Pandemic Anxiety among Prisoners and Ways to Deal with It

Morteza Azizi Mohsenabad

Department of Social Sciences, Imam Khomeini International University, Qazvin, Iran

Abstract
Anxiety is one of the problems that might occur during the outbreak of a pandemic, which is usually caused due to chronic stress in people. This anxiety will have far more destructive effects on the body and the psyche of those people inside an environment where their freedom is taken from them (such as prisons or detention centers). The reason is that it is really difficult and sometimes impossible to follow health protocols in these environments, the fact which makes prisoners more likely to be infected in comparison with others. Moreover, in these environments, in addition to the stress caused by the disease, there are several other sources of stress which cause people to suffer from different types of anxiety. This study aims to scrutinize the factors which cause anxiety as well as the consequences of anxiety caused by the prevalence of a pandemic inside prisons. It also suggests ways to prevent, control and treat anxiety in prisoners.

Keywords
Anxiety, Prevalence, Pandemic, Prison

1. Introduction

When a pandemic occurs, one of the main problems is anxiety which engulfs people due to the fear of its prevalence. Since pandemic outbreaks occur more rapidly in environments such as hospices, orphanages, barracks, and especially prisons, the anxiety caused by the outbreak is also wider compared to other parts of the society. Especially within prisons, this pervasive anxiety sometimes leads to anger among prisoners. If this problem is not prevented or controlled, in addition to the damage done to the psyche of prisoners, it may also affect the public order in the society and harm the safety of the community (Qiu et al., 2020). In terms of the history of discussions about the prevalence of a pandemic among prisoners, several articles have been written. However, most of these articles have looked at the issue from a medical point of view, and the place for research considering the subject from a psychological point of view remains empty. This
study aims to examine the psychological issue of why and how the prevalence of a pandemic can cause anxiety in prisoners and what measures can be taken to prevent it or to lessen its effects.

2. Statement of the problem

In fact, this study first investigates the anxiety caused by the prevalence of a pandemic among prisoners and then suggests solutions to prevent the pandemic itself or its growth in prisons. A pandemic such as COVID-19 may be stressful for people. Fear and anxiety about a new disease and what may happen can be overwhelming and may cause strong emotions both in adults and children. Also, public health measures such as social distancing can make people feel isolated and lonely and may increase stress and anxiety. Ideally, as soon as prison authorities know about the possibility of a pandemic in the country, they should take all necessary measures to prevent the disease from entering the prison, and in this regard, put both expert physicians and expert psychologists in charge of monitoring the physical as well as mental health of prisoners (Cava et al., 2005). However, in reality, this does not usually happen. In the recent case of COVID-19 disease, such measures were not anticipated in most prisons. Therefore, the pandemic quickly spread into prisons, causing great panic among prisoners. This happened in a wide range and distribution around the world to such extent that, for example, in many prisons around the world, including in prisons in various cities of Iran, anxiety caused by the COVID-19 outbreak urged prisoners to make a collective decision to escape from prison in order to save their lives. Thus, the gap between the ideal situation and reality is huge. However, although the ideal may not seem possible, we need to think of a solution that can bring the present situation as close to the ideal situation as possible. This will be possible if authorities take measures to prevent pandemics from entering into prisons that have not yet been involved (preventive measures) and to try to get both the disease and the anxiety under full control (treatment measures).

3. Theoretical foundations

The term anxiety was rarely used by scientists and researchers before the 20th century. But from the twentieth century onwards, various theories about anxiety were formed, causing this term to be used more frequently.

3.1. Psychoanalysis theories on anxiety

One of the most influential historical figures in studies on anxiety was the founder of psychoanalysis, Sigmund Freud. Freud argued that unlike other neurological diseases, neurosis is anxiety caused by the lack of proper gratification of sexual excitement. Freud cited as examples men and women who voluntarily and deliberately abstain from sexual abstinence, stating that they are experiencing an anxiety neurosis. Freud’s views on the causes of anxiety changed over time, and his final opinion was expressed in a speech he gave in 1932. In this speech, he stated that neurotic anxiety is rooted in sexual energy, and it is not as physically rooted, as he used to say, but has a psychological root. In relation to the neurotic anxiety described by Freud, it should be noted that Freud distinguished between reality anxiety and neurotic anxiety (Cherney, 2020). Reality anxiety is caused by a threat in an external environment; neurotic anxiety comes from within, though we are unaware of the true cause. Reality anxiety helps us, but neurotic anxiety can lead to misery in our lives. The keyword for Freud’s theory of anxiety is what he called Id, a wild, primitive psychological repository of instinctive desires. The task of managing and controlling these demands, buried deep in our subconscious, is the responsibility of the second part of the Freudian psyche, Ego. When the soul fails in this critical task, neurotic anxiety occurs, and desire is suppressed. Freud also believes that every anxiety in us reminds us of our first encounter with danger: “the trauma of birth”. Every fear of anxiety we experience in our lifetime is echoes of this event at the beginning of life (Towl & Crighton, 2000).
3.2. Behavioristic theories on anxiety

According to Watson, the behavior has a simple explanation: we learn to behave. They were heavily influenced by Russian scientist Ivan Pavlov. In his famous experiment, Pavlov suggested that when a particular stimulant comes with food, dogs learn to react to that accompanying stimulant in the same way they react to food (saliva) even when there is no food. This process is called conditioning.

