

Qualitative study of the Implications of Communicational, Biological and Psychological Connections of Corona Virus on Families

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Abstract

The high prevalence of the corona virus has put the world in a dangerous position, and fear and anxiety have spread across the globe, leading to significant social and psychological damage around the world. The aim of this study was to qualitatively investigate the implications of communicational, biological and psychological connections of Corona virus on families. To achieve this goal, a qualitative approach and a descriptive phenomenological method were used. The statistical population of the study included the group with Covid-19 disease and the group with acceptable prevention of Covid-19 disease in Tehran. The sampling method was purposive. Thirteen patients (cured from the disease and non-sick) were selected as the sample. Data collection was done through semi-structured researcher-made interviews and data analysis was done by content analysis method. Krippenherd seven-step method was used to analyze the data. The five main categories include intra-family relationships, negative feelings and emotions caused by illness, changes in the behavior of others (after social relationships), family disputes and lifestyle changes, and 24 subcategories and 100 free codes of research results. According to the results, it can be said that the design of psychological interventions to improve mental health during this epidemic should be done and also a community program of critical psychological intervention should be prepared and implemented to compensate for the devastating effects after Covid 19.

Keywords: Consequences of communicational connections, Biological, Psychological, Corona virus, Lifestyle

Introduction

Corona virus became epidemic in Wuhan city of the central Province of Hubei, China in December 2019 (Nozari et al, 2020). The disease is similar to the common cold and includes headaches, high fever, dry cough, runny nose and diarrhea, and respiratory problems ranging from mild to severe (Who, 2020). Considering the prevalence of Covid-19, which affects almost all important economic, political, social and military aspects of all countries in the world, the discussion of the psychological and biological consequences of this disease on families is very important (Leeet al, 2020).

Covid-19 disease has infected all countries of the world due to very high transmission in less than a few months by creating a pandemic situation (Zhao & Chen, 2020) and due to the pathogenicity of the virus, the rate of spread and the percentage Mortality and the resulting burial may endanger the psychological and well-being of individuals in society and their lifestyle (Chen, et al., 2020). Given that Covid-19 is a new and unknown disease and keeping people at home is the most common and best strategy to prevent the spread of the disease. Accordingly, it is predictable that some of the symptoms of psychological and biological disorders will occur in people from different communities. In this regard, according to the results of numerous studies, people with Covid-19 disease have a low psychological tolerance capacity and are highly exposed to psychological disorders such as anxiety, stress, depression and negative thoughts (Yao et al, 2020).

In addition to mental health, home quarantine affects the physical health of individuals. Research shows that people are less physically active during the weekend or summer holidays, their sleep patterns are impaired, they follow less than a proper diet, and they experience obesity and recurrent headaches. This phenomenon is exacerbated when people are confined to the home and do not work outside the home. On the other hand, the emergence of stressful stimuli at home, such as a long-standing fear of getting Covid 19, unpleasant and boring thoughts, lack of adequate space at home, and heavy use of cell phones and televisions can have lasting effects, including poor and unplanned living habits. Chronic headaches include poor eyesight due to overuse of the media, neck pain, and disc pain (Brooks, et al., 2020).

Sleep disturbance is another biological problem caused by Covid-19 that people in quarantine may experience (Zhang et al, 2020). Another study found that sleep quality in people who isolated themselves for 14 days during the release of Covid-19 showed that sleep disorders were associated with increased anxiety and stress in these people, which could be supported by Appropriate socialization improved their sleep quality (Xiao et al, 2020). Another study conducted by ordinary people in China in early 2020 found that of about 2019 participants online, about 4.6 percent reported high levels of post-traumatic stress disorder. Among these factors, it seems that some factors that can contribute to the occurrence of psychological and biological symptoms in the general public, concerns about the risk of disease, future employment status and sources of income for individuals and families, as well as long periods of home quarantine. Be; Thus, what is clear is that

despite Covid-19 disease, everyone's lifestyle has changed, which is difficult to predict (Ali Akbar Dehkordi et al, 2019).

