CHAPTER 5

PYSCHOSOCIAL EFFECTS OF THE COVID-19 PANDEMIC

Neşe ÇAKI[1], Dino KRUPIĆ[2], Philip J. CORR[3]

[1]Assist. Prof. Dr., Istanbul University, Faculty of Economics, Labour Economics and Industrial Relations, İstanbul, Turkey
e-mail: nese.caki@istanbul.edu.tr

[2]Assist. Prof. Dr., Josip Juraj Strossmayer University of Osijek, Faculty of Humanities and Social Science, Psychology, Osijek, Croatia
e-mail: dkrupic@ffos.hr

[3]Prof. Dr., City, University of London, School of Arts and Social Sciences, Psychology, London,UK
e-mail: Philip.Corr.1@city.ac.uk

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ABSTRACT

The Coronavirus Disease (COVID-19) pandemic was declared a global health emergency by the World Health Organization (WHO) in January 2020. As the case in previous pandemics, COVID-19 has had significant adverse social, psychological and economic effects on people across the globe. The purpose of this chapter is to consider the psychosocial impact of COVID-19 on society resulting from lifestyle changes, including social isolation due to lockdown, social distancing, and the wearing of masks, as well as behavioural changes, including alterations in shopping habits, remote working, and distance education. We provide a literature review utilising previous scientific research and various media tools. On the basis of this review, we argue that the new conditions have resulted in many different adverse psychosocial effects, including anxiety, stress, obsessive behaviours, depression, loneliness, stigmatisation, and hoarding, although individuals experience these effects to varying degrees. Implications for their amelioration and directions for future research are outlined.

Keywords: Pandemic, COVID-19, psychosocial, anxiety, depression, mental health

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1. Introduction

The novel Coronavirus Disease (COVID-19) pandemic was first seen in the Chinese city of Wuhan. It was reported to the WHO in December of 2019 who declared a global health emergency in January 2020 (WHO, 2020a) as the virus is highly contagious (Pan, Zhang, & Pan, 2020). When infected, individuals sneeze or cough, and the virus is released into the air in droplets which can directly impact the face of a host. Otherwise, it is transmitted after healthy individuals have touched contaminated surfaces with their hands and then touched their face (especially their eyes, nose, and mouth) before washing their hands (Stankovska, Memedi, & Dimitrovski, 2020). When precautions are not taken or not correctly followed, COVID-19 infections, which may produce asymptomatic cases, increase rapidly. It seems that COVID-19 infectivity takes place 1-2 days before the symptoms begin to appear (Sarı, Hoşbul, & Şahiner, 2020). At the beginning of 2020, the disease began to spread rapidly around the globe. At the time of writing, there were over 138 million cases and over one million of deaths (WHO, 2020b)

Around the globe, measures have been implemented to prevent the spread of COVID-19 (Cirrincione et al., 2020). In Europe, most notably in Italy, Spain, Germany, France, and the UK, not only were the physical facilities of schools, universities, and various public facilities closed to prevent the spread of infection, but also entire cities and regions (and in some cases entire countries) were placed under strict lockdown or curfew (Kwok, Lai, Wei, Wong, & Tang, 2020). Given these circumstances, it is clear that the pandemic has affected individuals and societies not only in terms of health but also lifestyle, education, work, social activities and consumer habits; and it has significantly impacted contact with loved ones including those who are hospitalised and even dying.

From a psychosocial perspective, other important issues affecting people and societies include emerging uncertainty, helplessness, loneliness, anxiety, stress, depression, and stigmatisation - although some positive concepts, such as resilience and altruism, also enter the picture (WHO, 2020c). Adherence to government measures and the maintenance of a positive state of mind among the population affects the spread of the disease (Aslan, 2020). In the light of this information, we decided to review the existing literature on the psychosocial impacts of the COVID-19 pandemic. In the first part of this chapter, we discuss pandemics and precautions. In the second part, we discuss the psychosocial effects of outbreaks more generally. In the last part, we discuss the psychosocial effects of COVID-19 on the general population as well as on people with different demographic characteristics (age, gender, occupation, personality).