Behaviorists believed that conditioning could be an acceptable explanation for creating irrational phobia and fears. Behavioral comments about anxiety were subsequently developed by American psychologist Mowrer. Mowrer proposed a two-step theory of anxiety. He believed that anxiety, and especially the desire to avoid it, was a fundamental drive to human behavior. He believed that anxiety was a conditioned form of pain reaction, whose very useful function was to motivate and strengthen behavior that usually prevents recurrence of pain-causing stimuli. Mowrer’s emphasis on the motivational power of experiences was grounds for a psychologist from Harvard University called Skinner to come up with the theory of operant conditioning. Skinner’s focus was on the effect that our behavior has on the world around us. If the effect is positive, we learn to repeat behavior, and if the effect is negative, we learn to behave differently next time. Mowrer’s theory helps us explain how irrational anxieties may form. A person who does not board a plane because of anxiety deprives himself of the position to understand that his fears are groundless and unjustified. There is very little chance that the plane will crash and the person in it will be killed or injured. If a person dares to board a plane for a while, this fear gradually disappears in him. But this anxiety causes him not to have this experience, and as avoidant behavior proceeds, anxiety becomes more rooted in him (Channabasavanna et al., 1979).

3.3. Cognitive theories on anxiety

The goal of the cognitive approach is to identify and understand the basic processes that pave the way for understanding how humans think. This approach claims that anxiety stems from our appraisal of a situation. At first, this assessment or interpretation of the situation is not an informed process and is usually intuitive. Our senses act like an early warning system, that is, they choose something that could be potentially important and send it to a more rational and deeper part of the brain to be examined. When it is detected in this process that we are not sure we can handle a threat, we feel anxious. It’s not the event itself that determines our emotional state, but the way we interpret it. The perceived threat can be external - such as noise at night - or internal. For example, panic attacks are often misunderstood by the belief that an unknown physical sensation that may also be normal (such as tightness in the chest) is interpreted as symptoms of serious illness, such as a heart attack. In fact, a false cycle begins in which the emergence of physical symptoms of anxiety (such as shortness of breath, severe heartbeat, nausea) is seen as a serious risk or danger of death, which in turn leads to more anxiety. In this case, the individual’s assessment of these internal symptoms is of great importance (Qiu et al., 2020). That is, if a person can change their mindset, they can also change their emotions. But after running down the stairs and feeling short of breath, why does one interpret this feeling as a sign of imminent death but the other doesn’t notice it at all? Why does one person hear a noise at night and say to himself that there is nothing to worry about, but the other loses the ability to move after hearing this noise of anxiety? The answers to these questions are pre-formed in imagination and ideas and lie in habitual thinking processes. That’s what Aaron T. Beck, founder of cognitive-behavioral therapy, calls schematic beliefs. These schematic beliefs are formed through our life experiences and are so deeply rooted and automated that we are often unaware of their existence. Anxiety problems can be severely persistent if left untreated. Anxious people can spend a lot of time worrying about events that have never happened to them, and it’s actually very unlikely to happen. Why don’t they realize that their anxiety is misplaced? Why don’t they learn from the experience? This is a question that has attracted the attention of many cognitive-clinical psychologists. One of their key findings is that people with anxiety problems adopt a range of strategies known as safety behaviors. These strategies are designed
to prevent anything they fear. So, for example, a person who fears social situations will seek to avoid them; if that avoidance is not possible, they turn to other techniques such as ensuring a friend is present. Or, for example, they choose their clothes so that they don’t look at all and try not to attract any attention. These safety behaviors may reduce anxiety in the short term, but the problem is that they prevent us from discovering the fact that thoughts associated with our fear are unfounded, and this lack of awareness increases anxiety in us more and more. People with anxiety problems are hypervigilant to potential threats. But because their attention is too focused on potential danger, they ignore events that do not fit with this rather uncomfortable view of the world. This, in turn, can magnify the likelihood of danger (psychologists call it threat anticipation) and lead to a multiplicity of false alarms, all of which go hand in hand to increase anxiety. In these people, there is a tendency to negatively interpret ambiguous events. This is a significant problem given that many of the situations we encounter are inherently ambiguous, usually because it’s very difficult to know what other people really think and feel (Hawryluck et al., 2004).

3.4. Neurobiological theories about anxiety

These theories often address brain function and other parts of the body. Until recently, scientists believed that a brain region called the amygdala acted as the center of fear and anxiety. Some studies have shown that monkeys whose amygdala is damaged are unusually unreacted against scary stimuli (such as a nearby snake) and do not react. In people with anxiety disorder, scientists thought that fear and inappropriate anxiety were caused by the hyperactive amygdala. Today, however, we know that anxiety is the result of constant interaction in different regions of the brain. No brain region controls anxiety alone. Rather, interactions among many brain regions are necessary to experience anxiety. One potential explanation for how this event is the idea that the brain is divided into two parts: a cognitive brain and an emotional brain. The frontal lobe, where all our feelings and thoughts come together as a unified experience, is cognitive. The amygdala, which is deep inside the brain, is part of the emotional brain. According to this theory, we only feel anxious when signals from the emotional brain dominate our cognitive brain and into our consciousness. For example, if you can reasonably conclude that snakes are rare in the forest where you walk, the cognitive network of the brain overtakes and the network of emotional fear (Greifinger, 2007).