Many correct lifestyle changes not only reduce psychological damage but can also enhance physical and biological health (Raji et al, 2010).

Therefore, in the current high-risk situation, it is necessary to study and identify the psychological and biological consequences of Covid-19 disease at different levels of society, especially families, which are the target community in the present study. Therefore, the aim of this study was to qualitatively investigate the consequences of communication, biological and psychological links of Corona virus on families.

Methods

This research was descriptive in nature and method and applied in purpose. The statistical society of the present study consisted of a group who had acceptable prevention against corona virus in the city of Tehran. The sampling method was purposive. In qualitative research, the number of samples is not predetermined and defined, and data collection from research participants continues until the stage of achieving saturation. The researcher tried to interview 9 patients who got better, 4 people weren't infected in a purposeful manner. In order to identify the criteria and indicators in the study, semi-structured interview technique was used. In this study, the researcher completely reached saturation after conducting 13 interviews in the group of patients and recovered-people. Inclusion criteria included: corona virus infection, willingness to participate in research, no previous mental health problems, no use of psychiatric and sedative drugs, and exclusion criteria also included unwillingness to participate in research, having previous mental health problems, using psychiatric and sedative drugs. The method of conducting the research was that the researcher, while gaining the satisfaction and trust of the interviewees for honest cooperation, expressing the goals and nature of the research and emphasizing the confidentiality and anonymity of the interview text, conducted the interview and obtained data through conversation. During interviews, conversations were recorded. To study the face and content validity of the interview questions, several professors of the Department of Psychology as well as experts in the field of qualitative research were consulted. The duration of the interviews varied from 30 to 70 minutes depending on the patience and tolerance of the participants. Theoretical saturation of data was achieved with 13 participants, but three interviews were conducted again to validate the findings. The text of the interviews was handwritten verbatim after listening to it several times. The obtained information was analyzed by Colaizzi method. The extracted factors were then approved by experts to indicate the depth of meaning expressed by the participants.

Results

Interviewees in the two recovered patient groups included 13 participants (7 females and 6 males). Participants ranged in age from 33 to 59 years. Marital status of participants was 10 married and 3 single. The educational range of the participants varied from

masters to third elementary and they had different jobs: teacher (two persons), employee (two persons), shopkeeper (2 persons), salesman (one person), taxi driver (one person), hairdresser (one person), worker (one person) and housewife (three persons) and medical staff group included 11 participants (5 women and 6 men). The age range of the participants was from 28 to 45 years. Marital status of participants was 5 married and 6 single. The educational range of the participants varied from masters to bachelor and their record of service varied from 3 to 20 years. In the first stage, the interviews of recovered patients were analyzed by line-by-line analysis. Finally, 100 free codes were obtained, which after final analysis and validation were divided into 5 main categories and 24 sub-categories, as follows:

Table 1. Codes from interviews and their analysis steps

Axis categories	Subcategories	Free codes
Intra-family relationships	Intensifying a sense of support within the family	Sense of support, financial support, time investment, use of sentences in the warm-up, intimacy and dependence, love for each other
	Keep family members away from each other	Fear of other family members, lack of understanding of the patient, distance from the patient, lack of attention to the patient's psychological needs during the illness, having loneliness anxiety
	Rejection and blaming of the patient	Increased patient blame, inappropriate behavior and hypersensitivity in family members, double stress, following negative cases in the patient's disease, failure to express the patient's wishes to others, inability to communicate healthily with others, labeling
Negative emotions and feelings	Incidence of stress, aggression and irritability of family members	Tensions and conflicts, inability to express emotions and desires, inability and awareness of emotions, inability to express emotions, fear and anxiety in family relationships
	Fear and anxiety	Fear, severe anxiety and stress, withdrawal from others, low mood, anxiety, confusion, avoidant behaviors
	Isolation and withdrawal	Isolation, intolerance of ambiguity, feeling of being labeled, avoidant behaviors, impatience, guilt, cold and intimate relationships with others

