengthened through relevant training and effective psychological interventions [17].

In Khodabakhshi's research on students during the quarantine caused by Corona, the main experiences of these people in four main themes include the growth of negative emotions, confusion and pessimism, the growth of practical intellectual obsessions about the body and washing, intellectual concerns about endangering the health of the family and economic concerns. and the fear of tomorrow to get rid of Corona. Death anxiety, the experience of the stigma of the disease, the experience of ambiguity, positive emotional experiences, the emotions experienced in relation to family members and the emotions caused by quarantine were the main themes that were obtained from the research of Rahmati nejad et al because of interviews with corona patients [18].

In their meta-analytic study, Brooks et al reviewed 24 articles on the effects of quarantine on medical workers and community members during communicable diseases in different communities. They

concluded that the reviewed studies emphasize the negative psychological effects of quarantine, including post-traumatic stress disorder (PTSD) symptoms such as confusion and anger. In addition, psychological stressors such as worry about prolonged quarantine, uncertainty about the future, fear of illness, boredom, insufficient facilities, misinformation, mistakes, insufficient income, and financial and economic losses can be the consequences of long-term quarantine [19].

In a research aimed at the phenomenology of the lived experiences of the elderly from the Corona pandemic, Chi showed that Covid-19 has brought unprecedented challenges and disproportionate threats to the lives, relationships and well-being of the elderly. However, the main message of the study was that older people believe that "this too shall pass" and that they will regain the freedom that was lost during the pandemic [20].

Brooke and Clarke identified three themes of early social quarantine experiences of older adults, including protective measures, current and future plans, and acceptance of a good life [21].

The results of the research of Ariapooran and his colleagues showed that the suicidal thoughts of nurses with a bachelor's degree were more than those with a master's degree, and the anxiety and suicidal thoughts of single nurses were more than those of married ones were [22].

The results of Feizipour et al.'s research showed that there was a significant relationship between the scales of depression, aggression, anxiety, psychosomatics, sleep quality, obsession, suicide and memory with the group of direct and indirect health care staff involved with Covid-19 [23].

In a study by Bismark et al., one in 10 Australian workers reported suicidal thoughts or self-harm during the pandemic. The likelihood of suicidal thoughts or self-harm was

higher among employees living alone who had friends or family with Covid-19. Increased alcohol consumption, poor physical health, increased worry about income or previous mental illness, and having dependent children were other factors influencing the tendency to commit suicide [24].

The results of Mortier et al.'s research showed that the lack of sufficient preparation of the hospital complex to accept Covid-19 patients, the stress caused by the current financial conditions, the stress of job loss and adverse mental health were the most important causes of suicidal thoughts and behaviors [25].

In the studies of non-lethal suicidal behaviors, including during the covid-19 epidemic, psychiatric factors, emotional disorder, depression, home and work stress, personality disorder, psychological, physical and occupational factors were involved [26].

In the research, Kakarala and his colleagues stated that the epidemic of Covid-19 has made the medical work environment more stressful than before, and as a result, the risk of suicide of doctors increases. The medical system in the United States has not adequately protected the mental health of doctors. Lack of confidentiality, stigma, cost and time, as well as cumbersome medical licensure programs continue to be obstacles for physicians. Work pressures imposed by insurance companies and financial incentives to increase income while reducing costs aggravate the work stress of doctors [27].

The results of Xu et al.'s research showed that family members suffering, lack of response to psychological needs, low quality marital or family relationships, low sleep hours and long working hours, perception of high stress, perception of low support, depression, anxiety and reduced trust in Breathing causes suicidal tendencies among Chinese hospital workers during the Covid-19 pandemic [28].

In these six studies, the prevalence of suicidal thoughts and attempts has not been stated. Being female, having a previous suicide attempt, using psychotropic medication, and job burnout during the COVID-19 pandemic were associated with a higher risk for suicidal ideation [29].

The results of Al-Humadi et al.'s research showed that depression, anxiety, stress caused by the Covid-19 epidemic, the young age of some doctors, job-related worries and burnout were the most important predictors of suicidal thoughts and attempts among doctors [30].

The articles reviewed in this study had a high overlap regarding the expression of the factors of suicidal thoughts and attempts among the treatment staff. So that the fear of contracting Covid-19, stress caused by financial conditions, stress of job loss, adverse mental health, gender, previous suicide attempts, use of psychoactive drugs and alcohol, loneliness, job burnout and psychological problems, among others. were agents. In all researches, the population and the statistical sample of the articles were appropriate. Most of the research articles used in this study were done in China, Spain, America and Iran, respectively. A number of studies also reported the prevalence of suicidal thoughts and attempts, which is a considerable amount [31].

The results of Sahimi et al.'s research showed that the proportion of health workers with suicidal thoughts was 11.1%. The analysis showed that clinical depression was the most important factor related to suicidal thoughts [32].

De la Vega Sánchez et al.'s research showed that the prevalence of serious suicidal thoughts was 31.6%, and up to 17.32% of people reported suicidal thoughts during the pandemic [33].

The results of Xu et al.'s research in China showed a prevalence of 13.3 percent of suicidal thoughts. In China, the prevalence of workplace

bullying, suicidal thoughts, and attempted suicide were 30.6%, 16.8%, and 10.8%, respectively. In Spain, the prevalence of serious suicidal thoughts was 31.6%, and up to 17.32% of people reported suicidal thoughts during the pandemic [34].

In 2021, Mortazavi et al. conducted a phenomenological study on the experienced phenomenon of bereavement caused by Corona among survivors in the Iranian population. In this study, the experiences of 9 women and 6 men were studied through semi-structured interviews. By analyzing in the Claiz method, the researchers found 5 main themes and 16 sub-themes. The themes of ambiguity and despair, untold narratives, feeling of loneliness, conflict between fear and need, as well as consolation with alternative methods were the 5 main themes of the study [35].

Shahyad et al., in a study titled "Psychological effects of the spread of the Covid-19 disease on the mental health status of the community: a review study", strong evidence has been seen in the research for the occurrence of symptoms of psychological disorders at different levels of society during the corona epidemic [36].

In 2021, Mortazavi et al. conducted a phenomenological study on the experienced phenomenon of bereavement caused by Corona among survivors in the Iranian population. In this study, the experiences of 9 women and 6 men were included in the study through semi-structured interviews. By analyzing in the Claiz method, the researchers found 5 main themes and 16 sub-themes. The themes of ambiguity and despair, untold narratives, feeling of loneliness, conflict between fear and need, as well as consolation with alternative methods were the 5 main themes of the study [37].

