

Cognitive Distortion among Infected Patients from COVID-19 – A Qualitative Analysis

Arben Hysenaj*

Heimerer College, Psychology of Assessment and Intervention, University of Bamberg, Germany

ABSTRACT

Introduction: SARS-COVID-19 now is known as a pandemic and planetary widespread virus, and there is little known about the impact of this pandemic on people's health. This study aims to investigate the cognitive distortion (ourselves, self-blame, and about the world) among infected people from SARS-COVID-19.

Methodology: Individual semi-structured interviews were conducted among 18 interviewees. Interviews were recorded, transcribed, and analyzed via Grounded Theory approach.

Results: Findings indicate that infected people from SARS-COVID-19 show cognitive distortions about the world, about themselves, and self-blame.

Conclusions: There should be a focus on decreasing the cognitive distortion among infected people, to avoid psychological disorders and behavior deviation that can come up from cognitive distortions. Policymakers, health experts should pay attention to cognitive changes among infected people. They should offer projects and strategies for supporting infected people from SARS-COVID-19.

Keywords: SARS-COVID-19; Infected People; Cognitive distortion

INTRODUCTION

Coronavirus disease (SARS-COVID-19) is continuing to be a world challenge. Until 17.02.2021 there were 108 822 926 infected people and 2 403 641 deaths all over the world [1]. Situation like this in the world resembles with situation in Kosovo (according to Kosovo Agency of statistics 2011, Number of populations in Kosovo is: 1,739,825), National Institute for Public Health in Kosovo (IKShPK), on 13 March 2020 were announced two first infections of people from SARS-COVID-19. Until 17.02.2021 Kosovo counted 65 065 infected people from SARS-COVID-19, and 274 160 suspected of infection, and 1553 death cases. But there is little known about the impact of the pandemic on people's mental health and cognition in Kosovo and worldwide.

We were witnesses of weak health services and policies toward managing the pandemic situation in Kosovo and all over the world. Health services and health experts were distracted from a pandemic, and little has been done toward offering appropriate services toward maintaining mental health. Investigation shows that mental health services worldwide are not prepared to deal with the pandemic situation and consequences [2]. Besides this, the Kosovo health system is facing different and numerous difficulties in the

field of expertise, management, budget, political organization, and above all the lack of health insurance.

Owing the protocol of World Health Organization, Kosovo followed the restriction strategy, as a rout of managing the Pandemic COVID-19. Quarantine was accompanied with “stay at home” slogan, associated with restrictions in social life, restrictions in businesses and economy, restriction in the education system (functioned online but with many difficulties), overloaded health system from hospitalized people etc. Changes like these requested special energy and dedication from people to overcome this situation and created suitable circumstances for psychological problems.

Findings indicate that situations that are serious and perceived by the people as traumatic situations, can provoke cognitive distortion and depression [3], additionally pandemic and epidemic situations are provocative of cognitive distortion. Investigation of H1N1 epidemic consequences shows that there is a change in cognitive model and hereafter on people's behavior [4]. Because of the SARS-COVID-19, older people experienced a cognitive decline compared to younger people [5]. As well, infected people from SARS-COVID-19 were the target of discrimination, and this was the trigger of feeling self-blame and guilt among infected people

Correspondence to: Arben Hysenaj, Heimerer College, Psychology of Assessment and Intervention, University of Bamberg, Germany,

Tel: 044722618; Email: hysenaj7@hotmail.com

Received: April 07, 2021, **Accepted:** May 04, 2021, **Published:** May 11, 2021

Citation: Hysenaj A (2021) Cognitive Distortion among Infected Patients from COVID-19 – A Qualitative Analysis. J Depress Anxiety. 10:405.

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[6]. Besides this, the feelings of worry from infection of SARS-COVID-19 were associated with self-blame and helplessness [7].

The cognitive distortions are known as a trigger or cause of different psychological problems, hereinafter we will mention some researchers with a focus on cognitive distortion, psychological problems, and COVID-19. The finding indicates that cognitive distortion due SARS-COVID-19 provoke anxiety and a sense of uncontrollability [8], also increases mental health issues [9], notwithstanding, repetitive negative thinking mediates loneliness and depression during pandemic 2020 [10].