	Feelings of despair and hopelessness	Early irritability, confusion, anxiety and confusion, fear and anger, sadness, low mood, irritability, feeling empty, poor concentration on activities, depressive symptoms and emotional disorders
The dimension of social relations	Rejection by others (changes in neighbors' relations) Blaming others Loss of relationships due to shame and embarrassment	Rejection of sick people by those around and neighbors, labeling, changing social behavior with patients Feelings of shame and embarrassment, rejection by those around you, limitations in relationships, being unloved by those around you
	The stigma of illness and the contrasting feeling of pity and disgust	Feelings of pity and disgust, reduced resilience, reduced tolerance for distress
	Blaming others	Labeling and blaming others for not following proper protocols
Family disputes	Relationships between spouses and children	Marital problems, behavioral problems of children
Changing in lifestyle's patterns	Obsessive-compulsive disorder	Obsessive-compulsive observance of health items in the middle and affluent class, non-observance of health items in the weak class, less presence in high-risk areas by the middle and affluent class, presence in high-risk areas by the weak class
	Anxiety disorders	Anxiety and fear of infection, anxiety and fear of outbreak, decreased life expectancy, death anxiety
	Quarantine	Housing, business closures, school and university closures, recreation centers closure, travel cancellations

The first theme: Intra-family relationships: The experience of sick people showed that in some people, their illness caused the family members to be more together and their supportive aspects of each other increased, and in some other patients Fear of illness has caused family members to distance themselves from each other and has led to the patient

being blamed for the fact that this situation has not been pleasant for the sick people and has caused them resentment.

The first category of the first major theme of family relationships included the intensification of supportive feelings within the family, which included codes of supportive feelings, financial support, and time investment, use of warm sentences, intimacy and dependence, love for each other. "As a result of this disease, the relations increased and we got to know each other more, and some of the violence turned into reconciliation, and we helped each other in every material and spiritual way." Even to some extent, with financial assistance to the weaker members of the family, we had a significant impact on solving their problems.

The second category of the first main theme included distancing family members from each other, which included codes of fear of other family members, lack of understanding of the patient, distance from the patient, lack of attention to the patient's psychological needs during the illness, having anxiety alone. Participant 3: "In family relationships, family members become estranged due to fear of illness. But I say do not do this and do not put a distance between themselves; and being in a space has a great impact on the patient's mood and that the family relationship is maintained. "When they are separated, it has a bad effect on a person's mood, both emotionally and physically."

The third category of the first main theme included rejection and blame of the patient, which includes codes to increase the patient's blame, inappropriate treatment and hypersensitivity in family members, double stress, following negative cases in the patient's disease, not expressing the patient's wishes to others. The inability to communicate healthily with others was labeling. Some patients were rejected and reprimanded by their family members during the illness. Participant 1: "The patient's family members are very important; For example, my brothers and sisters for fear that they might get sick. They just thought of themselves and quarantined me in a room, sometimes because they thought that because I did not observe hygiene, I had to deal with my own illness and they did not pay attention to me and my words. "They did not listen."

The fourth category of the main theme included the occurrence of stress, aggression and irritability of family members. This category includes codes of tension and conflict, inability to express emotions and desires, inability and awareness of emotions, inability to express emotions, fear and anxiety. It was in family relationships. Covid-19 disease caused tension and conflict, inappropriate treatment and hypersensitivity in family members, and this situation was not pleasant within the family and imposed a kind of double stress on family members. Participant 4: "The first two or three days were good since the illness and the quarantine of the family members at home. Then, little by little, the criticism started, we soon lost our temper and got into a fight with each other. My parents could not stand each other. My brother was upset with my mother because he was at home and always used the phone. Tensions in the family had increased.

The second main theme: Negative feelings and emotions caused by the disease (dimension of personal relationships): The analysis of the interview participants in the study showed in depth that the negative feelings and emotions had increased during this period.