2. Pandemics and Precautions

The general definition of a pandemic is an outbreak of a disease that spreads across multiple countries or continents, thus becoming a global phenomenon. According to the definition of the WHO, certain criteria are needed to define a pandemic: (1) the disease is a new virus; (2) it spreads around the world; and (3) most people do not have immunity (WHO, 2010). Throughout history, many pandemics and epidemics have been recorded, including: acute haemorrhagic conjunctivitis (AHC), Human Immunodeficiency Virus (HIV), dengue fever, Severe Acute Respiratory Syndrome (SARS), Middle East Respiratory Syndrome (MERS), and influenza of Spanish (1918) and Asian (1957) (Kilbourne, 2006; Morens, Folkers, & Fauci, 2009).

In order to prevent or curb a rapid spread of infection, many countries have taken a variety of measures encompassing different aspects of life. Such measures involve public health officials, entailing among other initiatives: conducting of tests for the disease, the monitoring of infected individuals and their environments (including quarantine and self-quarantining), and contact tracing. Some other important preventative measures include wearing masks in certain areas, social distancing, the imposition of curfews or lockdowns (including restrictions on certain age or risk groups), and limitations on health services offered at hospitals and clinics. However, many important preventative measures – and arguably, the ones that have impacted people's lives the most – have been implemented outside the realm of healthcare. Measures affecting social and economic life include: special arrangements concerning supermarkets, restaurants, and shopping centres; the closing of entertainment venues, such as cinemas, theatres, and concert halls; the cancellation or postponement of sports events; the halting of religious services and activities; and the substitution of distance/remote learning at schools and universities. There have also been restrictions of transportation, the most extreme of which is the closing of hard borders between countries as well as softer ones between regions within countries – this has been extended to restrictions on movement between cities within countries and on the proscribed use of public transport (ECDC, 2020; Sarı et al., 2020).

3. Psychosocial Impacts of Pandemics

The psychosocial perspective is used primarily to explain the effects of social structures on individual characteristics (Şahan, 2016**)**. As a social concern, pandemics or epidemics affects people not only physically but also psychosocially. It is still too early to say for sure what will be long-term consequences of the COVID-19 pandemic on global mental health. Researchers worldwide are conducting many studies to provide the information necessary

to help overcome the psychological consequences of the pandemics (Holmes et al., 2020). For this purpose, experiences from previous pandemics and epidemics can inform us about the adverse effects the pandemic may have for mental health, stigmatisation, altruism and hoarding, both in short and long term

Mortality rates vary greatly by country. Moreover, at this time, Spanish influenza is the largest known pandemic in human history (Aşkın, Bozkurt, & Zeybek, 2020). According to the results of the study conducted in Saudi Arabia on MERS (Batawi et al., 2019) it is reasonable to assume that mental issues will last a long time after the end of the pandemic. For instance, because of the self-isolation measures during epidemics of MERS in 2015, 7.6% of participants experienced elevated levels of anxiety, and 16.6% felt anger. Four to six months after the self-isolation, 3% remained anxious, and 6.4% felt aggressive (Jeong et al., 2016). In another study conducted in Hong Kong during the SARS epidemic, it was found that individuals' mental health deteriorated, and they felt high levels of helplessness, terror and anxiety. In addition, some of these individuals (16%) had post-traumatic symptoms, and a significant portion (40%) was reported to perceive increased stress in the family or work environment after the pandemic (Aşkın et al., 2020). In addition, stigmatisation is a public health problem that needs to be tackled as an external stressor with the potential to do as much harm as depression and other mental symptoms (Tuncay, Koyuncu, & Özel, 2020).

According to research conducted on health workers during the same epidemic, it was found that they were stigmatised, excluded and rejected in their neighbourhood due to their hospital work, and 9% stated that they were reluctant to return to work or had an idea to quit. In addition, health workers became anxious and felt less able to deal effectively with the problems they encountered. Moreover, according to a study conducted with nurses during the MERS pandemic, high levels of anxiety, decreased endurance, and fear of stigmatisation was found (Aşkın et al., 2020; Pan et al., 2020). Additionally, it has been demonstrated that, in case of perception of a higher risk of the virus, increased symptoms of anxiety and depression are linked to the personality trait of altruism. Specifically, when it comes to health care workers, because perceptions may affect the relation between stressful events and their psychological impact, altruism seems to protect them against the negative impacts of the outbreak (Wu et al., 2009).