Also, investigation shows that during SARS-COVID-19, different psychological problems provoked cognitive distortions. An investigation shows that the high level of stress and anxiety during the SARS-COVID-19, causes the cognitive limitations resources [11], furthermore, stress and depression were positively correlated with fear from SARS-COVID-19, self-blame and regret [12].

Investigations show that in circumstances of pandemic and epidemic situation causes cognitive distortions and psychological problems. This research is focused on assessing cognitive distortion among infected people from SARS-COVID-19.

RESEARCH METHODOLOGY

We did 18 qualitative interviews through the online platforms. Respondents were infected from SARS-COVID-19. We used the Grounded Theory approach to obtain the description of cognitive distortion through infected patients with COVID-19. Participants were selected through the snowball sampling method. Clients from 19 to 72 years old were eligible to be chosen as a sample of this research. Four participants were already known by investigators and the rest were selected through a purposive method snowball. We contacted interviewers through telephone, and we asked them if they are willing to take part in this research, and during the telephone contact, we decided on a suitable time and platform for conducting the interview. Participants were informed about the voluntary nature of the study, and every participant was asked for oral consent. We removed any information that can put into question the identity of the participants, we used numbers instead of names (Client numbers 1, 2, etc.). The interviews were recorded, and we followed the requirement standards for reporting Qualitative Research Guidelines.

Instruments

We used semi-structured interviews to collect the information and inputs from the clients. Interviews were focused on gaining information about cognitive distortion, especially the Beck Triad of cognitive distortion, negative cognitions about the self, negative cognition about the world, and self-blame.

Procedure

Interviews took place in Kosovo during August and November 2020. With participant permission, all interviews were audio-recorded. We spend 10 to 15 minutes talking about daily life and asking demographic questions. After this, we switch to the questions about:

- “How do you feel?”
- “Is there any change in your life?”

- “Is there something different from the past?”
- “How do you see the world now?”
- “Is there a change in the world from the past?”
- “How do you see the people and society?”
- “Are there any particular changes in the way you think about the world?”
- “How do you see yourself?”
- “Are there any particular changes in the way you think about yourself?”
- “How do you feel about the way you think?”
- “Is there any change in the way you think for yourself nowadays?”
- “What are the changes?”
- “Do you feel that your thoughts are going hard for you?”
- “Do you have something else to say to us?”

Audio records were transcribed; the interviews and transcriptions were in Albanian. During the analyses we selected the categories and codes accompanied by quotes, quotes were translated from Albanian in English and vice versa, translations were conducted from three students, with master's degrees in English.

Data analysis

Data analyses were conducted via In vivo software. Part of the analysis was also reading and transcription several times. From 18 Interviews, two of the interviews were sent to three investigators with experience in qualitative research, their duty was to write down the categories and codes. After this, we compared the outcomes of two other investigators and framed the final categories and codes for further work and investigation, jointly with discussion and debate with two other investigations.

RESULTS

Interviews lasted about 40 - 50 minutes, the interviews were conducted online, via telephone, and google meet.

The results and analyses of the interviews were conducted through the categories codes and interview quotes. In Tables 1, 2, 3, and 4, you can see the focus of analyses, this focus is in three main categories, or three types of cognitive distortion: Negative cognitions about self, negative cognition about the world, and Self-blame.

Outcomes of the interview show that during the pandemic situation and quarantine, interviewees diagnosed with SARS-COVID-19, experienced negative cognition about self. These feelings approached when they were infected, their thoughts about that they “brought virus” into their home, families, and relatives, and being aware of the “risk” of the virus, increased the negative cognitions about the self, “I am a mean and risky person”. Also, during the SARS-COVID-19 time, people were pushed to work, even though the spread of the virus was at a high level, this brought feelings of powerlessness that they cannot change things “I am not able to save myself, my family and relatives, I cannot do something about this”. Respondents were scared about the family members and relatives. They felt like this, because they put their family members

Table 1: Demographic data.

