

## Research Article

# Positive Cognitive Triad and COVID-19 Fears: An Empirical Investigation

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## Abstract

The novel coronavirus (COVID-19) disease has produced both physical and mental health crisis at an unprecedented level forcing the global community to take actions to deal with the pandemic. Various mental health issues have cropped up in people since the spread of the highly contagious disease. The present empirical study examined the role of the positive cognitive triad in coping with mental health problems, especially the fears of the pandemic. Using a cross-sectional research design, data were collected from the 240 participants in a northern state in India at the time when the positive cases were increasing. Regression analysis showed significant variation explained by positive cognitive triad on the outcome variable, i.e. positive cognitive triad reduces the perception of fears of the COVID-19 disease. The study revealed that the positive cognitive triad might be used as one of the coping strategies with the fears and anxiety of the disease. Regression analysis further revealed that two dimensions of the positive cognitive triad i.e. positive cognition of the self and positive cognition of the future, had a significantly negative influence on the fears of the disease. Thus, people who have positive cognition of the self and the future are less likely to experience fear of the novel COVID-19 diseases.

*Keywords:* positive; cognitive; triad; self; future; world; COVID-19; fears.

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Since the emergence of the highly contagious corona virus (COVID – 19) disease, it has spread fast across the globe, putting people at risk of contracting the infection and the possibility of severe health complications. The disease has attracted emergency medical actions at the global level. However, the COVID – 19 pandemic also brought significant psychological problems in people. Various factors ranging from the highly infectious nature of the virus to lockdown and isolation to economic, social disruptions, and uncertain future gave genesis to psychological health problems. United Nations (2020) observed that the pandemic severely affected the mental health and well-being of people at the global level. Wang et al. (2020) found that COVID -19 had a moderate-to-severe level of psychological impact on more than half of the respondents. However, fears and anxiety were found to be the most common and widespread psychological problem because of the virus (NIMHANS, April, 2020; Rajkumar, 2020; Wang et al. 2020). Unparallel levels of psychological problems resulting from this pandemic have drawn the attention of mental health professionals such as psychiatrists, social workers, psychologists, and other related bodies to address such issues urgently. Professionals have suggested different ways and approaches to cope with anxiety and fears resulting from the pandemic. All the strategies to cope with the pandemic suggested by professionals are primarily theoretically drawn from studies on recent epidemics such as SARS, and are not based on empirical evidence with the current epidemic (COVID-19), especially in India. The lack of such studies provides an opportunity to examine the issue, hence the current study.

The current study proposed the positive cognitive triad as one of the approaches to cope with fears and anxiety resulting from the pandemic in people. This premise is based on (1) the cognitive approach, which emphasizes negative and /or maladaptive belief systems in producing anxiety and fears, and (2) the growth of positive psychological approaches alternative to pathological approaches, which have made significant strides in dealing with several



psychological problems including fears and anxiety. Considering these both approaches, the current study argued that at the time of the COVID-19 pandemic, positive cognitions of people towards the self, the world, and the future (termed as 'positive cognitive triad') might provide psychological resources and promote psychological strengths, positive emotions and motivations in people. Thus, in turn, it may protect them from negative psychological impacts, especially fears and anxiety of the pandemic. The positive cognitive triad may help people develop a constructive and adaptive approach to deal with the fears and anxiety resulting from this global pandemic. The positive cognitive triad has recently got attention as a tool to prevent people from a mental health problem (Pittard, 2019) and to enhance overall well-being (Fredrickson, 2001; Mak et al., 2011). However, a very limited number of studies have examined the influence of the positive cognitive triad on fears and anxiety, although few studies deal with the relationship between positive cognitive triad and depression. Given the scarcity of study between the positive cognitive triad and fears and also the possibility of its role in reducing the perception of fears, the present study intends to examine the association between the two study variables. Thus, the study's objective is to examine the influence of the positive cognitive triad on the perception of COVID – 19 fears.