4. Review of literature
4.1. Researches on the negative psychological effects of a pandemic on people in the society (not necessarily prisoners)

In 2004, Hawryluck and his colleagues studied 129 quarantined individuals during the SARS epidemic in 2003. They had responded to a web survey. The results of this study showed a high prevalence of psychosis. Symptoms of post-traumatic stress disorder (PTSD) were diagnosed in 28.9% and depression in 31.2% of them. Longer periods of quarantine were associated with increased symptoms of PTSD. Also, PTSD and depressive symptoms were found in people who were either familiar with a person infected with SARS or who had been in direct contact with such a person (Hawryluck et al., 2004). In another study, the psychological effects of quarantine were also seen in healthcare workers. These psychological effects included fatigue, collective separation, anxiety, irritability, insomnia, lack of concentration, ambivalence, bad job performance, reluctance to work, and thinking about resignation (Bai et al., 2004). In a long-term qualitative study, a series of behavioral changes resulting from quarantine were seen in subjects, including an obsession with hand washing, crowd avoidance, and delayed return to normal lifestyle even months after quarantine (Cava et al., 2005). A more recent study on the effects of quarantine during COVID-19 in China showed that the COVID-19 pandemic posed a serious threat to people's mental health in China. The disease and the quarantine imposed on people have caused psychological problems such as panic disorder, anxiety, and depression in the community (Qiu et al., 2020). Another study has been conducted in the Republic of Ireland, showing that about 27% of Irish people exhibited signs of general anxiety and
depression during the first week of the COVID-19 quarantine. The research showed that groups of people are more vulnerable to the possibility of engaging with this anxiety and depression. This study showed that women are more vulnerable than men. Also, the vulnerability of older people over 65 years of age and young people is higher than other age groups. In addition, those who have lost their income due to the outbreak are more susceptible to anxiety and depression than other segments of society (Hyland et al., 2020).

4.2. Researches on anxiety in prisoners (not necessarily caused by a pandemic)

In a book titled *Psychology in Prisons*, the psychological problems that may arise for prisoners are explained comprehensively. Although the book does not mention the disorders that might arise from a pandemic, we can read things that are closely related to the subject we are discussing in the field of trauma or anxiety. (Towl & Crighton, 2009). Another book with the same title (*Psychology in Prisons*), was published in 1990 by Rutledge Publication, which, like the previous book, explores psychological issues within prisons. The book shows how knowledge of psychological principles can lead to a better understanding of the prison environment and the problems that occur within it. The authors of the book tell how psychology can be used to increase the perception of prisoners and tackle day-to-day problems in prison life. They focus on key areas of the problem, such as sex offenders, violent criminals and the AIDS issue. It also explores the effects of the prison environment on staff and suggests means to reduce stress levels. In one chapter of this book, the issue of stress in prison has been meticulously examined (Cooke et al., 1990). Another study discussed the issue of anxiety among prisoners in a more detailed way. In their research, the writers have shown that anxiety among prisoners can cause aggression and violence in them. They also found that having a steady job in prison and decent use of leisure time can play a significant role in managing anxiety, mood depression, and aggression in prisoners (Lapornik et al., 1992). Another article published in India examined the anxiety of prisoners who are still on trial and have not been given a definitive sentence. These prisoners are under additional pressure and are more anxious than other prisoners (Channabasavanna et al., 1979). This article is of particular importance because the prevalence of a pandemic and the closure of courts leads to prolonged proceedings, which in turn prolongs this period of anxiety for these prisoners.

4.3. Medical (not psychological) researches on pandemic in prison

On March 15, 2020, amid the coronavirus outbreak, the World Health Organization published a booklet entitled “Preparedness, prevention, and control of COVID-19 in prisons and other places of detention”. In this manual, useful information and instructions are provided on how to deal with this pandemic in prison, but this information and guidance are purely medical, and there is no noteworthy allusion to the psychological issues in it. Also, a book titled “Public Health Behind Bars” was published by Springer Publishing in 2007. The book explores the problem of disease in a growing prison population and analyzes its impact on the public health of prisoners after being released. The contents of this book are notable because there is also a problem in pandemics that a disease becomes widespread in prison, after which prisoners who leave the prison transmit the disease to the community, causing the spread of pandemics to accelerate (Greifinger, 2007).

5. Findings

One of the most powerful causes of anxiety is fear of physical injury. Another powerful factor causing anxiety is feeling a continuing threat. When these two join hands and people experience these two states together, their anxiety-raising power multiplies. Especially if these people are in an environment where the environment itself is a source of stress. Prisoners experience such a situation during the outbreak of a pandemic. People who are denied their freedom, i.e., those in prisons, are more likely to be more vulnerable
Factors causing anxiety in prisoners after a pandemic outbreak

Anxiety in prison generally has some causes and reasons. The prevalence of a pandemic in particular can add to the previous reasons. First, the general factors of anxiety in prisoners will be examined and then specifically the anxiety factors caused by the prevalence of a pandemic will be discussed. Thus far, a singular factor or cause has not been diagnosed to be identified as the only cause of anxiety. Rather, multiple factors usually go hand in hand to form anxiety. Genetics is one of the causes of anxiety formation. A prisoner may be genetically susceptible to various types of anxiety. Technological and methodological advances have allowed researchers to examine genes that play a role in the development of anxiety in more detail, but research is still at an early stage. Studies have shown that if someone’s first-degree relatives have mood and anxiety disorders, they are more likely to develop anxiety disorders (Smoller et al., 2015).