Sex	Male	11
	Female	8
Education	Secondary school	5
	Faculty	8
	Master degree	3
	Doctorate	2
Residential status	Urban	12
	Rural	7
Age	19-30	3
	31-40	5
	41-50	5
	51-60	2
	Above 60	4

Table 2: Cognitive distortion (negative cognition about self) and quotes for interviews.

Type of cognitive distortion	Quotes from interviews
Negative cognition about self	“I am a mean person; I brought the virus in my house...I am risking my family’s life.”
	“I had to work, I needed this, in the end I earned virus, and now my mother is in hospital with O ₂ therapy, looks like I missed making right and suitable decision for everyone.”
	“I have changed, I cannot face this situation.”
	“If something will happen in my elder loved ones, I will be devastated.”
	“I am not right person to handle this situation, it is affecting me very badly, I feel overwhelmed.”
	It is going to change me forever.”
	“Virus changed me, really changed me a lot...”
	“I am looking forward to go out, I am staying alone, I can't even move out of my room.”
	“I am sick, my family is infected, I am afraid what will happen with us.”
	“Looks like there is no way to handle it, or no escape from it.”
“I am the one who brought bad luck in my family.”	
“There is nothing I can do and achieve for now.”	

Table 3: Negative cognition about the world and interviews quotes.

Type of cognitive distortion	Quotes from the interviews
Negative cognition about world	“There is no more trust out of your family; I do not know why people hide the fact that they are infected”?
	“In this situation there is no one to whom you can count on.”
	“Everyone is trying to stay healthy, secure, and looking after his family.”
	“I have to look and take care after my parents.”
	“There is no visible approach of enemy, you never know where, when, and with whom you can be infected”?
	“The whole world has never been like this, dangerous, unsecure, harmful etc.”
	“You cannot seek for help from others, they are facing the same issue, health problems, no job, unsecure job incomes etc., even if they can do that, they do not do this.”
	“This is planned, Pandemic is just a flue, nothing else, but world is preparing something for us, some says that vaccine provoke cancer, some says that vaccine cause genetic mutations.”
“This is something that world come up, in order to achieve what they want, they want to do something with vaccine, I believe that there is no need for such drastic limitation in the world from the flue, but they are planning something.”	

and relatives at risk of infection, and “*face to face with death*”. Also, outcomes of the interviews indicate that clients who suffered from SARS-COVID-19, experienced a feeling that they and also people around them are different, they are not doing well to overcome and manage their situation.

Interviews indicate that there is an experience of negative cognition about the world. The first important thing to mention is the fact that in Kosovo there is a stereotype about being sick, for some people, especially the old generation having an illness is a weak point

for people and for the family. So, people try to hide their health issues, and hiding the infection from COVID-19, was very risky for other peoples that are not infected. This was a point that people started to think that the world outside is dangerous, and there is no trust in people. COVID-19 situations pushed people to perceive the world around them as “*dangerous, insecure, harmful*”, according to interviews, situations like this brought “*health problems, no job, insecure job incomes*”, by pushing people to think that the world around them is not manageable, and out of control. Also, some respondents show that they think that there is no virus, or there

Table 4: Self-blame and interviews quotes.

Type of cognitive distortion	Quotes from interviews
Self-blame	"Just because of me, now we are all infected, this was from my careless behavior."
	"I am careless and not vigilant, and many things happened to me because of this lack of vigilance, now because of this many people are hurt, and can be hurt"
	"I know some people that are not infected, they were careful, and they stopped this miserable spreading around their family members."
	"I contributed to my family infection, and now we are all facing the death, my grandfather passed away, my mother is feeling so bad, she is hospitalized."
	"I am the one who is stupid one; I brought the death to my loved ones."

is a virus, but it is the same as common flu in the past. Interviews outcomes show that respondents assume that this is part of the world plane, for causing genetic mutations or to cause fatal diseases in the future, via vaccines against SARS-COVID-19.

Results of the interviews show that the interviewees with COVID-19, experienced negative cognition, type self-blame. Interviewees indicate that they feel guilty and they blame themselves for spreading the virus. Respondents showed that they were careless and not vigilant, and this brought the loved ones in front of the death, and also some of them blame themselves and they feel guilty because they experienced the death of the family members or people around them from SARS-COVID-19.