Other themes identified in the present study were unconventional mourning. The participants expressed that they were not allowed to hold an in-person ceremony due to

quarantine and following health protocols during the Corona epidemic. The lived experience of women bereaved by the death of their husbands showed that unconventional burials and virtual mourning ceremonies have been effective in the unfinished mourning process. In a letter to the editor, Javadi et al mention the corona pandemic as a cause of delayed mourning in survivors. These researchers state that the important issue is the psychological effects of the surviving families after the death of their loved ones. During the corona epidemic, the survivors were not allowed to hold mourning ceremonies, vent their emotions, and express sadness and grief in the usual way, especially during the quarantine period, when even relatives cannot communicate with each other for a long time after the death of a loved one. In a study, psychiatric wards were identified as a very suitable place for the spread of the virus. Being hospitalized in hospital wards causes contact with other people and leads to an increase in the possibility of infection and contracting covid-19 [38]. In a report from China Psychiatric Hospital, 50 patients with psychiatric disorders admitted to the ward and 50 mental health specialists were infected with Covid-19. In another report, it was announced that 323 patients with severe psychiatric disorders were infected with Covid-19. Perhaps one of the reasons for this frequency is the less use of complete and advanced protective equipment by the staff and the treatment staff in the psychiatric departments compared to the emergency and special care departments. Another issue is long-term hospitalization and less self-care in psychiatric patients. Also, due to the necessity of hospitalization of these patients, even if there are symptoms of Covid-19, they cannot be discharged for home quarantine [39]. These cases ultimately lead to the worry and stress of the patient and companions during

hospitalization and lead to a decrease in the desire of patients to be hospitalized, which is effective in the treatment of patients. It seems that the epidemic of infection and isolation affects the care and treatment of patients. In Kirkland and Weinstein's study, it was shown that the rate of health workers entering the room of isolated people is half of the other cases, and the physical contact of the personnel during the hospitalization period with the patients was much less [40].

In Sint et al.'s study, the examination of isolated patients by the professors and treating doctors of the department was significantly less than other patients, but the examination by the senior resident was not reduced. In this study, not being able to meet the patient by the caregivers caused the patients to worry [41].

In the study of Stelfox et al., there were more mistakes in the care of isolated patients and the complications of treatment increased. For example, it was more likely that vital signs were not recorded, and there were even days without a nursing report. In a systematic review, patient isolation had a negative effect on mental health, care, and patient satisfaction. In our study, not being able to meet the patient and not being able to contact the patient caused an increase in anxiety and worry in both the patient and the caregivers, and the possibility of not having access to a doctor and closing the clinic caused a lot of concern, and the caregivers were worried about getting infected. The patients were infected with Covid-19. These issues together with the fears of treatment personnel seem to be effective in the complete treatment of patients. Although it is necessary to conduct a special investigation in this case [42].

The study of Pisola et al. was conducted with the aim of discovering the mental health needs of elderly people isolated at home due to Covid-19. The main topics of the interviews were placed in the five themes of communication,

coping resources and strategies, affective states and emotions, perceptions and reflections about the future and collaborative actions. Many seniors reported discomfort, anxiety, anger, uncertainty, and fatigue [43]. In addition, people who lived alone and in small and closed environments were more worried. The use of communication technologies is a useful solution to reduce the anxiety of the elderly [44].

Loza et al.'s study showed that access to health services was relatively reduced during nationwide shutdowns. However, the elderly was trying to increase their knowledge about vaccination. Using information technology was a good solution to solve their problems. While the use of smart devices was considered a big challenge [45].

Kasar et al.'s study showed that the social isolation of the elderly had increased during the Covid-19 era. The use of technology, the use of cognitive behavioral therapy and individual interventions were solutions to the challenges of the elderly during the pandemic [46].

Kasar et al.'s review study showed that the social isolation of the elderly had increased during the Covid-19 era. The use of technological emergencies, the use of cognitive behavioral therapy and individual interventions were solutions to the challenges of the elderly during the epidemic [47].

In line with the present study, the study by Crowlow et al. showed that family support is effective on the burden of problems and emotional tensions of the elderly. In addition, any type of family support for the elderly can reduce the burden of a person's illness. In the current study, family cohesion has been expressed as one of the subsets of resilience and healing measures [48].

Yıldırım et al.'s study found that the anxiety levels of older adults whose family relationships were negatively affected during the pandemic had a greater impact on their

depression levels than those who said their family relationships were not affected during the pandemic. In addition, studies report that the quality of sleep of family members worsens due to the restrictions of the disease outbreak and leads to negative emotional symptoms and behavioral and psychological problems in the family. In the current study, insomnia is also mentioned as one of the sub-themes of mental-psychological tension [49].

Naqvi's study was conducted with the aim of understanding how to experience social distancing and staying at home from the perspective of the elderly. According to the findings, the elderly has experienced a combination of positive and negative emotions during the time of staying at home, and it also seems that the wisdom of the old age has helped them to use and create coping strategies in order to pass this time. Considering that maintaining social relations was considered a vital point for most of the interviewees, it is necessary for the families to explain the situation through a correct conversation and without concealment, and in addition to following the health guidelines; there are various areas of the possibility of maintaining social relations for the elderly [50].

Moradi et al.'s study also showed that the themes of psychological problems, misbehavior, age discrimination and caring for the elderly were among the most important concepts extracted from the studies conducted in the world. The concepts extracted from Moradi et al.'s study were consistent with the themes extracted from the present study [51]. In a study in Turkey, which aimed to determine the effect of anxiety on the depression levels of the elderly in quarantine during the Covid-19 pandemic, the data was collected during the period when the curfew was imposed on the elderly. The data were analyzed using the structural equation model. Based on the structural equation model, anxiety was

determined as a predictor of depression. Anxiety affects depression in the elderly. Therefore, it is recommended to provide them with appropriate psychological support interventions and understandable information about the epidemic, to reduce their anxiety and depression levels during the epidemic [52].

In addition, a study in Argentina reported that the quality of care received by elderly people with dementia living in the community was severely affected by the Covid-19 pandemic. The aim of the study was to investigate how much the mandatory quarantine imposed due to Covid-19 has affected the behavioral symptoms of people with dementia after the first 8 weeks of quarantine. The important findings were increased anxiety, insomnia, depression, worsening of walking disorder and increased use of psychoactive drugs to control behavioral symptoms. When they compared the frequency of behavioral symptoms in each dementia group, they found that anxiety, depression and insomnia were more common in people with mild dementia compared to people with severe dementia. They analyzed the type and pattern of using rehabilitation services before and during the period of isolation and observed that, as a rule, rehabilitation services were stopped in most people due to quarantine [53].

Girdhar et al.'s study examines the mental health problems of the elderly due to forced social isolation and various methods of reducing the adverse effects of social isolation. In this study, texts related to the topic of the elderly, epidemic disease, covid-19 and social isolation were studied. The findings showed that the elderly population is the most vulnerable group against the corona disease. In addition to infection, social isolation and quarantine puts them at high risk for various physical and mental health problems. Epidemic disease may cause exacerbation or recurrence of fears, anxiety disorders, obsessive-

compulsive disorder [54]. It is possible to have catastrophic personal experiences that lead to post-traumatic stress disorder. Various measures such as social facilitation interventions, psychological treatments, providing health and social care, friendship interventions and leisure skills development can be useful in reducing mental health consequences during isolation. Promoting a sense of physical and social security, hope, connection, peace and community efficiency is effective in controlling or reducing the potential adverse effects of social isolation [55].