One behaviour that is often observed during a pandemic and may represent zero-sum thinking, as opposed to altruism, is hoarding – it can be described as an unnecessary accumulation of consumer products. Hoarding may reflect emotional attachment or impulsiveness, as hoarders usually associate high levels of perceived risk (such as during a

pandemic, natural disaster, or a period of political or economic uncertainty) with the possibility of product deprivation. It may include the fear of being unable to obtain food, medicine, and other essential items, as well as uncertainty regarding the availability of products in the future. As a result, significant shortages have occurred (Kumar & Nayar, 2020; Sobirova, 2020). One example of such hoarding was observed during the Avian Influenza, in which many people purchased large amounts of food, disinfectant, and the antiviral medicine oseltamivir. Another example was during an outbreak of flu in Hong Kong in 1968, in which a shortage of medicines emerged due to the public buying up supplies, along with rioting and looting of restaurants and grocery stores (Taylor, 2019).

4. The Psychosocial Effects of COVID 19

4.1. Mental Health

One of the important social issues is that pandemics affect people psychologically. According to the WHO's Interim Guidance (2020c) on *Mental health and psychosocial support aspects of the COVID-19 response*, there are some specific issues and stressors for this outbreak, such as: uncertainty, helplessness, fear of getting sick and dying (for oneself and/or one's family members); fear of job loss, fear of losing one's livelihood, loss of social contacts and loneliness, anxiety, anger, stress, depression; and the stigmatisation of those who have recovered from the illness or who are thought to have been exposed to it, including frontline health workers and other essential workers. On the other hand, some individuals have experienced positive effects, including the satisfaction derived from helping others and increased resilience (IFRC, 2020). Moreover, the WHO Department of Mental Health and Substance Use made recommendations in order to improve well-being via psychosocial support, targeted at the general population, healthcare workers, team leaders and managers in healthcare facilities, childcare workers, older adults, people with underlying health conditions and those who look after them, and people in isolation (WHO, 2020a).

According to available data, depression, anxiety, and PTSD are the most common psychological responses to the COVID-19 pandemic (Vindegaard & Benros, 2020). Most of the studies have assessed anxiety and depression due to their high comorbidity (Gorman, 1996) – however, at the time of writing this chapter, there are relatively few empirical studies along these lines. Those that exist indicate that pandemics have a robust negative effect on mental health over the globe. For instance, Rajkumar's (2020) review article estimated that from 16 - 28% of participants reported the presence of the symptoms of anxiety and depression during the pandemic.

Depending on the characteristics of samples and from country to country, these estimates vary. For example, a study conducted in the USA reported much higher estimates of depression and anxiety symptoms (Liu, Zhang, Wong, Hyun, & Hahm,2020). More severe signs of depression are found in individuals suspected to be positive on COVID-19 (Nguyen et al., 2020) and health workers (Pappa et al., 2020; Rehman et al., 2020). One in five healthcare workers is experiencing symptoms of anxiety and depression, while around 40% of them have trouble with sleeping. Some studies indicate that females (Sønderskov, Dinesen, Santini, & Østergaard, 2020) and individuals younger than 35 years of age experience more psychological difficulties (Huang & Zhao, 2020). Similar results were obtained in Australia (Stanton et al., 2020), USA (Rosenberg, Luetke, Hensel, Kianersi, & Herbenick, 2020) and Italy (Casagrande, Favieri, Tambelli, & Forte, 2020).

The effects of the pandemic on mental health seem to depend on the age of participants, but these data are still inconclusive. For instance, people older than 65 in Northern Spain reported fewer mental health issues (Gorrochategi, Munitis, Santamaria, & Etxebarria, 2020), even though Spain is one of the most affected countries. On the contrary, the same age population in the UK reported more concerns for their health (Shevlin et al., 2020a). We must await further data to conclude whether these differences are the result of the impact of the culture or the specific circumstances experienced by different countries. In addition to age, pregnant women have an especially stressful time during pandemics (Moyer, Compton, Kaselitz, & Muzik, 2020). According to such studies, it seems that all countries that have employed lockdown will face a higher level of mental health issues because of the lack of social support (evoked by reduced mobility during the lockdown) which serves to increase levels of anxiety and depression (Kong et al., 2020).