DISCUSSION

The beginning of the pandemic situation in Kosovo was accompanied by dynamic movements toward supermarkets to buy supplements for a long time. A lot of people rushed into the hospitals to seek tests and health support. But there were very limited ways of supporting people in the psychological field. Kosovo was almost the last State in Balkan that was affected by SARS-COVID-19 infections. The findings of this research show that pandemic situations increase cognitive distortion (negative thoughts about the world, our self, and self-blame).

Outcomes show that quarantined participants were more likely than others to perceive discrimination and suffer from mental problems [13], hereafter, findings indicate that cognitive distortion impacts different psychological problems during the pandemic situation [14]. The situation that preoccupied people about their health during different epidemic situations, provoke changes in cognition, behavior, and emotions [15], also provoke a moderate level of stress and cognitive distortion [16]. Findings in Wuhan during the Pandemic situation shows that victimization was a negative predictor of mental health, and positive thinking was a positive predictor of mental health [17], some other findings show that self-blame has a psychological impact during the SARS-COVID-19 complications [18]. Investigation via interviews outcomes show that pandemic situations affect the negative cognitive triad (ourselves, world, and self-blame), this can be because of the nature of SARS-COVID-19, which can be spread from person to person, that virus can be spread from physical contact, and physical proximity, also from the fact that virus is fatal, especially for old ones and people with chronic diseases, also from the fact that virus has hit all over the world, etc.

Outcomes of our interviews show that change in cognition can explain people's behavior and health. Besides the fact that people and countries were in quarantine, there was no control about the

impact of quarantine on people's health, behavior, and their life. Findings indicate that there is a need to address decision-making and cognitive distortion to control Pandemic COVID-19 [19]. There are ambiguous attitudes towards SARS-COVID-19, interviewees expressed their beliefs that this is something serious, and something that can put people in danger, some interviewees believe that this is something planned and it is just the flu, and they are afraid that the world is planning something inappropriate for people. Some findings show that trust in Raoult and his hydroxychloroquine-based treatment against COVID-19 was positively associated with belief that truth is political, belief in conspiracy theories regarding the COVID-19 pandemic [20]. During the pandemic COVID-19, higher trust in scientists was associated with lower susceptibility to COVID-19 related misinformation [21]. Thoughts and beliefs that are linked with skepticism in COVID-19 are also distortions that should be managed to not affect and provoke psychological disorders, and people's misbehavior.

LIMITATIONS

Below we will mention some research limitations:

- Lack of investigation in this topic.
- Sampling via snowball.
- Difficulties to approach infected people.
- Being refused from respondents.
- Online interviews (because infected people are a sample of this research).

CONCLUSION

Cognitive distortion about the world, ourselves, and self-blame are present to people infected from SARS-COVID-19. Findings indicate that the level of these cognitive distortions is dominant and pushed people to think negatively about the world. This is noticeable, especially when they express their thoughts about the conspiracy. For some respondents and people, SARS-COVID-19 is something planned for the population all over the world. The limited information about SARS-COVID-19, about the virus, origin, power of virus, prolongation of the virus, nature of the virus, made the situation confused and pushed people to believe in conspiracy.

Quarantine, anti-COVID-19 rules, isolation, was the only response of health experts and health policymakers against the SARS-COVID-19. This is still going on, but this response is increasing the cognitive distortion, in these circumstances, the Government needs to plan the psychological interventions in the way that the

citizens can productively utilize the period of isolation and SARS-COVID-19. This can be achieved via psychological support services in cases of pandemic and epidemic situations. Health policymakers, together with health experts, psychologists, and psychiatrists, should organize a group of experts that have to work on preparing the special plan and strategy for psychological support and increasing psychological health, by preventing changes in cognition, during and long after SARS-COVID-19 infection.