In addition, in the current study, one of the main themes obtained is the economic tensions caused by the general quarantine. Governments around the world are challenged to deal with the direct impact of this disease on the health system and the economic, financial and social consequences of this pandemic [56]. The study by Pisola et al. was conducted with the aim of discovering the mental health needs of elderly people isolated at home due to Covid-19 and showed that the main topics of the interviews were in 5 themes of communication, coping resources and strategies, affective states and emotions, perceptions and reflections about the future and Collaborative measures were placed. Many seniors were exposed to discomfort, anxiety, anger and fatigue. Also, people who lived alone and in small and closed environments were more worried. The use of communication technologies is a useful solution to reduce the anxiety of the elderly [57].

Agustina Loza et al.'s study entitled "Qualitative study on the elderly and access to health services during quarantine due to Covid-19" was conducted in Argentina. The main themes included access to regular consultations, access to vital medicines, emergency consultations and the role of information and communication technology.

Access to health services was relatively reduced. However, the elderly was trying to increase their knowledge about vaccination. Using information technology was a suitable solution to solve their problems. While the use of smart devices was considered a big challenge [58].

Fafadar et al. (2014) investigated the implementation barriers of interprofessional education in Iran from the point of view of educational managers of the health system. The findings indicate the lack of recognition of this educational approach and, as a result, the lack of understanding of the necessity of its implementation. Currently, in Iranian society, there are cultural, attitudinal and functional-structural barriers to the implementation of this educational approach. One of the important steps in responding to cultural and attitudinal barriers is to introduce interprofessional education and successful executive models based on solid research evidence and the results obtained from these models during the last few decades at the global level. This study has been designed and implemented with the aim of identifying and introducing successful implementation models of interprofessional education in health sciences at the global level with a review of related texts [59].

Ashford & Platzer (2000) during a qualitative research by investigating a group of nurses determined the barriers to deep thinking learning and stated that the existing culture or the environment in which nurse's work is the biggest obstacle to deep thinking and learning through experience [60].

Chong also in 2009, by explaining the nursing students' understanding of the function of deep thinking in the nursing bed, points out significant points that they have a positive understanding of the function of deep thinking and it increases the learning activities and self-directed motivation of the students. Also, the

content of the field, teaching method, preparation of the trainer, clinical trainer and learning support resources should be provided for the students [61].

Saperstein (2015) with a qualitative research on students and professors of USU's Edward Hebert School of Medicine presented a model of deep thinking performance training by developing. Implementing a curriculum during 4 years of medical education in the master's degree, and practice based on deep thinking longitudinally in 3 stages of education and By providing an example of thoughtful writing, they show students how to replace such a curriculum and witness its potential benefits, such as enhancing interprofessional education and improving self-awareness and clinical practice [62].

Haqbein et al.'s research (2019) was conducted with the aim of investigating the level of anxiety caused by the new corona virus (Covid-19) in breast cancer patients during the corona pandemic. The findings of the research show that the average score of anxiety caused by the Covid-19 virus in patients with breast cancer is lower than average. Among the components of anxiety, the average score of psychological symptoms of breast cancer patients was reported to be higher than physical symptoms [63].

Salari et al.'s research (2019) investigated the prediction of coronavirus anxiety based on distress tolerance and cognitive regulation of emotion in working women. The results showed that there is a negative correlation between adaptive emotional regulation strategy and distress tolerance with corona anxiety and negative correlation between maladaptive emotional regulation strategy and corona anxiety [64].

The purpose of Alizadeh Birjandi et al.'s research (2019) was to determine the relationship between general health index and corona anxiety among employees. The results

of data analysis showed that there is a negative and significant correlation between the scores of general health indicators and corona anxiety. In addition, the correlation of the Corona anxiety index with the indices of depression, anxiety, physical condition and general health was positive and significant, and the scores were not significant with the social dysfunction scale [65].

Yaqoubi et al.'s research (2019) was conducted with the aim of reviewing the factors that aggravate the anxiety of pregnant women during the corona virus pandemic. By classifying the results of the studies of factors that aggravate anxiety in pregnant women during the corona virus pandemic, it was classified into three categories: factors related to pregnant women, factors related to spouse, and factors related to society [66].

Azazi Bejnordi et al. (2019), with the aim of predicting Corona anxiety based on cognitive emotion regulation strategies, health stubbornness and death anxiety in diabetic patients, show that positive cognitive emotion regulation strategies and health stubbornness have a negative relationship with Corona anxiety in diabetic patients, Meaningful and negative strategies of cognitive regulation of emotion and death anxiety had a positive and significant relationship with their corona anxiety. Also, the cognitive regulation strategies of emotion, health stubbornness and death anxiety were able to explain 38.8% of the changes in corona anxiety in diabetic patients, and the share of death anxiety was higher than other variables [67].

Tavakoli et al.'s research (2019) was conducted with the aim of investigating death anxiety among nurses working in corona wards. The average total death anxiety score of nurses was average, 20.8% of them experienced mild death anxiety, 70.8% experienced moderate death anxiety, and 8.3% severe anxiety, and the average total death anxiety score had no

significant relationship with demographic variables [68].

Rahimzadegan and Atadakht (2019) investigated the prediction of corona anxiety in people with obsessive-compulsive disorder based on their cognitive flexibility and differentiation. The results of multiple regression analysis showed that there is a significant negative relationship between corona anxiety and cognitive flexibility and self-differentiation in patients with obsessive-compulsive disorder, and cognitive flexibility and self-differentiation negatively predict corona anxiety [69].

Kakavand et al.'s findings (2019), with the aim of investigating the mediating role of emotional ataxia and anxiety caused by Corona in the relationship between resilience and marital conflicts during quarantine, showed that emotional ataxia and anxiety caused by Corona between couples' marital conflicts and role resilience It has a mediator [70].

Amir Fakhraei et al.'s research (2019) was conducted with the aim of predicting Corona anxiety based on health concerns, psychological toughness and positive excitement in diabetic patients. The findings showed that health concerns had a positive and significant relationship with corona anxiety in diabetic patients, and psychological toughness and positive excitement had a negative and significant relationship with their corona anxiety. Also, the variables of health concern, psychological toughness, and positive overexcitement could significantly predict 26.5% of the changes in corona anxiety in diabetic patients, and the share of health concern was higher than other variables [71].