The first category of the second main theme included fear and anxiety when seeing people, which included codes of fear, anxiety and extreme stress, withdrawal from others, low mood, worry, confusion, and avoidant behaviors. The experience of the patients showed the fact that they experienced severe fear, anxiety and stress during the illness. This anxiety stemmed more from the ambiguity of the situation, the unknownness of the disease and its treatment, distrust of the future, and so on. Participant 9: "I was very scared these days (during the Corona outbreak). Of course, because I got sick. The medicine did not work well either. My mouth ached because of the stress and anxiety I had. It was a very difficult situation. At that time, his ignorance (Covid-19 disease) made me more afraid. I was really scared. I was a little scared because I was unfamiliar with the disease and that when I got the disease the number of people who had recovered was very small and I knew almost no one who had recovered." "That put a lot more pressure on me."

The second category of the second main theme included isolation and withdrawal from others, which included codes of isolation, intolerance of ambiguity, feelings of being labeled, avoidant behaviors, impatience, guilt, cold and unfriendly relationships with others. Some patients may have felt guilty because they felt sick; they isolated themselves and withdrew from those around them and their friends, and this isolation and withdrawal made their relationship cold and intimate. Participant 2: "I felt very lonely, however I did not like to communicate with others, even my friends called me and I refused their call."

The third category of the second main theme included feelings of despair and hopelessness, which included codes of urgency, confusion, worry and confusion, fear and anger, sadness, low mood, irritability, feeling empty, poor concentration in activities, Symptoms were depression and emotional disorders. During the illness and treatment, patients experienced a feeling of hopelessness, urgency, confusion, and so on. "After two months of being quarantined at home, we became sensitive to every little thing."

The third main theme: change in the behavior of others (dimension of social relations): Analysis of the interviews of the participants showed that the disease of social relations had strongly affected them, which included rejection by others (change of neighbors) the rupture of relationships was due to shame, stigma, illness and blame of others.

The first category of the third main theme included rejection by those around (changing neighbor relations), which included codes of patient rejection by those around and neighbors, labeling, changing social behavior with patients. Patients who have been infected during the illness have been rejected and ill by those around them, especially their neighbors, and this may have offended them. Participant 8: "After we got sick, one of the neighbors called the emergency services to take the family away. These have a corona. They pollute the environment. Or some of our neighbors secretly disinfected our hallways and doors every day; which was annoying to us." "In their opinion, it seems that our family has low social consciousness and we have not observed health and we have taken the corona."

The second category of the third main theme included the reduction of relationships due to shame and embarrassment, which included codes of feeling of shame and embarrassment, rejection by others, limitation in relationships, and being unloved by

those around. During the illness, patients felt a sense of shame and embarrassment due to being rejected and unloved, and as a result, they reduced and limited their relationships with others. In some areas, this limitation of relationships has even been extended to restrictions on video calling. Participant 5: "We could not see our families, because we were embarrassed." We did not even make video contact with others because we felt ashamed.

The third category of the third main theme included disease stigma and contrasting feelings of pity and disgust, which included codes of pity and disgust, reduced resilience, and reduced tolerance for anxiety. Patients were stigmatized for their weakened immune systems and disease, and this stigma of the disease caused them a double feeling of pity or disgust on the part of others, and this was very painful for them and difficult to bear. Participant 8: "My wife's acquaintances have been stigmatizing us since I became ill and that they are weak in immunity and susceptible to disease." The stigma of the disease made them either feel sorry or disgusted.

The fourth category of the third main theme included blaming others, which included tagging codes and blaming others for not following the protocols properly. Patients were considered by others to be the main culprits of their illness and were therefore blamed, ridiculed and ridiculed by them, and this was difficult to bear. Participant 7: "I started having symptoms in November 1999. I did not take the disease seriously before I got it. "Although I was very strict after the symptoms, it was no use anymore. Everyone blamed me for the disease and talked sarcastically about them and me getting it."

The fourth main theme: Family disputes (relations between spouses and children): The analysis of the interviews showed that in the days of Corona, family disputes were very evident due to the full-time separation of spouses and children.