REFERENCES

1. World Health Organization (WHO). Coronavirus disease (COVID-19) pandemic.
2. Giallonardo V, Sampogna G, Del Vecchio V, Luciano M, Albert U, Carmassi C, et al. The Impact of Quarantine and Physical Distancing Following COVID-19 on Mental Health: Study Protocol of a Multicentric Italian Population Trial. *Front Psychiatry*. 2020;11:533.
3. Abela JR, D'Alessandro DU. Beck's cognitive theory of depression: A test of the diathesis-stress and causal mediation components. *Br J Clin Psychol*. 2010;41:111-128.
4. Ho SS, Peh X, Soh VW. The cognitive mediation model: Factors influencing public knowledge of the H1N1 pandemic and intention to take precautionary behaviors. *J Health Commun*. 2013;18(7):773-794.
5. Hampel H, Vergallo A. The Sars-CoV-2 Pandemic and the Brave New Digital World of Environmental Enrichment to Prevent Brain Aging and Cognitive Decline. *J Prev Alzheimers Dis*. 2020;294-298.
6. Usher K, Durkin J, Bhullar N. The COVID-19 pandemic and mental health impacts. *Int J Ment Health Nurs*. 2020;29(3):315-318.
7. El-Zoghby SM, Soltan EM, Salama HM. Impact of the COVID-19 pandemic on mental health and social support among adult Egyptians. *J Community Health*. 2020;45:689-695.
8. Metin A, Cetinkaya A. According to cognitive model possible effects of coronavirus pandemic on human psychology. *Curr Res J Soc Sci*. 2020;10:231-244.
9. Schudy A, Żurek K, Wiśniewska M, Piejka A, Gawęda Ł, Okruszek Ł. Mental well-being during pandemic: the role of cognitive biases and emotion regulation strategies in risk perception and affective response to COVID-19. *Front Psychiatry*. 2020;11.
10. Hager NM, Judah MR, Milam AL. Loneliness and depression in college students during the COVID-19 pandemic: Boredom and Repetitive Negative Thinking as Mediators. 2020.
11. Boals A, Banks JB. Stress and cognitive functioning during a pandemic: Thoughts from stress researchers. *Psychological Trauma: Theory, Research, Practice, and Policy*. 2020;12:255.
12. Belen H. Self-blame regret, fear of COVID-19 and mental health during post-peak pandemic. *Psychol*. 2020.
13. Xin M, Luo S, She R, Yu Y, Li L, Wang S, et al. Negative cognitive and psychological correlates of mandatory quarantine during the initial COVID-19 outbreak in China *Am Psychol*. 2020;75:607-617.
14. Bibin J, Chith E, Mascarenhas P. The outbreak of novel coronavirus in India: Psychological Impact. 2020.
15. Qian M, Ye D, Zhong J, Xu K, Zhang L, Huang Z, et al. Behavioural, cognitive and emotional responses to SARS: differences between college students in Beijing and Suzhou. *Stress and Health*. 2005;21:87-98.
16. Omar R, Oksana K. Stress-induced cognitive assessment among university students during the pandemic of Corona (COVID 19). *SSRG-IJHSS*. 2020;7:89-93.
17. Yang D, Tu CC, Dai X. The effect of the 2019 novel coronavirus pandemic on college students in Wuhan. *Psychological Trauma: Theory, Research, Practice, and Policy*. 2020;12:6-14.
18. Zacher H, Rudolph CW. Individual differences and changes in subjective wellbeing during the early stages of the COVID-19 pandemic. *Am Psychol*. 2021;76(1):50-62.
19. Da Silva AG, Miranda DM, Diaz AP, Teles AL, Malloy-Diniz LF, Palha AP. Mental health: why it still matters in the midst of a pandemic. *Braz J Psychiatr*. 2020;42:229-231.
20. Fuhrer J, Cova F. "Quick and dirty": Intuitive cognitive style predicts trust in Didier Raoult and his hydroxychloroquine-based treatment against COVID-19. *Judgment and Decision Making*. 2020;15:889-908.
21. Roozenbeek J, Schneider CR, Dryhurst S, Kerr J, Freeman AL, Recchia G, et al. Susceptibility to misinformation about COVID-19 around the world. *R Soc Open Sci*. 2020;7(10):201199.