Eini et al. (2019) investigated the causal modeling of Corona anxiety in students based on optimism and resilience with the mediation of perceived social support. Findings Based on the obtained results, the causal model of the relationship between optimism, resilience,

perceived social support and students' corona anxiety was confirmed based on various fit indices. Optimism, resilience, and perceived social support have a direct effect on students' anxiety level. In addition, optimism and resilience through perceived social support have an indirect effect on students' corona anxiety [72].

Rahmani et al.'s research (2019) investigated the anxiety caused by Corona and its relationship with burnout among the employees of a hospital. It was found that there is a significant relationship between anxiety caused by Corona and job burnout. The results of this study showed that there is a significant relationship between anxiety caused by Corona and job burnout, which suggests that, based on the high prevalence of these disorders, more attention should be paid to the health of hospital employees due to their special role in dealing with Covid-19 [73].

Alizadeh Fard et al. (2018) studied the relationship between anxiety and solidarity caused by corona disease and mental health in the community of Tehran and the results showed that anxiety and social solidarity caused by corona disease are correlated with mental health. It was also found that anxiety and social solidarity caused by corona disease predict 47 and 26 percent of mental health changes, respectively [74].

The aim of Alipour's research (2018) was the preliminary validation of the Corona Anxiety Scale in the Iranian sample. The questionnaire is divided into two parts: mental symptoms and physical symptoms. Conclusion The Corona Anxiety Questionnaire has good validity and validity in the preliminary validation and it can be used as a scientific and reliable tool to measure the anxiety of the Corona Virus [75].

Soleimani et al. (2021) investigated the contribution of social intelligence and resilience components in predicting corona anxiety in students. The results showed that

the relationship between social intelligence and resilience with corona anxiety is negative and significant. Also, social intelligence and resilience predict 31.6 and 43.4 of changes in Corona anxiety, respectively.

Pidaei et al. (2021), with the aim of identifying the dimensions of resilience of human resources in the conditions of the corona disease pandemic based on Islamic teachings while using religious teachings and obtaining the opinion of religious experts in order to provide comprehensive solutions to increase the resilience of human resources in Dealing with the corona virus. During the three stages of the survey, the dimensions of resilience in the four main dimensions of financial-economic resilience, physical-biological resilience, cultural-social resilience and psychological-spiritual resilience have been identified in twenty components, which can be a suitable framework for formulation Programs to improve the level of resilience of human resources to deal with the Corona pandemic in today's organizations [75].

Safari Darbarzi (2019), designed a comprehensive model of hospital resilience by identifying the factors affecting hospital resilience, and the relationship between these factors in the face of the corona disease. The findings have identified eight general factors affecting hospital resilience. The eight identified factors were structured into four general levels by interpretive structural modeling. The initial level of the model is stability factors and communication and information technology systems. Also, the model fitting results confirm the relationships formed by interpretive structural modeling [76].

The purpose of Bagheri et al.'s research (2019) is to investigate the prediction of resilience of patients with Corona based on hope, religious coping style, spiritual intelligence and self-compassion. The research findings showed that

hope, spiritual intelligence, self-compassion and religious coping have a positive and meaningful relationship with resilience. In other words, an increase or decrease in each of the variables of hope, spiritual intelligence, self-compassion, and religious coping is associated with an increase or decrease in resilience. The results of the research showed that people who have higher hope, more positive religious coping style, higher spiritual intelligence, and more self-compassion, have more resilience and better performance in difficult and difficult conditions of corona disease [77].

Nasirzadeh et al. (2019) was conducted with the aim of determining the state of stress, anxiety, depression and resilience of people during the Covid-19 disease, it shows that the scores of stress, anxiety and depression are average. The average resilience score was also low. A significant relationship was observed between the anxiety score and the level of education, occupation and age, and between depression and occupation [78].

Discussion

Corona viruses are the source of common infections of the upper respiratory tract, digestive tract and central nervous system in humans and other mammals. In the last two decades, two beta-coronaviruses named SARS and MERS caused continuous public panic and became the most important public health events. At the end of the last decade, on December 31, 2019, a new coronavirus called nCoV-2019 from the same beta coronavirus family caused a large pneumonia outbreak in Wuhan, China, with a high number of patients. The intensity of transmission of this virus was so high that it became a major global challenge in just 3 months. Until now, the routes of infection and the exact mechanism of infection of the respiratory tract by COVID-19 are not known. In this study, we gathered the

information obtained from the researches about COVID-19 and it was found that the expression level of ACE2, which is the receptor of nCoV-2019, in AT2 cells of the lung, upper epithelial cells and esophagus, absorptive enterocytes from the ileum and intestine. The cells of the oral cavity and especially the tongue have increased greatly, and this increase in expression has caused an increase in the level of contamination and as a result, a high percentage of the infectivity of this virus [79]. The high level of ACE2 expression in the cells of different organs indicates that not only the respiratory system, but also the digestive system is part of the possible route of infection and disruption by this virus. In addition, the intestinal symptoms of 2019-nCoV may appear following the high expression of ACE2 in enterocytes. Having said that, since there is still no definitive treatment for infections caused by coronaviruses, it seems that the best way to deal with a severe infection of COVID-19 is to control the source of infection, early diagnosis, supportive treatments and timely dissemination of correct information. Far from creating terror, it is a way to deal with the epidemic.

However, researchers around the world are developing more than 165 vaccines against the corona virus, and 27 vaccines have reached the human testing phase. Normally, the vaccine needs several years of research and testing before reaching the clinical phase, but scientists should produce a safe and effective vaccine for this virus due to the emergency situation of the new corona virus pandemic. The effort to produce a corona virus vaccine began in February 1998 with the decoding of the SARS-CoV-2 genome [80].

The first safe human trial of the vaccine took place in March, but the path forward is uncertain. Some experiments will fail and other experiments will end without a clear result, but it is possible that a number of experiments in

stimulating the immune system to produce effective antibodies against the virus will come out proud. Hopefully, with more research by biologists, we will see a cure for this deadly disease. Based on the research conducted, the new virus was named SARS-CoV-2 by the Corona virus study group of the International Committee on the Classification of Viruses and the disease caused by it by the WHO as COVID-19.

The outbreak clearly originated from the Wuhan market, and subsequently some environmental samples from the live animal sector of the market tested positive for SARS-CoV-2, but based on the latest evidence, it may not have actually appeared in the market. The first known case of infection with SARS-CoV-2 was a frail elderly man who developed symptoms on December 1, 2019. None of his family members were infected and the source of his virus remained unknown. Furthermore, of the original 41 cases, 14 had no contact with the seafood market. In another report, 5 of the 7 initial cases of COVID-19 had no connection to the seafood market. Therefore, it seems likely that the virus intensified in the market, but it is possible that the market was not the place of origin and was the only source of the outbreak.