The only reported category for the fourth main theme, namely family disputes (relationships between spouses and children), included relationships between spouses and children, which for this category were also, reported codes of marital problems, behavioral problems of children. Participant 11: "Although these days we are busy moving house on Eid night, but disinfecting the house, especially the door handles and entrance corridors of the house, constantly washing clothes and reminding children of hygiene tips, has doubled the efforts of mothers. Concerns about protecting family members, especially when children are out of the house, have become a concern for mothers, and despite the many advices given to teens, it is difficult for them to accommodate the sensitivity of the issue and pay less attention to health advice. Children also make a lot of excuses to leave the house and insist on buying Christmas clothes and accessories, but it cannot be explained to them that there is a risk of getting the Corona virus outside the house. "Because most men are at home these days and in the days of quarantine, running the house has been a bit of a problem for women, and this is increasing the quarrel between men and women."

The Fifth main theme: Lifestyle Changes: The analysis from the interviews showed that the lifestyle in the days of Corona has changed drastically compared to before, including obsessions, homelessness, closing jobs and even losing a job and more.

The first category of the fifth main theme included obsession and unconventional cleanliness, which included obsessive observance codes of health items in the middle and affluent class, non-observance of hygiene items in the weak class, less presence in high-risk areas by the middle and affluent class, presence in areas Dangerous by the weak cortex. Participant 4: "Of course, we see this change in lifestyle and obsessive-compulsive health issues more in the middle and affluent class and the weak section of society, which is forced to continue daily activities in society, such as people who collect garbage or children of workers and workers, "They have to work in polluted environments." Participant 10: "Corona has not been very effective in changing the lifestyles of people struggling with poverty, as health supplies and personal protection such as masks, gloves and disinfectants are sold at high prices, and some of these Families cannot afford it." What has affected people's lifestyles more than anything else is the anxiety and panic caused by the corona virus.

The second category of the fifth main theme included anxiety disorders, which included codes of worry and fear of infection, anxiety and fear of outbreak, reduced life expectancy, and death anxiety. Participant 3: "Fear and worry about the spread of this disease in society, has a negative impact on life expectancy and has greatly reduced empathy and social interactions."

The third category of the fifth main theme included quarantine, which included house codes, closure of businesses, closure of schools and universities, closure of leisure centers, cancellation of travel. Participant 6: "Many people have been forced to stay at home, schools and universities have been closed, the economic situation of the people has deteriorated and their eating, health and sleep habits have changed, social communication has disappeared, travel, entertainment and even simple "Most of the hobbies have been canceled, house buying, security level, our supervision of each other, etc. Many other things have suddenly changed, all of which have forced us to adhere to a new lifestyle."

Analysis of information obtained from people who had acceptable prevention of the disease showed that the main theme in the prevention and control of physical and mental health is the cohesion and strength of the family structure. Important sub-themes of this main theme that as controlling and preventive factors are: having warm and intimate family relationships, receiving information from reliable sources, strengthening the spiritual sense, getting help from a psychologist and counselor, having the support of family members, not having problems And family conflicts and the use of cyberspace to have online meetings with acquaintances and friends. Participant 12: "Our family relationships did not change much. We kept in touch with health issues. We put a table with disinfection and hygiene items in front of the entrance. We followed the health protocols completely and traveled as a family." we had. For my exercise program, I got exercise equipment such as treadmills and dumbbells, and I got an exercise and nutrition program from a good trainer on Instagram, and because I no longer use outside food and restaurants, I was able to follow my diet more than before. My work schedule was completely shut down because I did not already have the virtual working infrastructure and I could not start it. "Social relationships were only virtual because I was worried that others would not fully comply and be carriers, and although I am a very social person and the lack of communication affects my mood, I did not meet other people for a long time,

"Participant 13: "Socially, although communication with even my mother was cut off, cyberspace miraculously replaced social relationships and played a very good role, and connections were made visually and nostalgia, "It made this lifestyle much more colorful, and we lived with Corona."