The COVID – 19, has created a host of negative mental health problems in people, both infected and non-infected, across the globe. Studies have revealed that people experienced relatively increased psychological problems such as depression, anxiety, insomnia, perceived stress, post-traumatic stress symptoms (Gopal, et al., 2020; Roy et al. 2020; Shukla & Singh, 2021), helplessness, hopelessness (Kochhar et al. 2020), sleep problem (Majumdar et al. 2020) because of the pandemic. Of all the mental health problems, fears and anxiety have been the most common and widespread to everyone (Lunn et al. 2020; Xiang, et al. 2020). United Nations (2020), in its policy report on COVID – 19 pandemic, also reported a high level of symptoms of anxiety and depression in various countries. Wang et al. (2020) found that the pandemic produced a moderate-to-severe level of anxiety in one-third of the respondents. In its report, the India-based National Institute of Mental Health and Neuro Sciences (NIMHANS, April, 2020) has drawn a similar conclusion on the psychological effects of the pandemic. Though the anxiety symptoms, as shown by people, may not meet the diagnostic criteria of DSM-V in everybody to be labeled as anxiety disorder, still support from mental health experts became the need of the hour to enable people to cope with their fears and anxiety from this pandemic and also to keep them physically and mentally healthy. However, people needed

support to address their psychological problems. In India, support from mental health professionals assumed more significance because of the large number of people who have faced uncertainty and consequent mental health issues not only because of the COVID-19 disease but also because of the never experienced before personal, social, and economic disruption brought by the pandemic (Chudhry, et al., 2020; Nicola et al. 2020).

The positive cognitive triad is a multi-dimensional construct that refers to the individuals' positive cognitions about the self, the world, and the future. Positive cognition of self enables the person to realize their strengths and potentials, i.e. a sense of self-worth (Peterson, 2018). Positive cognition about the world is concerned with looking for opportunities, seeking and offering help, finding solutions to the problem (Peterson, 2018). Positive cognition of the future indicates individuals' optimistic outlook, i.e. hope that despite adversity, things will turn out fine in the future, and hardships will effectively be managed (Mak, et al., 2011; Peterson, 2018). Positive cognitive triad construct is derived from Beck's (1976) well-known cognitive theory of depression in which a negative view of the self, the world, and the future, called negative cognitive triad, is emphasized in the genesis of depression. In the current study, it is proposed that flipping Beck's (1976) negative cognitive triad and using the same may be helpful in coping with the pandemic's fears and anxiety which is also in line with the positive psychological approach. Studies have shown the association between anxiety and the prevalence of negative cognitive products (Prins & Hanewald, 1997; Treadwell & Kendall, 1996), thus implying that positive cognitions are likely to reduce fear and anxiety.

A study by Sin and Luybomirsky (2009) showed that depression and anxiety is reduced, well-being is improved by applying positive psychological interventions. In their study on generalized anxiety, Eagleson, et al. (2016) showed that worry/anxiety can be effectively countered by using positive ideation/ thoughts. The significance of positive thoughts in anxiety reduction has also been exhibited in an experiment by Nelson and Knight (2010). Walton et al. (2020) suggested that being positive is important to cope with the anxiety and fears resulting from the COVID-19 pandemic. Drawing on these findings, it can be inferred that the positive cognitive triad can be used to lessen the perception of fears and anxiety. However, there is an alternative view as well, which is proposed as depressive realism hypothesis (Alloy & Abramson, 1988). According to this, depressed people are more precise in analyzing the problem and in turn strategizing to cope with the problem. Scholars have proposed that various mechanisms are involved in this effect, such as the severity of depression (McKendree-Smith & Scogin, 2000). Thus, it can be



inferred that people with negative perspectives produce more accurate assessment of the situation and, thus, cope better. However, the present study took the line that if people see environmental stimuli or events from positive lenses, have an optimistic outlook, and believe in themselves, hope for a better world and future, their thoughts and behaviors will be adaptive and constructive. As a result, people are likely to experience lesser fears and anxiety. More specifically, if people adopt positive cognitions towards the problems (here COVID-19 pandemic), they are less likely to experience fears and anxiety of the pandemic. Thus, it is hypothesized that: there would be a significantly negative influence of positive cognitive triad on the perception of COVID-19 fears.

## Method

### Participants and Procedures

Adopting a cross-sectional survey research design, the study was undertaken in the state of Bihar in India. A total of 240 participants responded the anonymous online questionnaires. The data were collected during April - May, 2020, the time when the COVID – 19 cases were on continuous rise in India. The mean age of participants was 29.3 years ( $SD = 9.35$ ). Sample consisted of students (41%), government / semi government employees (25%), private jobs holders (22%), self-employed and others (12%). Male constituted 53% of the respondents and majority of them were from urban areas (87%). From the religion's perspective, 69% respondents were Hindu, 27% Muslim and 4% comprised of others such as Christian. Out of the total respondents, 18% were graduates, 67% were post-graduates and 15% were having doctorate degree and other qualification.