A recent philo-epidemiological study suggests that the virus may have been circulating in November, but remained undetected and entered the seafood market from elsewhere, where it intensified. Sequence studies show that the receptor binding domain of SARS-CoV-2 virus is similar enough to that of SARS-CoV virus and hence it can effectively use the human ACE2 receptor to enter human cells.

Infectious experiments were performed with HeLa cells that were able to express or not express the ACE2 gene in humans, bats, cats, pigs, and mice, and the results confirmed that the SARSCoV-2 virus was able to use the entry receptors on all ACE2-expressing cells. Except

for mice. Molecular modeling has shown that the binding affinity of SARS-CoV-2 to ACE-2 may be even higher than that of SARS-CoV [81]. Therefore, it may be more efficient in infecting human cells. Evidence from sequence analysis clearly indicates that it is probably of bat virus origin. Probably, a Chinese horseshoe bat acts as an intermediary and like SARS-CoV is the intermediate host of this disease. The closest wild animal nucleotide sequence known to that of SARS-CoV-2 virus was isolated from an intermediate horseshoe bat, but there was no significant difference in the receptor binding domain between the two viruses [12].

Malayan anteaters (*Manis javanica*) have been implicated as potential intermediate hosts, and SARS-like viruses have been detected in anteaters seized in anti-trafficking operations in southern China, but they are only about 85-92% identical to SARS-CoV-2. have shown homology. Next generation sequencing (NGS) was performed on lung lavage samples. Samples from 17 patients were taken between December 24-30, 2019, confirming the presence of a SARS-related coronavirus, but this information was not widely available until the sequence was reported on January 12, 2020. Interestingly, this was the first time that NGS alerted the world to a new zoonotic virus before the virus was isolated, indicating that a new method for reporting outbreaks based on NGS should be considered instead of pathogen isolation and identification [81]. The flow of information obtained has made significant progress compared to the SARS-CoV experience in 2003, but it is important that this progress continue.

Because the lack of basic information about sequences slows down the process of diagnosis and preparation. It is possible that this lack of primary information has also been extended to the notification of cases. Because no cases were reported between January 1 and 17, 2020, modeling suggests that, there may have been

over 450 unreported cases during that time, some of which were later retrospectively confirmed. The increasing readiness of hospitals to treat patients with the coronavirus worldwide has made it difficult to access hemophilia treatment centers. This issue has implications in medical follow-up, evaluation consultations, specific treatments, educational programs, and diagnostic procedures [24].

In this situation, medical centers should quickly adapt to this reality by using all remote communication methods such as telemedicine and establish regular contact with patients, especially those who need accurate and regular follow-up. Clinical research programs have been affected by this epidemic and it has become difficult to start new studies on patients due to logistical and health reasons. Hemophilia centers, ensuring access to treatment and proper follow-up, also took measures to monitor patients in clinical studies. However, some experimental treatments were delayed in being evaluated, some clinical trials were stopped, and the introduction of many new treatments was delayed [18].

The pandemic also led to the cancellation of many educational or research activities planned in 1400 that are essential to advancing knowledge and care of hemophilia worldwide. All these are lost opportunities that need to be reactivated. Even if communication technologies make it possible to maintain interactions between professionals and patients, they do not replace the necessity of direct contact. The economic and social consequences of this epidemic are huge. Today, it seems impossible to assess the impact of hemophilia financing worldwide, both in terms of treatment reimbursement and in terms of financial support for hemophilia centers [86]. Many hemophilia patients who are socially or professionally weakened suffer more from the economic and social consequences of this

crisis. These patients should be taken into consideration, so that financial, social and occupational problems are not added to the problems of their illness and treatment.

Conclusion

At the same time as in other countries of the world, the epidemic of the corona virus in Iran also raised the need to observe social distance and home quarantine, and as a result, the continuation of face-to-face education was disrupted, and virtual education was chosen as a solution to not stop education in schools and universities. A solution that was adopted to prevent education in the country, but faced students and universities with a new challenge and certain complications. Considering that it is impossible to teach in their sick environment without facing infectious diseases, it is necessary to prevent damage to the learning of students of different fields by formulating rules and guidelines. In addition, the use of educational methods such as movies and animations as well as other virtual education methods can help to improve the level of students' learning in cases where it is not possible for them to be at the patient's bedside. Evidence suggests that people may experience symptoms of psychosis, anxiety, suicidal thoughts, and panic during outbreaks of infectious diseases. Several factors are effective on the anxiety caused by the covid-19 epidemic; some of these factors are visible in other countries and others in countries including Iran. Factors affecting the anxiety caused by the disease include its newness and unknown nature, high transmission speed, death rate, reduction of social interactions due to the observance of quarantine, constant hearing of the news of the epidemic and its effects, severe economic sanctions imposed on the country and doubts about the adequacy. In order to take the necessary measures to meet health care needs, the government pointed out

that all of them can be reasons for anxiety in the covid-19 epidemic, especially in Iran.

Many Americans are using anti-anxiety medications to manage stress and anxiety. Because from mid-February to mid-March 2020, the demand for these drugs has increased by 34.1%. It can be concluded that the epidemic of Covid-19 has had a great impact on endangering mental health. Hoernke et al showed in their research that innovative solutions for virtual education can facilitate valuable and safe educational experiences and increase the quality of clinical education. Abbasi and his colleagues also showed in their research, the lack of access of all learners to the virtual space, especially in deprived areas and the creation of inequality in the opportunity for education, the heavy costs of the Internet for many families, the slow speed of the Internet as the challenges of electronic education.

There is which is consistent with the results of the present research, which emphasizes on creating a suitable platform for clinical education with a virtual approach. With the decrease in the presence of medical students in the department due to the Corona epidemic, the use of electronic education can compensate for the lack of education in the clinical environment. One of the methods of teaching in the conditions of Corona is to use simulation in a virtual environment to increase the quality of clinical education.

The use of process simulation increases the quality of learning and reduces the time it takes for students to achieve results when learning new processes. In their research, De Ponti and colleagues concluded that medical education in the form of virtual reality or simulation of the clinical environment can be useful to complement traditional medical education in the hospital during the 19-Covid-19 pandemic, which is consistent with the results of the present study. Janighorban et al showed in their research that educational simulation is an

important tool in clinical education with beneficial effects for professors, students and patients, which is consistent with the results of this research. Considering the conditions of the corona pandemic and the impact of clinical education in educational hospitals, electronic learning can be used as a new approach to improve the quality of clinical education.

The use of new technologies for electronic clinical training in post-corona conditions can also be used as a helpful method before the patient's bedside presence in the real environment in teaching hospitals in order to increase the quality of clinical training for medical students.