Discussion

The aim of this study was to qualitatively investigate the communication, biological and psychological consequences of corona virus on the family. The findings of this study showed that the prevalence of Covid-19 can affect family relationships, personal relationships, social relationships, relationships between spouses and children and cause obsessive-compulsive disorder in individuals. In order to explain these findings, we must first point out the conditions caused by the outbreak of Covid 19 virus. These conditions, such as social distancing, closure of schools and businesses, and travel restrictions to cut the transmission chain of the virus (Cao et al, 2020), have made life difficult for individuals in the individual, family, and social dimensions. Campbell (2020) showed that during the Covid outbreak, 19 tensions among family members increased and there were reports of domestic violence. Some researchers attribute the stress of family members and the interpersonal and social problems during the Covid 19 outbreak to receiving social support and stressful situations (Klopfenstein et al, 2020).

Warm and intimate family relationships, family support were important family and social resources that supported and helped people with the disease to cope with the disease and the damage caused by it and to be safe from serious harm. The cohesive structure of families prevented conflict, violence and conflict in the family, and its members sought the necessary information about the disease from reliable sources and, when necessary, communicated in cyberspace to prevent the transmission of the disease to other family members and acquaintances. The method of intimate family relationships was maintained and was not compromised.

On the other hand, the findings of this study showed that the prevalence of Covid disease has affected 19 social relationships. Explaining this finding, it can be said that staying at home and telecommuting during the outbreak of Covid virus 19 can lead to feelings of loneliness and psychological inefficiency in people, which can affect people's social relationships. They may also be rejected by others when they develop Covid 19 disease.

Another result of this study was the increase in negative emotions during quarantine due to Covid 19 disease. Explaining this finding, it can be said that during the outbreak of Covid disease 19, negative emotions such as anxiety and depression increase and the happiness index among individuals decreases. Decreased happiness can also be caused by rumination among people and lack of effective coping strategies (Miller & Cappuccio, 2021). In general, in explaining the findings, it can be said that based on the theory of behavioral immune system, they use negative emotions (anxiety and depression, despair and hopelessness) and negative cognitive evaluation in order to protect themselves (Trazi et al., 2013).

Also, the analysis of the information obtained in the subjects was obsessive and unconventional grooming and sleep disorders. Explaining this finding, it can be said that this virus has caused obsession to spread and people with a history of obsessive-compulsive disorder to become more obsessed, so that this issue has overshadowed their other activities as well.

Conclusion

Findings of the study in the improved and non-affected group in the form of 5 main categories including family relationships, negative feelings and emotions caused by the disease, changes in the behavior of others (after social relationships), family differences and lifestyle changes and 24 subcategories that Includes intensified sense of support within the family, distance from family members, rejection and blame of the patient, tension, aggression and irritability of family members, fear and anxiety when seeing people, isolation and withdrawal from others, feelings of despair and quickness Rejection by others (changing neighbors' relationships), Decreased relationships due to shame and embarrassment, Illness and conflicting feelings of pity and disgust, Blaming others, Relationships between spouses and children, Obsessive-compulsive disorder, Anxiety disorders And quarantine and was 100 free codes. One of the limitations of the present study is that due to the fact that the present study was performed on patients recovering from Covid 19 in Tehran, the results cannot be generalized to other cities in Iran due to different cultural and social contexts. Also, the use of available samples, ethical considerations of the participants in answering some of the interview questions and conducting face-to-face interviews were other limitations of the present study that can be a threat to the validity of the results. On the other hand, since the intervention package of the present study was not prepared and a questionnaire was not extracted and standardized from the interviews; it can be another limitation of the present study. From the research suggestions, it can be recommended that similar studies be conducted in other parts of the country. In the present study, due to the high prevalence of corona and the risk of contracting this deadly virus, audio and written interviews were used. It is suggested that researchers use video cameras for interviews in future research for the time after corona. Also, one of the practical suggestions of the present study is that psychologists and specialists pay attention to the topics obtained in order to provide mental health services. Finally, the corona virus is not the first virus to threaten humanity, nor will it be the last. Communities need to use effective strategies to strengthen families to care for and protect themselves and others, and to better interact with each other to control and minimize the psychological consequences of an outbreak.

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