Another cause of anxiety in a prisoner is having experienced trauma in the past. Mental health researchers have found that childhood trauma can increase a person’s risk of anxiety. Difficult experiences such as physical and mental abuse, the death of a loved one, abandonment, divorce, or isolation can all be contributing factors. When someone has been through difficult experiences, and these experiences have created a sense of uncertainty, humiliation, or lack of trust in him or her, it is understandable that he or she may become anxious in a variety of situations in the future (Fryers & Brugha, 2013). Learning also plays a role in creating anxiety in people. Some behavioral scientists believe that anxiety is a learned behavior, stating that if a person has a parent or caregiver who exhibits anxious behavior, the child may also be inclined to reflect the same uneasy behavior in their life. (Burstein & Ginsburg, 2010). Drug use is one of the most effective factors causing anxiety in people (Woody et al, 1975). This cause may be more evident especially in prisons, as the rate of addictive substance use among prisoners is much higher than in other segments of society. Even the use of everyday addictive substances such as caffeine can increase feelings of worry or nervousness and help develop anxiety (Richards & Smith, 2015). Relying on caffeine sources such as coffee, tea, soft drinks, and energy drinks can make some people feel restless and anxious, especially when used in large quantities. Prisoners with other medical problems may also be susceptible to anxiety. For example, research has shown that people suffering from asthma or people with the chronic obstructive pulmonary disease also develop anxiety (Tselebis et al., 2016). Prisoners’ attitudes are also associated with anxiety in the possibility of engaging them. For example, research has shown that those with negative attitudes to life become more anxious than others (Bienvenu & Ginsberg, 2007). One of the most important causes of anxiety among some prisoners inside the prison is that they are threatened and extorted by other prisoners (Ireland, 2000). Another factor of anxiety in prison, commonly seen in newly arrived inmates, is anxiety caused by an inability to adapt to the prison environment in a prison, commonly referred to as prison anxiety (Carter, 2001). However, one of the most important causes of anxiety in people who are closely related to the subject of the research is being in a stressful situation continuously. Chronic stress is always one of the pre-causes of anxiety. During the outbreak of a pandemic, chronic stress is the problem of nearly all people in society, but there are reasons why this problem is seen in prisoners more than in

Factors causing anxiety in prisoners after a pandemic outbreak

Another cause of anxiety in a prisoner is having experienced trauma in the past. Mental health researchers have found that childhood trauma can increase a person’s risk of anxiety. Difficult experiences such as physical and mental abuse, the death of a loved one, abandonment, divorce, or isolation can all be contributing factors. When someone has been through difficult experiences, and these experiences have created a sense of uncertainty, humiliation, or lack of trust in him or her, it is understandable that he or she may become anxious in a variety of situations in the future (Fryers & Brugha, 2013). Learning also plays a role in creating anxiety in people. Some behavioral scientists believe that anxiety is a learned behavior, stating that if a person has a parent or caregiver who exhibits anxious behavior, the child may also be inclined to reflect the same uneasy behavior in their life. (Burstein & Ginsburg, 2010). Drug use is one of the most effective factors causing anxiety in people (Woody et al, 1975). This cause may be more evident especially in prisons, as the rate of addictive substance use among prisoners is much higher than in other segments of society. Even the use of everyday addictive substances such as caffeine can increase feelings of worry or nervousness and help develop anxiety (Richards & Smith, 2015). Relying on caffeine sources such as coffee, tea, soft drinks, and energy drinks can make some people feel restless and anxious, especially when used in large quantities. Prisoners with other medical problems may also be susceptible to anxiety. For example, research has shown that people suffering from asthma or people with the chronic obstructive pulmonary disease also develop anxiety (Tselebis et al., 2016). Prisoners’ attitudes are also associated with anxiety in the possibility of engaging them. For example, research has shown that those with negative attitudes to life become more anxious than others (Bienvenu & Ginsberg, 2007). One of the most important causes of anxiety among some prisoners inside the prison is that they are threatened and extorted by other prisoners (Ireland, 2000). Another factor of anxiety in prison, commonly seen in newly arrived inmates, is anxiety caused by an inability to adapt to the prison environment in a prison, commonly referred to as prison anxiety (Carter, 2001). However, one of the most important causes of anxiety in people who are closely related to the subject of the research is being in a stressful situation continuously. Chronic stress is always one of the pre-causes of anxiety. During the outbreak of a pandemic, chronic stress is the problem of nearly all people in society, but there are reasons why this problem is seen in prisoners more than in