The extent of these mental health issues is shown by one of the most extensive studies conducted in the UK regarding the effects of COVID-19 pandemic on mental health. It was reported that roughly 25% of respondents had symptoms of anxiety and above 30% symptoms of depression during the lockdown (Fancourt, Steptoe, & Bu, 2020). As this study was conducted on several occasions, the authors were able to monitor temporal changes in mood over time. Results revealed that trajectories of depression and anxiety indicated a slow recovery a few weeks after the lockdown - the improvement was much more gradual for respondents with a prior history of mental illness. Another two-wave study assessing the changes in depression before and after the quarantine was conducted in Italy on university students (Meda et al., 2020): consistent with the UK study, an increase in scores on the Beck's Depression Inventory was reported.

An additional problem of increased anxiety due to COVID-19 is the rise of somatic symptoms (Shevlin et al., 2020b). For example, many countries are trying to prevent the spread of the coronavirus among healthcare staff. Accordingly, there have been dramatic consequences of the collapse of the health system in Italy and in other countries (e.g., the UK) resulting in many hospitals not being able to provide health care for less critically acute cases, including detection and treatment cancer - it is reported that many more lives will be lost to this lack of medical provision. There have also been reported that people are less inclined to seek medical help even for serious conditions, such as heart attack. A large number of citizens with somatic complaints who cannot get the required medical attention may experience anxiety as a result (Asmundson & Taylor, 2020). This is accompanied by the rise of cyberchondria, which is a tendency to self-diagnose and treat using internet resources (Jungmann & Witthöft, 2020). As this self-practice tends to produce a high level of false alarms, it increases the already heightened level of anxiety and, possibly, depression.

Many issues are yet to be studied. Researchers and mental health professionals are concerned by the occurrence of the PTSD in COVID-19 survivors (Sękowski et al., 2020) and citizens after the pandemic (Dutheil, Mondillon, & Navel, 2020). Indeed, we are already witnessing the increase of PTSD symptoms related to quarantine (Fawaz & Samaha, 2020; Rossi et al., 2020).

Another issue is the rise of the prevalence of domestic violence. Aggression seems particularly dangerous in the case of a lockdown. People with weak self-control capacities and emotional instability are prone to expressing violence to their intimate partners during lockdown – heightened tension and close proximity interact to increase the probability of violence. When locked-down with an abuser, the victim is much more likely to develop mental issues, including posttraumatic stress disorder (PTSD), depression and anxiety, and these may lead to suicide. However, empirical studies on this specific topic have yet to be published. It is also of interest to speculate that the negative psychological state of the world's population and the invisible nature of COVID-19 have resulted in a redirection of fear, anger and outrage in the form of social unrest and protest – a speculation that needs empirical attention.

To sum up, the following months and years will be very challenging for mental health professionals worldwide since it is not only the medical aspects of the current pandemic that elevate the level of anxiety. Added to this is the resulting economic crises, amongst other things, increased unemployment and financial strain. These economic effects are bound to add to the significant negative impact on mental health (Bareket-Bojmel, Shahar, & Margalit, 2020).

So, what can be done? Having professionally-administered individual treatments is not feasible , so mental health resources must be oriented towards finding short, effective and easy-to-implement mental health interventions. Fortunately, some preliminary studies have already reported promising results, showing that self-guided therapeutic approaches, such as cognitive-behavioural, mindfulness, and acceptance-based interventions and similar interventions, have mild-to-moderate effects on the improvement of mental health (Fischer et al., 2020) - as these authors stated, such techniques are not efficient as traditional one-on-one therapy conducted with a certificated psychotherapist, but if nothing else, they can be used by a large number of citizens and, thereby, their combined effects may be considerable.

4.2. Stigmatisation

During the current pandemic, individuals with COVID-19 may experience stigmatisation from their social circles or neighbours. Stigma is manifested in terms of fear, suspicion, judgment, accusations, avoidance, refusal to communicate, and other exclusionary behaviour (Tuncay et al., 2020). Many other studies have shown that healthy people tend to avoid and stigmatise those who have been infected. In fact, not only those who have been infected by the disease but also their families and friends, as well as healthcare workers, are vulnerable to stigmatisation due to real or perceived exposure to the disease in question (Mak et al., 2009; Taylor, 2019). In order to avoid stigmatisation, people may conceal their health status and, even, delay seeking medical help. This outcome leads to a reduction in early detection and treatment and results in increased spread of the disease (Dubey et al., 2020); thus, stigma is not only a social problem but a medical one too. WHO (2020a) has made recommendations in *Mental health and psychosocial considerations during the COVID-19 outbreak* report with regard to combatting stigmatisation. For example, they suggest that diagnosed people should not be referred to as “COVID-19 cases”, “victims”, “COVID-19 families” or “the diseased”; instead, they should be referred to as “people who have COVID-19”, “people who are being treated for COVID-19”, or “people who are recovering from COVID-19”. Whether this changed use of language has any positive effect is yet to be seen.