References

- [1] A Almasi Nokiani et al. CT-severity score in COVID-19 patients: for whom is it applicable best?. *Caspian Journal of Internal Medicine*. **2022** 13(3): 228 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [2] A Amini, et al., Medical Tourism Industry: A Systematic Review on Its Principles, Sequels, and Ethical Issues., *Eurasian Journal of Science and Technology*., **2022** 2 (2):143-155 .[[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [3] A Babak et al., Effects of mindfulness-based stress reduction on blood pressure, mental health, and quality of life in hypertensive adult women: a randomized clinical trial study ,*The Journal of Tehran University Heart Center*, **2022** 17 (3), 127 [[Google Scholar](#)], [[Publisher](#)]
- [4] A Baghersad, et al., Immunochemical Characterization of *Salix alba* (*S. alba*) Pollen Allergens and Evaluation of the Cross-Reactivity Pattern with Common Allergenic Pollen Grains. *International Immunopharmacology*. **2023** 1;124:110953.[[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [5] A Biravand , et al., Comparison of Amount of Microleakage from Core Composite Following Incremental and Bulk Composite Build-up Techniques using Clearfil Photo Core-Light Cure. *Jundishapur Scientific Medical Journal*. **2015** 14(4): 411. [[Google Scholar](#)], [[Publisher](#)]
- [6] A Dabbaghi, et al., Efficacy of Different Image Processing Filters for the Detection of Proximal Recurrent Caries in Digital Bitewing Radiographs. *Jundishapur Scientific Medical Journal*. **2015** 14(2): 157-168. [[Google Scholar](#)], [[Publisher](#)]
- [7] A Feiz, et al., Survey of Selected Radiography Techniques used by Ahvaz Dentists in Implant Treatment. *Jundishapur Scientific Medical Journal*. **2015** 14(4): 404-410. [[Google Scholar](#)], [[Publisher](#)]
- [8] A Gandomi-Mohammadabadi et al. COVID-19 in a patient with newly diagnosed chronic lymphocytic leukemia (CLL): a case report. *Journal of Research in Applied and Basic Medical Sciences*. **2021** 7(1): 26-30 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [9] A Hasanpour Dehkordi, et al., One-year prevalence of antimicrobial susceptibility pattern of methicillin-resistant *Staphylococcus aureus* recovered from raw meat. *Tropical Biomedicine*. **2017** 34(2):396-404. [[Google Scholar](#)], [[Publisher](#)]
- [10] A Hedayati, et al., Optimize pictures of industrial radiography in corrosion and sediment recognizing in oil or gas transmit pipe lines, *International Journal of Chemistry*, **2014** 5, 20-29 [[Google Scholar](#)]
- [11] A Ismaili, et al., General Anatomy of Blood Vessels, Nervous System and Respiratory System. **2021** 1: 108 [[Google Scholar](#)], [[Publisher](#)]
- [12] A Jalali, S Hassani, S Albuzyad, A Moaddab, M Rajabzadeh., Investigation of Cardiopulmonary Complications in Patients with Infection and Prevalence of Intubation in ICU with Radiological Point, *Pakistan Heart Journal*, **2023**; 56 (2), 906-919 [[Google Scholar](#)], [[Publisher](#)]

- [13] A Khalaji, et al., A bioinformatics-based study on the Cisplatin-resistant lung cancer cells; what are the orchestrators of this phenom?. *Gene*. **2022** 5;834:146668. [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [14] A Khalaji, et al., Advances in Monoclonal Antibody Therapies for Triple-Negative Breast Cancer: Immunotherapeutic and Targeted Strategies. *Current Molecular Medicine*. **2024**. [[Google Scholar](#)], [[Publisher](#)]
- [15] A Khalaji, et al., Don't eat me/eat me signals as a novel strategy in cancer immunotherapy. *Heliyon*. **2023** 1;9(10). [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [16] A Rahat-Dahmardeh, et al., Rhabdomyolysis in COVID-19 Patients: A systematic Review and Meta-Analysis. *International Journal of Early Childhood Special Education*, **2022** 14(02): 4019-4024. [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [17] A Saedi, S Saedi, MM Ghaemi, M Milani Fard., A Review of Epidemiological Study of Covid-19 and Risk Factors., *Eurasian Journal of Science and Technology*., **2022** 2 (3): 218-226 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [18] A Shahbaz, et al., Bredigite-containing materials for regenerative medicine applications: A rapid review. *Journal of Composites and Compounds*. **2023** 5(16): 190-199 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [19] AM Fard, MM Fard., Evaluation of office stones in kidney patients and how to form and treat them., *Eurasian J Sci Tech.*, **2022** 2 (2):384-98 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [20] B Fazeli et al. A systematic Review the treatment and diagnose of neurological problem in fat patients adults involved infection with radiological point. *International Neurology Journal*. **2024** 28(1):423-433 [[Google Scholar](#)], [[Publisher](#)]
- [21] B Fazeli, A comprehensive overview of Neurological Diseases, Scholar Press, **2024**, 978-620-5-52216-5 [[Google Scholar](#)], [[Publisher](#)]
- [22] B Fazeli. A comprehensive overview of Neurological Diseases such as MS, Alzheimers, Guillain Barre and Myasthenia Gravis based on Drug therapy Tips in These patients. **2023** 164. [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [23] B Mahmoodiyeh, et al., A Systematic Short Review in Evaluate the Complications and Outcomes of Acute Severe of Pediatric Anesthesia., *Journal of Chemical Reviews.*, **2021** 3 (3):219-231 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [24] B Shrestha et al. Dual time-point imaging of lymphoma adenopathy using total-body FDG PET/CT. *Journal of Nuclear Medicine*. **2023** 64(1):1444 [[Google Scholar](#)], [[Publisher](#)]
- [25] B Shrestha et al. Role of 18F-FDG PET/CT to evaluate the effects of chimeric antigen receptor T-cell therapy on lymph node involvement in patients with non-Hodgkin lymphoma. *Journal of Nuclear Medicine*. **2023** 64(1):1159 [[Google Scholar](#)], [[Publisher](#)]
- [26] BA Kiasari, et al., Combination therapy with nivolumab (anti-PD-1 monoclonal antibody): A new era in tumor immunotherapy. *International Immunopharmacology*. **2022** 1;113:109365 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [27] BS Al-Gazali, et al., Estimation of Umbilical Artery Resistive Index in Pregnant Women with Preeclampsia in Al-Najaf Province. *Journal of University of Babylon for Pure and Applied Sciences*; **2019**; 27(1): 107-112 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [28] Chitsazi, M. T., Fattahi, E., Zadeh Farahani, R. M., & Fattahi, S. *Helicobacter pylori* in the dental plaque: is it of diagnostic value for gastric infection?. *Medicina Oral, Patología Oral y Cirugía Bucal (Internet)*, **2006**;11(4), 325-328. [[PMC free article](#)] [[Crossref](#)] [[Google Scholar](#)]