Factors causing anxiety in prisoners after a pandemic outbreak

Another cause of anxiety in a prisoner is having experienced trauma in the past. Mental health researchers have found that childhood trauma can increase a person’s risk of anxiety. Difficult experiences such as physical and mental abuse, the death of a loved one, abandonment, divorce, or isolation can all be contributing factors. When someone has been through difficult experiences, and these experiences have created a sense of uncertainty, humiliation, or lack of trust in him or her, it is understandable that he or she may become anxious in a variety of situations in the future (Fryers & Brugha, 2013). Learning also plays a role in creating anxiety in people. Some behavioral scientists believe that anxiety is a learned behavior, stating that if a person has a parent or caregiver who exhibits anxious behavior, the child may also be inclined to reflect the same uneasy behavior in their life. (Burstein & Ginsburg, 2010). Drug use is one of the most effective factors causing anxiety in people (Woody et al, 1975). This cause may be more evident especially in prisons, as the rate of addictive substance use among prisoners is much higher than in other segments of society. Even the use of everyday addictive substances such as caffeine can increase feelings of worry or nervousness and help develop anxiety (Richards & Smith, 2015). Relying on caffeine sources such as coffee, tea, soft drinks, and energy drinks can make some people feel restless and anxious, especially when used in large quantities. Prisoners with other medical problems may also be susceptible to anxiety. For example, research has shown that people suffering from asthma or people with the chronic obstructive pulmonary disease also develop anxiety (Tselebis et al., 2016). Prisoners’ attitudes are also associated with anxiety in the possibility of engaging them. For example, research has shown that those with negative attitudes to life become more anxious than others (Bienvenu & Ginsberg, 2007). One of the most important causes of anxiety among some prisoners inside the prison is that they are threatened and extorted by other prisoners (Ireland, 2000). Another factor of anxiety in prison, commonly seen in newly arrived inmates, is anxiety caused by an inability to adapt to the prison environment in a prison, commonly referred to as prison anxiety (Carter, 2001). However, one of the most important causes of anxiety in people who are closely related to the subject of the research is being in a stressful situation continuously. Chronic stress is always one of the pre-causes of anxiety. During the outbreak of a pandemic, chronic stress is the problem of nearly all people in society, but there are reasons why this problem is seen in prisoners more than in

Factors causing anxiety in prisoners after a pandemic outbreak

Another cause of anxiety in a prisoner is having experienced trauma in the past. Mental health researchers have found that childhood trauma can increase a person’s risk of anxiety. Difficult experiences such as physical and mental abuse, the death of a loved one, abandonment, divorce, or isolation can all be contributing factors. When someone has been through difficult experiences, and these experiences have created a sense of uncertainty, humiliation, or lack of trust in him or her, it is understandable that he or she may become anxious in a variety of situations in the future (Fryers & Brugha, 2013). Learning also plays a role in creating anxiety in people. Some behavioral scientists believe that anxiety is a learned behavior, stating that if a person has a parent or caregiver who exhibits anxious behavior, the child may also be inclined to reflect the same uneasy behavior in their life. (Burstein & Ginsburg, 2010). Drug use is one of the most effective factors causing anxiety in people (Woody et al, 1975). This cause may be more evident especially in prisons, as the rate of addictive substance use among prisoners is much higher than in other segments of society. Even the use of everyday addictive substances such as caffeine can increase feelings of worry or nervousness and help develop anxiety (Richards & Smith, 2015). Relying on caffeine sources such as coffee, tea, soft drinks, and energy drinks can make some people feel restless and anxious, especially when used in large quantities. Prisoners with other medical problems may also be susceptible to anxiety. For example, research has shown that people suffering from asthma or people with the chronic obstructive pulmonary disease also develop anxiety (Tselebis et al., 2016). Prisoners’ attitudes are also associated with anxiety in the possibility of engaging them. For example, research has shown that those with negative attitudes to life become more anxious than others (Bienvenu & Ginsberg, 2007). One of the most important causes of anxiety among some prisoners inside the prison is that they are threatened and extorted by other prisoners (Ireland, 2000). Another factor of anxiety in prison, commonly seen in newly arrived inmates, is anxiety caused by an inability to adapt to the prison environment in a prison, commonly referred to as prison anxiety (Carter, 2001). However, one of the most important causes of anxiety in people who are closely related to the subject of the research is being in a stressful situation continuously. Chronic stress is always one of the pre-causes of anxiety. During the outbreak of a pandemic, chronic stress is the problem of nearly all people in society, but there are reasons why this problem is seen in prisoners more than in
other segments of society. One reason is that during the outbreak of a pandemic, prisoners see the same limited connection they could have with family members at risk. Due to various initiatives, including social distancing, commuting to prisons is at its lowest level, causing many prisoners to be deprived of the emotional support of their families. Such a situation creates stress in them, and with the continuation of this situation and the continuation of this stress, this chronic stress may become a form of anxiety. On the other hand, the prevalence of pandemics in prisons causes prison guards and prison officials to become more concerned about their health than other segments of the society since it is not possible to observe all protocols in an inappropriate prison environment. In some cases, some prison guards have reported that they are still infected with pandemics despite all protocols. This concern in prison guards and prison officials, when accompanied by fatigue and sometimes helplessness, will undoubtedly affect their conduct towards prisoners. If these out-of-custom behaviors continue, in addition to negatively affecting the morale of prison authorities, it will also create a stressful atmosphere for prisoners, and in the long run, this will be one of the causes of anxiety in them. Besides, prisoners are more susceptible to the disease when they realize that a pandemic has also made its way into prison. Given the limited prison environment and the lack of appropriate health and medical facilities within the prison, if they are not reassured as soon as possible and practically they do not see evidence that their health is important to the government, an atmosphere of panic and fear might be created in the prison environment. This can cause violent behavior and defying prison rules and even riots in prison or jailbreak, which will undoubtedly be met with repression by prison authorities, which will help create anxiety both among inmates and prison guards.