It is also important to note that there is a connection between the stigma surrounding COVID-19 and racist behaviour. Especially at the beginning of the pandemics, members of the countries where the virus originated were facing stigmatisation worldwide due to their ethnic and/or racial background (Karataş, 2020). Such actions can lead to further mental health issue and, even, social unrest which which can result in a failure to socially distance and, in this way, contributes to the further spread of the virus.

4.3. Altruism and Hoarding

During a pandemic, due to extraordinary conditions and feelings of frustration, socially-destructive behaviours are prone to occur. However, positive attitudes and behaviours appear to be more prevalent (Taylor, 2019). One of them is altruism. This can be described as "unselfish regard for the welfare of others" (Feng et al., 2020). Some of the attitudes and behaviours, such as being vaccinated (Taylor, 2019) once a vaccine is found, wearing masks, and staying in quarantine, are connected to altruism. In the first stage of the pandemic, people discussed whether or not everyone needed to wear a face mask and what type of masks were most effective. However, at the beginning of June, 2020, the WHO recommended that everyone wear masks in public places.

According to Cheng, Lam and Leung (2020), the wearing of masks by the entire population is both a useful and low-cost measure, shifts the focus from self-protection to altruism in terms of considering other people's health, and is a demonstration of social solidarity in the global reaction to the pandemic. Another measure that can be taken is reminding the public of the benefits of quarantine for society at large, which may appeal to their more altruistic inclinations and result in greater compliance (Brooks et al., 2020). Moreover, self-isolation and voluntary quarantine should be supported by giving necessary information about minimising distress and long-term adverse effects of imposed quarantine (Dubey et al., 2020). On the other hand, altruism during pandemics may affect people's mental health negatively since altruistic individuals may be more anxious for patients and feel more helplessness due to being unable to help those who have been infected (Feng et al., 2020).

During the COVID-19 outbreak, hoarding also occurred due to fear of losing the current standard of living (Sobirova, 2020). Yet, the hoarding of vaccines, masks, and sanitizers for self-protection is counterproductive, because if other people cannot access these products, the risk of further infection will only increase (Van Bavel et al., 2020). This situation requires altruism and social solidarity at the national and international level. Far too little is known about possible individual differences in hoarding behaviour. It would be a valuable target for future research.

4.4. Psychosocial Effects on People with Different Demographic Characteristics

The COVID-19 outbreak has different psychosocial impacts on society. However, these impacts can be seen differently according to demographic factors such as age, gender, occupation, and so on. For instance, the impact is greatest on women, health care workers, other frontline workers such as custodians, individuals getting relatively low social support,

individuals who are aged 50 or older and have chronic health problems such as weakened immune system, disease lung or heart, diabetes, and cancer patients are more vulnerable to infection (Jecker, Wightman, & Diekema, 2020; Stankovska et al, 2020; Tuncay et al., 2020). Additionally, because of isolation, child abuse, partner violence and suicide increase (Otu, Charles, & Yaya, 2020); and when children and their parents in quarantine are compared with those not quarantined, there is a rise in posttraumatic stress symptoms (Sprang & Silman, 2013).

When the negative impact is evaluated in terms of jobs, it is seen that one of the most vulnerable occupations is health care workers. They have job-related stressors: high risk of infection, disease or death; overwork, fatigue and burn-out due to long work hours; and exposure to the death of patients, including children and the inability to save some of the patients despite their best efforts. At the same time, they experience threats of violence from patients or their relatives. Besides external factors, they have to separate from family and loved ones because of the possibility of inadvertingly infecting them (Taylor, 2019). It would be surprising if these stressors did not cause anxiety, depression, insomnia, somatisation and obsessive-compulsive symptoms and the evidence shows that, indeed, they do (Zhang et al., 2020).