- [29] E Sadat Motaharian, et al., Management of Nursing Human Resources in Covid-19 Pandemics Period., Eurasian Journal of Science and Technology., **2022** 2 (2):156-165 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [30] E Yahaghi, et al., Helicobacter pylori in vegetables and salads: genotyping and antimicrobial resistance properties. BioMed Research International. **2014** 12;2014: 757941.[[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [31] ES Motaharian, et al., Radiologic findings of patients with covid-19-a systematic review study., Journal of Chemical Reviews., **2021** 3 (3): 171-180 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [32] F Al-Jabouri, et al., IL-18 Act as a Costimulus for Production of Interferon Gamma During Stimulation by Pseudomonas aeruginosa Infection, Pseudomonas aeruginosa Infection, J Pure Appl Microbiol; **2019**; 13(2): 891-896 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [33] F Divsalar et al. The Causes and Treatments of Neurological diseases: GB and MG in Children and Adults Involved Infection, relying on drug therapy and incidence of stroke and epilepsy., International Neurourology Journal. **2024** 28(1): 853-863 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [34] F Hosseinzadegan et al. Cardiovascular Diseases and Relationship with Mortality and Severe COVID-19 in Patients with COVID- 19: A Systematic Review and Meta-Analysis. International Journal of special education., **2022**.37(3); 12609-12617 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [35] F Mirakhori et al. Evaluation of Amyloid Plaques in the Nervous System of Alzheimer's Patients with Reference to Non-Pharmacological Treatments in Patients. International Neurourology Journal. **2024** 28(1): 804-820 [[Google Scholar](#)], [[Publisher](#)]
- [36] F Mirakhori, M Moafi, M Milanifard, H Tahernia, Journal of Pharmaceutical Negative Results, **2022** 1889-1907 [[Crossref](#)], [[Google Scholar](#)], [[Publisher](#)]
- [37] F Montazer et al. Histopathologic findings in COVID-19 Autopsies from IRAN: A comprehensive report of laboratory, chest Computed tomography (CT) and morphology findings. Authorea Preprints. **2020** [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [38] F Safarnezhad Tameshkel et al. A Retrospective Study on the Gam-COVID-Vac (Sputnik V) COVID-19 Vaccine Short-Term Efficacy and Side Effects in Iranian Healthcare Providers. Archives of Clinical Infectious Diseases. **2023** 18(3) [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [39] F Siadat, et al., The effects of periodontal treatment on pregnancy outcomes: A systematic review of clinical trial studies. Res Dent Sci. **2022**; 10;19(3):260-71 , [[Google Scholar](#)], [[Publisher](#)]
- [40] FB AH Jalali,S Hassani, A Zare,T Ziaadini, Systematic investigation of cardio vascular & clinical problem in patients with covid-19 with Neurological and Pathological point, The seybold Report Journal, **2023**; 18 (04), 1634-1653 [[Google Scholar](#)], [[Publisher](#)]
- [41] H Kaseb Ghane, et al., High-Power Laser Application for Immediate Implant Placement in Infected Sites: A Systematic Review, Photo-biomodulation, Photomedicine, and Laser Surgery, **2024** 41, 12 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [42] H Zakeri,et al., Pain Management strategies in Intensive care unit:challenges and Best Practice, GMJ, **2024**;13: 3264: 1-8 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [43] K Hadavand Mirzaei, et al., Application of Robotic Instruments in Hip Arthroplasty Surgery Based on Practical Tips a Systematic Review, Eurasian Journal of Chemical, Medicinal and Petroleum Research, **2024**, 3

- (2), 593-609 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [44] JMM Sheibani Hossein., Pericarditis as a trigger for Prinzmetal angina-a case report., *Journal of medicine and life.*, **2021** 14 (6): 853 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [45] K Hadavand Mirzaei, et al., A systematic Review of medical care & investigation Rate of stroke in cancer fat patients with Bariatric and Radiological clinical points., *International Neurourology Journal.*, **2024** [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [46] K Hadavand Mirzaei, et al., A systematic Review Treatment and diagnosis of Neurological disease in fat patients with bariatric & Radiological points., *International Neurourology Journal.*, **2024** [[Google Scholar](#)], [[Publisher](#)]
- [47] K Hadavand Mirzaei, et al. Medical care of infection patients undergoing weight loss surgery and laparoscopy, relying on cardio-pulmonary & Neurological care: A systematic review., *International Neurology Journal.*, **2024**; 28(2):74-83 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [48] K Hadavand Mizaei et al. A systematic review on the role of stem cells in the treatment and diagnosis of neurological diseases such as MS in overweighting patients with endoscopy point. *International Neurourology Journal.* **2024** 28(1) [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [49] K Hadavand Mizaei et al. Application of Robotic Instruments in Hip Arthroplasty surgery based on practical Tips: A systematic Review. *Eurasian journal of chemical, medical and petroleum Research.* **2024** 3(2): 593-609 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [50] K Hadavand Mizaei et al. Application of Robotic Instruments in Hip Arthroplasty surgery based on practical Tips: A systematic Review. *Eurasian journal of chemical, medical and petroleum Research.* **2024** 3(2): 593-609 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [51] K Liu, et al., Preparation of Paclitaxel Nanocrystals Coated with Folic Acid-Modified Phospholipids Based on Preoperative Chemotherapy for Gastric Cancer. *Journal of Biomedical Nanotechnology.* **2024** 1;20(1):35-41. [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [52] K Sohrabi et al. Determining the Role of Intestinal Microbiota Through Inflammatory Cytokines in the Occurrence of Constipation in the Elderly Referring to Hazrat Rasool Akram Hospital. *International Neurourology Journal.* **2024** 28(1): 563-575 [[Google Scholar](#)], [[Publisher](#)]
- [53] Kh Ghasemi et al. Investigation of the prevalence of asymptomatic microscopic hematuria in primary school children of Bushehr and Kharg Island. *Tebe Jonoob*, **2004** 7(1): 54-60 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]
- [54] KH Mirzaei., A Comprehensive Review of Bariatric Surgery and Laparoscopy Based on Surgical Tips., *Globeedit, Europe.*, **2024** 1, 109 [[Google Scholar](#)], [[Publisher](#)]
- [55] KH Mirzaei., *Comprehensive Book of General and Bariatric Surgery with Regard to Surgical and Non-Surgical Points.*, *Globeedit, Europe.*, **2024** 1, 141 [[Google Scholar](#)], [[Publisher](#)]
- [56] L Khaji, MH Shahreza. SCCmec types in methicillin-resistant *Staphylococcus aureus* strains of various types of milk. *Electronic Journal of Biology.* **2016** 13:1. [[Google Scholar](#)], [[Publisher](#)]
- [57] M Dashti et al. Application of Machine Learning in orthodontics: A Bibliometric. *Advances in Artificial Intelligence and Machine Learning*; **2023** 4(1):2014-2026
- [58] M Jafari, KH Mirzaei, M Shojaei, M Saboury., A Systematic Review: The Relation Between Vitamin D and Short Chain Fatty Acid in Serum Plasma with Protein Recombination in VDR in Multiple Sclerosis Patients (MS)., *Eurasian Journal of Chemical, Medicinal and*