5.2. Effects of anxiety on prisoners after a pandemic outbreak

The individual effects of anxiety in prisoners are similar to those which can be seen in people in other segments of society, although in prisoners they can be more severe. In the short term, anxiety increases a person’s breathing and heart rate and concentrates blood flow towards the brain. This very physical response prepares the person to face a severe situation. If it becomes too severe, the person may start to feel nauseous. If the state of anxiety is excessive or persistent, it can have a devastating effect on a person’s physical and mental health. Prolonged attacks of anxiety and panic can cause a person’s brain to release stress hormones regularly. This can increase the frequency of symptoms such as headache, dizziness, and depression. When a person feels anxious and stressed, their brain encounters a flood of hormones and chemicals designed to help a person respond to a threat, such as adrenaline and cortisol. Prolonged exposure to stress hormones can be detrimental to a person’s physical health in the long run. For example, prolonged cortisol exposure can contribute to weight gain. Anxiety disorders can cause rapid heart rate, heart palpitations, and chest pain. A person may also be at increased risk of high blood pressure and heart disease. Anxiety also affects the digestive systems. Stomach pain, nausea, diarrhea, and other digestive issues such as loss of appetite can also occur.

If a person constantly feels anxious or experiences it for a long time, their body no longer receives signals to return to normal functioning. This can weaken a person’s immune system and make a person more vulnerable to viral infections and common diseases. Normal vaccines may also not work if there is anxiety. Anxiety causes faster and shallower breathing. If a person has chronic obstructive pulmonary disease, they may be at increased risk of hospitalization. Anxiety can also worsen asthma symptoms. Anxiety can also have other effects, including headaches, muscle tension, sleep problems, depression and social isolation. An anxious person may easily become angry or perhaps emotionally resentful. Other symptoms include nightmares, insomnia, and sadness (Cherney, 2020). At the extra-individual level, many effects can be mentioned for prisoners’ anxiety. As mentioned earlier, anxiety in a person may cause that a person gets angry earlier than usual. This can be very problematic in prison. Because prison is an environment that is normally very susceptible to aggression and strife, and this double sensitivity will undoubtedly create a tense atmosphere. Anxiety can hurt prisoners’ interactions with prison authorities. Such an interaction is
It has been repeatedly stated on a variety of topics that prevention is better than cure. This sentence is true about anxiety, too. Preventive efforts should be aimed at reducing risk factors and creating protective factors related to the etiology and maintenance of these syndromes. Some risk and protective factors cannot be corrected (e.g., family history). As a result, interventions require targeting variables that mediate the relationship between risk factors and disorder. In preventive scheduling efforts, timing is also very important, as some risk and protection factors may have a greater impact in certain periods than in other periods (Foa et al., 2017). One of the most important ways to prevent anxiety caused by pandemic outbreak is to eliminate the source of anxiety. That is to say since this anxiety arises as a result of the continuing stress of getting sick if prisoners ensure that the authorities do their utmost to prevent or control the disease from entering the prison, the stress in the prisoners will undoubtedly be lessened. As a result, the anxiety will also be prevented. One of the best things that happened in many countries, including Iran, was that many non-dangerous prisoners were granted long-term leave. This measure seems to have a couple of advantages. Firstly, these non-dangerous prisoners spend the critical conditions of the pandemic era close to their families. This keeps them away from the anxiety they could experience inside the prison. Secondly, as the population within the prison becomes less, a better situation can be provided to comply with the approved protocols to prevent the spread of the disease. Thirdly, the pressure on the prison staff also becomes less and the prison authorities can do more to control the situation. To try to reduce stress in the prison environment, one of the things that can be done is education. The training should be conducted both towards the prison staff and the prisoners. Both prison staff and prisoners should have basic information about the disease and know what measures will lead to the transmission and spread of the disease. They should be aware of the symptoms of the disease and should also be taught how to disinfect hands, clothes, and surfaces. Another measure is to provide the necessary facilities to prevent the spread of the disease. For prison staff and prisoners, there should be enough masks, disposable gloves and disinfectants to be given. If possible, the number of people in each prison room should be reduced to a minimum. Surfaces in different parts of the prison should be disinfected regularly. In a field study conducted on more than 5,500 people, the results showed that having a healthy diet, having a daily routine, not reading or listening to news about pandemic outbreaks, and having more entertainment can prevent anxiety as well as depression (Vieta, 2020). Therefore, one of the ways to prevent anxiety in prisoners during the pandemic is to keep unreliable news sources away from them. Because such sources mostly publish daunting and hopeless news and this causes stress, which is itself the basis for anxiety. Panic arises when a threat is over-magnified and, on the contrary, individuals underestimate their coping abilities. Therefore, measures should be taken to keep prisoners out of doubt about the future of their health. It is necessary for prisoners to hear the news of advances in controlling pandemics and treating those infected to bring them peace and keep them out of doubt. One of the preventive measures in the field of anxiety is speaking. Speaking is a great way to relieve uneasy emotions. This can be through talking to a friend, to a doctor, or a psychologist.
Unexpressed concerns quickly tend to become unbearable burdens on one’s shoulders, causing anxiety in the individual. Prison authorities need to provide the necessary conditions and situations where prisoners can talk to expert counselors about their problems and stresses. That is to say, they should be able to unload themselves talking with a trusted person. In this regard, since in-person visits of prisoners with their family members are not much recommended during the outbreak of a pandemic, prison authorities need to allow prisoners to be in contact with their family members more than ever through phone calls.