5. Personality and Public-Health Communications

Lastly, we look at the involvement of personality and how best to use behavioural science to communicate effective health-related messages. This is a very relevant psychological angle with considerable practical implications.

The first appearance of the unknown virus raised huge health concerns in the population. As such, increased fear and anxiety resulted in conflicted and cautious behaviour and a higher rate of acceptance of the lockdown as a strategy to fight pandemics. Over time, the economic situation and mental health issues are being perceived, at least by some people, as more dangerous than the pandemic itself. Therefore, during this pandemic, it is important to adjust public health messages in order to maintain disciplined behaviour aimed at decreasing the spread of the virus.

Although fear has been related to the higher level of health compliance (Harper, Satchell, Fido, & Latzman, 2020; Pakpour & Griffiths, 2020), it also contributes to a higher level of distress and lower mental health in general. For this reason, health messages must be designed in such a way as to produce better health compliance while at the same time not adding to

existing levels of fear, anxiety and depression. A few studies have suggested that compliance can be achieved by promoting more proactive or positive goals. For example, Bacon and Corr (2020a) found that approach motivation, specifically the Reward Reactivity tendencies (i.e. measure of how strongly one is experiencing the reward), alongside fear-related tendencies, are important in accounting for compliance. In their follow-up study, Bacon and Corr (2020b) reported a role for Goal-Drive Persistence scale (a measure of persistence to accomplish long-term goals) in the prediction of health compliance. A comparable finding was also reported by Žuro, Krupić, and Krupić, (2020), where the effect of these two approach measures on health compliance was replicated with different measures and in a different culture. These findings suggest that it would be more effective (and/or less costly) if the public health messages were reframed to evoke approach motivation and behaviour, and this is quite separate from any role for avoidance motivation.

6. Conclusion

Preventive measures are crucial to curtail the spread of COVID-19, as well as to lessen the resulting damage of social, political, and economic conditions – these are likely to affect more people than the virus directly. While the current pandemic has caused uncertainty, helplessness, and fear of falling ill and dying (for oneself and/or family members), the measures taken by the authorities to prevent the spread of infection have had a significant psychological impact. Curfews, lockdowns, quarantines, self-isolation, and social distancing, have all contributed to feelings of the loss of independence, challenges within the family, fear of losing one's job and livelihood, loss of social contacts, and loneliness, and these feelings have contributed to anxiety, anger, stress, and depression. In addition, many people have been stigmatised: those who have recovered from the illness or who are thought to have been exposed to it, and healthcare workers and frontline workers (cashiers, security workers, caregivers, etc.). Another behavioural change is the need to wash one's hands or use hand disinfectant frequently, and this has contributed to the formation of obsessive-compulsive behaviours which may last long after the pandemic subsides.

At the same time, there are also positive aspects which may be associated with the pandemic. For instance, when people wear masks, they not only considering their own health but also the health of others, in particular those people who belong to risk groups. Another example is the decision on the part of shoppers not to hoard items during the crisis, but to buy only what they need. However, we need to bear in mind that all psychosocial impacts affect people differentially. Determining the psychosocial effects of the pandemic would assist

psychologists and psychiatrists in determining appropriate forms of psychological treatment and/or intervention; and here individual differences in personality should not be ignored – differences between people in their habitual ways they think, feel, and behave are relevant.

Our review has some limitations that need to be acknowledged. We discussed short-term psychosocial effects of the current pandemic, such as anxiety, stress, depression, and so on; however, we are not yet able to observe the longer-term effects, such as the development of posttraumatic stress disorder or obsessive behaviours that persist after the present medical emergency. Another limitation is that the psychosocial effects of the pandemic may vary depending on the specific country's perceptions of the pandemic and measures taken locally as much as demographic characteristics, such as age, gender, and occupation. Country-wide and regional differences are likely to be relevant, yet our study has not focussed on them. Major factors of personality are suspected to either moderate or mediate stressors associated with Covid-19, and this seems especially important knowledge when designing public health interventions and information campaigns.

With a sustained research effort, much more will be known about the psychosocial impacts of COVID-19 and we shall be in a better position to help those who have been most affected. We are still, very much, at the start of this research journey.

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