Petroleum Research., **2024** 3 (3), 819-840
[\[Google Scholar\]](#), [\[Publisher\]](#)

[59] M Jafari, M Saboury, M Shojaei, KH Mirzaei., Methylation and Demethylation Gene Pathway Bio Chemistry Signaling in Fat and Athlete Adults with Point of Dopaminergic Points, Eurasian Journal of Chemical, Medicinal and Petroleum Research., **2024** 3 (3), 841-861 [\[Google Scholar\]](#), [\[Publisher\]](#)

[60] M Keyhanifard, et al., Systematic Examination of Neurological disease such as Guillian-barre and MG with Renal problem in cancer fat Patients with Radiological and clinical points., International Neuroulogy Journal., **2024** [\[Google Scholar\]](#), [\[Publisher\]](#)

[61] M Milani Fard, AM Milani Fard., Modeling Drug Release., Eurasian Journal of Science and Technology., **2022** 2 (1):14-33
[\[Google Scholar\]](#), [\[Publisher\]](#)

[62] M Mohsenibeigzadeh, et al., Driving Innovation in Education: The Role of Transformational Leadership and Knowledge Sharing Strategies, Current Opinion, 2024, 3(4); 505-515 [\[Google Scholar\]](#), [\[Publisher\]](#), [\[Crossref\]](#)

[63] M Naghdipour Mirsadeghi, et al., Pain Perception at Birth depending on the Personality of the Parturient Women, **2022**, 7(6): 543-547 [\[Google Scholar\]](#), [\[Publisher\]](#), [\[Crossref\]](#)

[64] M Naghdipour, et al., The effect of pelvic floor muscle fatigue on stress urinary incontinence: A systematic review, **2021**, 24(7) [\[Google Scholar\]](#), [\[Publisher\]](#), [\[Crossref\]](#)

[65] M Oroei et al. The evaluation of head and neck neoplasm in young and old adults. Social Determinants of Health. **2019** 5(2):117-125 [\[Google Scholar\]](#), [\[Publisher\]](#), [\[Crossref\]](#)

[66] M Roham et al. Direct Correlation of Lymphopenia with Severity Scores and Chest CT Findings in COVID-19 Patients. **2024** [\[Google Scholar\]](#), [\[Publisher\]](#), [\[Crossref\]](#)

[67] M Shojaei. A Systematic Review of the Effect and Safety of Alendronate on Bone Density in Patients with Chronic Kidney Disease. Eurasian Journal of Chemical, Medicinal and Petroleum Research. **2024** 3(2): 434-442 [\[Google Scholar\]](#), [\[Publisher\]](#), [\[Crossref\]](#)

[68] M Shojaei. Alternative Systematic Review of Insulin Resistance and the Role of Sex Steroids on Leptin Levels. Eurasian Journal of Chemical, Medicinal and Petroleum Research **2024** 3(1): 296-306 [\[Google Scholar\]](#), [\[Publisher\]](#), [\[Crossref\]](#)

[69] M Shojaei. CHAT-GPT and artificial intelligence in Medical Endocrine System and interventions. Eurasian Journal of Chemical, Medicinal and Petroleum Research., **2024** 3(1): 197-209 [\[Google Scholar\]](#), [\[Publisher\]](#), [\[Crossref\]](#)

[70] M Shojaei. Leptin as a Surrogate Marker of Insulin Resistance. **2024** 1: 124 [\[Google Scholar\]](#), [\[Publisher\]](#)

[71] M Shojaei. The Effects of esreradiol on leptin and other factors. Eurasian Journal of Chemical, Medicinal and Petroleum Research., **2024** 3(1):131-141 [\[Google Scholar\]](#), [\[Publisher\]](#), [\[Crossref\]](#)

[72] MK Hossein Tahernia, Mohammad Ghasemian, Fatemeh Rostami, Sara Hassani., Imaging Methods Applicable in the Diagnostics of Alzheimers Disease, Considering the Involvement of Insulin Resistance with Clinical Pharmacological Point, Pakistan Heart Journal, **2023**; 56 (3) [\[Google Scholar\]](#), [\[Publisher\]](#)

[73] S Saedi, et al., Assessed the Complication of Central Nervous System in COVID-19 Patients: A Systematic Review and Meta-Analysis., Eurasian Journal of Science and Technology., **2021** 2: 185 [\[Google Scholar\]](#), [\[Publisher\]](#)

[74] S Saedi, et al., Epidemiological Study of Breast Cancer in Iran: A Micro Review Study.,

Eurasian Journal of Science and Technology, **2022** 2 (3):227-235 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]

[75] S.A Ashkan Mousavi Chashmi et al, A Systematic Review of Gastrointestinal problem in women with diabetes and HTN based on Endoscopic & Pathology findings with evaluation of wound healing, International Neurourology Journal. **2024**, 28(1): 765-772 [[Google Scholar](#)], [[Publisher](#)],

[76] SAK AH Jalali, AH Maleki, S Hassani, E Khoshdel., Memory System Intraction and Cardiopulmonary Problem in Autism Spectrum Disorder and Prevalence of Intubation in ICU with Radiological Images., The seybold Report Journal, **2023**; 18 (05), 999-1022 [[Google Scholar](#)], [[Publisher](#)]

[77] SH AH Maleki, A Gholami, M Mohammadi, A Farhiudian., Investigation of medical services in patients with diabetes, cardio-vascular and Rheumatology disease in ICU., Journal of pharmaceutical Negative Results, **2022**; 13 (10), 4137-4158 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]

[78] Soubhak, S, Nursing actions in patients undergoing laryngectomy in relation to reducing anxiety and depression, Eurasian Journal of Chemical, Medicinal and Petroleum Research, **2024**, 3 (2), 530-542 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]

[79] Soubkari, S., [Covid CT Chest Finding](#), Eurasian Journal of Chemical, Medicinal and Petroleum Research (EJCMPR), **2024**, 3(2), 563-576 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]

[80] Sourili, S., What are the radiological criteria for identifying the Corona virus in CT scan images?, Eurasian Journal of Chemical, Medicinal and Petroleum Research (EJCMPR), **2024**, 3(2), 577-593 [[Google Scholar](#)], [[Publisher](#)], [[Crossref](#)]

[81] V Tajiknia, S Hassani, H Seifmanesh, A Afrasiabi, H Hosseinpour., Role of MRI in Pre-operative Assessment of patients with Advanced ovarian cancer candidate for cytoreductive surgery, A Brief Review., J. Obstetrics Gynecology and Reproductive Sciences., **2021**; 5 (9) [[Google Scholar](#)], [[Publisher](#)],

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