Another step that can be taken is not to allow the structure of prisoners’ lives to fall apart. At times when external factors such as a pandemic cause stress in people, they must keep their routines and maintain as much structure as possible in their lives. Prisoners should do their best to maintain continued habits in sleep and eating, etc. In this regard, appropriate incentives and advice should be provided to prisoners (Grover, 2020). Keeping a steady exercise routine can help prevent anxiety. Studies have shown that exercising for 30 minutes or more three times a week can reduce anxiety symptoms by up to 70 percent (Carek et al., 2011). Deep breathing can play an important role in calming people and keeping them away from stress and anxiety. The procedure recommended by a psychiatrist named Winsberg involves sending the breath into the lungs (inhalation) for seven seconds and sending air out through their mouth in eight seconds (exhalation). Of course, counting is of secondary importance, what is of primary importance is that exhalation is longer than inhalation. Prolonging exhalation emphasizes liberation and release. That is, the person releases all discomfort and relieves stress (Miller, 2020).

Research has shown that listening to relaxing music or a person’s favorite music plays a role in preventing stress and anxiety (Kavak Akelma et al., 2020). In recent research, the researcher examined whether certain types of music can reduce anxiety during a complex task and concluded that music is effective in reducing anxiety and that some music is better at doing so than other kinds of music (O’Connor, 2019). Therefore, playing music in prison environments can help prevent anxiety in prisoners.

5.4. Measures to prevent the spread of anxiety in prison

To prevent the spread of anxiety among prisoners, if one of the prisoners contracts the disease, measures should immediately be taken to ensure prisoners that if they observe hygiene, they will not be infected. This assurance reduces their stress and thus prevents the spread of anxiety among prisoners. In this regard, if an infected person is found in prison, it is suggested that screening be done immediately for all prisoners and staff. Of course, this screening should not be done in a way that might cause stress itself. People with abnormal symptoms (fever, cough, diarrhea, etc.) should be identified and tested. People who have had close contact with the affected person must be transferred to other locations away from other prisoners to block transmission routes and reduce the risk of infection. It is suggested that, for example, the prison be divided into four parts; the first part is the place where the patients- those who have been infected by certain tests- are kept. A second part is a place where people who were in direct contact with the patients and there is a high probability that the disease has spread to them will be transferred to. A third part is a place where people who have not necessarily been in contact with the infected but show symptoms that may be suspected of being infected are transferred to and monitored. And the fourth part is the public part where the rest of the prisoners are kept. It is also recommended that disposable masks and disinfectant liquid be given to prisoners and staff adequately, as well as sufficient soap and handwashing liquid. Prison air conditioning also should be suitable (Wang et al., 2020). Disinfecting surfaces regularly can be really helpful. It is recommended that unnecessary personnel do telecommuting. Non-dangerous prisoners who have the possibility to take long-term leave must be sent on leave. Non-dangerous prisoners who are allowed to receive amnesty should not stay in prison for the rest of their sentences. For example, they can go home on parole.
Cognitive-behavioral therapies have been studied more in the field of anxiety treatment. They have shown long-term effectiveness, provided that the treatment is strong enough and long-lasting. For example, at least one session a week for three to six months would be appropriate. These treatments first aim to understand the conditions in which anxiety symptoms have appeared, identify the pattern of negative and irrational thinking that has helped cause anxiety, and then correct it. With the help of the therapist, the anxious patient learns the factors causing anxiety and monitors their reactions. With this oversight, he becomes aware that, for example, he has sometimes had unrealistic interpretations of events. Cognitive and behavioral therapies may also include relaxation and breathing techniques that help calm the patient down. Analytical psychotherapy can also help to discover the root causes of anxiety and identify early traumas in the first emotional relationships. Despite the lack of benchmark studies, experience suggests that this type of treatment significantly improves the status of people with a debilitating anxiety disorder. Although therapy may not be of the necessary quality in the prison environment and may not be taken seriously by the prisoner, the general approach of prisons should be to persuade anxious prisoners to be treated and that experienced medical staff should be provided in prisons for this purpose.

Research has shown that alcohol and tobacco consumption and caffeine overdoses promote anxiety in people (Rochester, 2019). Fortunately, alcohol consumption is rarely seen in prisons, but smoking, drug abuse, and excessive tea consumption are still prevalent among prisoners. It is necessary to provide counseling to prisoners who are anxious to help improve their conditions by reducing the use of these substances. Some studies have shown that performing improv theatres by individuals can help reduce anxiety (Chillag, 2018). Suppose prisoners gather in prison environments and perform a theatre without any specific text or director or staging. In addition to providing refreshing moments for prisoners while under stress over pandemic outbreaks, such a move would also help reduce anxiety. Also, simple relaxation techniques (which can be implemented individually or in groups in prison environments) can be effective in calming anxious people. These people should breathe slowly and deeply for a few minutes. At the end of each breath, they count one to three. Empty the lungs completely during each exhalation. Consciously relax the muscles and start with the lower parts of the body and continue to the face. It should be noted that relaxation is presented as a skill that requires practice and should be done continuously to achieve the desired results (Craske & Barlow, 2007). Prisoners who choose this method to reduce their anxiety should be told that they should not expect miracles from relaxation exercises. Rather, by continuing and practicing, they can use this skill to calm their minds. The results have shown that exposure to the sun is very beneficial to help relieve anxiety and depression. Sunlight is the best source of vitamin D, which the body needs to convert calcium into the food it is eaten and is needed to strengthen people’s bones. In addition to maintaining bone health, vitamin D consumption is also associated with people’s mental health. Unfortunately, in prison environments, prisoners have the least benefit from sunlight. Prolonged staying in dark environments, in addition to the possibility of depression in people, can lead to worsening of the mood of anxious people. In the case of people with anxiety, it is suggested that prison authorities allow them to go to the prison yard more than others and be exposed to sunlight. Research has shown that sleep and anxiety are closely related (Nussbaum & Weissberg, 2013). Lack of sleep can cause anxiety in prisoners, and anxiety can also disrupt the sleep of prisoners. To control prisoners' anxiety, efforts should be made to ensure that prisoners have a night of adequate and proper sleep. In other words, both the quantity of sleep (the number of hours) and the quality of sleep are important. Prison authorities need to think about measures to allow prisoners to sleep properly during the stressful period of a pandemic outbreak. Another way to reduce anxiety is to play relaxing music in a prison environment. The results of a study show that music can reduce anxiety and stress by up to 65 percent. According to a study by Dr. David Louis Hodgson, there are many different types of music that, when listened to, can help dramatically reduce anxiety levels. The study assigned volunteers the task of solving puzzles that were specifically designed to induce different levels of stress to the subject. At the same time, doctors played a variety of different songs in the lab. The
results showed that music in particular helped reduce people’s anxiety levels by up to 65 percent. In prison environments, it is also possible to reduce prisoners’ anxiety by playing music that has been proven to be relaxing. But it should be noted that the music that is chosen should be relaxing, because sometimes the music may have a reverse effect. In a report in YLE, Emily Carlson, a music therapist, and researcher claimed that some music can increase depression or anxiety, especially in the case of people already suffering from depression or anxiety. Exercise is proved to reduce anxiety. It can both have a great impact on prisoners’ mental health as well as maintain their general health. Physical activity creates endorphins, chemicals that help a person feel good (Otto & Smits, 2009). Regular exercise relieves symptoms of everyday stress and helps fight anxiety disorders. Physical activity strengthens the feeling of health during and after exercise. Prisoners with regular exercise can relieve their stress and distract from the stressful concerns of their environment. Therefore, prison authorities must pay special attention to prisoners’ sports activities and make prison gyms more accessible to help prisoners cope with the spread of anxiety caused by the pandemic outbreak in prisons. Most anti-anxiety medications can have negative side effects and be addictive. People should try to remove their anxiety by having a healthier lifestyle, or by using mental strategies before resorting to medication. However, if the prisoner suffers from prolonged anxiety and this anxiety prevents him from sleeping and from going through the daily routine for a long time, he or she should ask the prison psychiatrist to prescribe medication to relieve anxiety. For example, panic attacks can be easily relieved with a drug that suits one’s needs. However, it is suggested that these drugs be used alongside other measures mentioned earlier. Pharmacotherapy should be used alongside therapy, not alone. Ideally, this drug treatment is limited for a period of time to help a person get through the most critical stage of the disease (Wegmann, 2012). Finally, it should be noted that all cases expressed as ways of preventing or treating or as methods for stopping the spread of anxiety in prisoners during the pandemic outbreak can only help to improve the situation and should not be expected to solve all problems. Sometimes some of these solutions may not be practical in the prison environment and may seem a little idealistic. But it is important to try as hard as possible to ensure that the outbreak of a pandemic in prison will not cause a humanitarian catastrophe.

6. Conclusion

Causes and effects of anxiety can be identified during the outbreak of a pandemic in prison. Anxiety arises as a result of several different causes and usually, a single cause cannot be held responsible for the emergence of anxiety. To prevent people from developing anxiety, the source of anxiety must be eliminated. Education is also one of the strategies to prevent this problem. Also, providing the necessary facilities to prevent pandemic outbreaks is effective in preventing anxiety in prisoners. Talking about problems can reduce the likelihood of a person engaging in anxiety. Having a daily routine for prisoners’ activities is also effective in reducing the risk of anxiety. Regular exercise and deep breathing as well as listening to relaxing music are also ways to reduce the risk of anxiety among prisoners. One way to prevent the spread of anxiety among prisoners is to reassure that infected prisoners do not transmit the virus to others. Also, cognitive behavioral therapies are effective in the field of anxiety treatment if used with continuity. Refraining from tobacco and drugs, as well as abstaining from excessive consumption of tea or coffee, can help improve anxiety. Performing improv theatre shows and performing relaxation techniques, both individually and collectively, can improve the conditions of anxious prisoners. Making more use of sunlight and regularizing an anxious person’s sleep can help them improve their problem. Playing relaxing music as well as continuous exercise can take a share of the distressed person’s recovery along with other factors. It is necessary to be taught to avoid cognitive distortions to lessen anxiety in the affected person. Finally, if an anxious prisoner is in a situation that requires medication, a prison psychiatrist can be asked to prescribe appropriate medications for him or her. The prevalence of pandemics in prisons has been discussed in many pieces of research. However, the psychological effects of this outbreak on prisoners have not been given
enough attention in studies. Interested researchers can study other psychological aspects of the prevalence of pandemics in prison. For example, depression due to helplessness, which is usually seen during the outbreak in prisons, is a subject that can be studied. Also, anger among prisoners as a result of pandemic outbreaks can be a proper subject of study. Moreover, one of the topics that can be explored is the suicide of prisoners committed at the time of the outbreak of a pandemic in prison.

References


https://books.google.de/books/about/Prison_Paranoia.html?id=IpMoAAAAAAYA&redir_esc=y