The administered questionnaires included socio-demographic information, positive cognitive triad and COVID-19 fears. Respondents were given detailed information such as the objective of the study, method of responding the questionnaires etc., on the first page of the online questionnaire. Link of the online questionnaire was sent to the different WhatsApp groups. Questionnaires were also sent through e-mail to the people who were not in the WhatsApp groups. All the respondents were assured of secrecy of their responses on the questionnaires. It is also stated in the questionnaires that the scale has no items with right or wrong answers.

## Measures

Demographic information: Respondents provided demographic information which included age, gender, occupation, educational qualification, religion and inhabitation.

*Positive cognitive triad:* Positive cognitive triad was measured by the scale adopted from the Cognitive Triad Inventory (CTI) developed by Beckham et al. (1986). The inventory consisted of three sub-scales: view of the self, the world and the future. Each sub-scale has both positive and negative items. In this study, only positive items of each sub-scale were taken. Thus, positive cognitive triad was measured using 14 items. The view of the self subscale consisted of 4 items ( $\alpha = .67$ ), the view of the future subscale consisted of 5 items ( $\alpha = .73$ ) and the view of the world subscale consisted of 5 items ( $\alpha = .78$ ). The sample items included were, "I can do a lot of things well" for view of the self. "The important people in my life are helpful and supportive", for the view of the world and "I expect that things will be going very well for me a few years from now", for view of the future. Items of the scale were scored on 5 –point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). High scores indicated higher levels of positive cognitive triad.

*COVID – 19 fears scale:* The scale developed by Ahorsu et al. (2020) was used in this study to assess the perceived fears of COVID – 19. It is a 7 – item one-dimensional scale which was scored on 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). An example of a sample item is, "It makes me uncomfortable to think about COVID-19". Higher scores implied a higher degree of the fears. The scale had a good reliability in the sample of the study ( $\alpha = .85$ ).

## Results

Harman's single-factor (EFA) analysis was performed to check the evidence of common method variance (CMV), before probing the relationships among the variables of the study. The result of the Harman's single-factor analysis revealed that all the distinct factors of the study accounted for 68 percent of the total variance, and the first factor captured only 25 percent of the variance which is less than threshold limit of 50 percent. Thus, the findings of the Herman's single factor analysis showed no evidence of CMV in this study. Skewness and kurtosis values were also calculated which were found to be below 1 and 2 respectively, suggesting the normality of the distribution of the variables (West et al., 1995).



The means, standard deviations, and correlations of the study's main variables are displayed in table 1. The correlations among the variables were found as expected. Two out of three dimensions of the positive cognitive triad are found to have significantly negative correlations with the COVID – 19 fears. A significant negative correlation was observed of COVID-19 fears with the positive cognition of the self ( $r(238) = -.131, p < .05$ ) and with the positive cognition of the future ( $r(238) = -.129, p < .05$ ). No significant negative relationship was found between positive cognition of the world and the COVID-19 fears.

Table 1.

*Means (M), Standard Deviations (SD) and correlation coefficients among variables*

Variables	M	SD	1	2	3	4
1 View of the self	3.89	.592				
2 View of the future	3.81	.644	.574**			
3 View of the world	3.84	.622	.575**	.685**		
4 Positive cognitive triad	3.84	.537	.798**	.892**	.888**	
5 COVID-19 Fears	2.65	.845	-.131*	-.129*	-.093	-.046

\* $p < .05$ ; \*\* $p < .01$

The regression results summarized in table 2, showed a significantly negative association of positive view of the self ( $\beta = -.331, p < .01$ ) and the positive view of the future ( $\beta = -.210, p < .05$ ) with COVID-19 fears. The result also revealed that positive cognitive triad explained 13 percent variance in the perception of COVID-19 fears ( $R^2 = .127$ ). This was corroborated by the F value which is found to be significant ( $F(3,236) = 11.394, p < .01$ ). Thus, the regression result indicated that positive cognitive triad may be considered as a valid predictor in explaining the outcome variable of the study. Positive cognitive triad thus, seemed to contribute to reduce the fears of the pandemic. Thus, the study findings did support the hypothesis of the study which stated that positive cognitive triad influences the perception of fears of the COVID-19.





Table 2.

*Summary of regression analysis for predicting COVID-19 fears*

Variables	$\beta$	t-value	$p$
1 View of the self	-.331	-4.142	.000
2 View of the future	-.210	-2.333	.021
3 View of the world	-.139	-1.550	.123
$R^2 = .127$ , $F(3, 236) = 11.394$ $p = .000$			

## Discussion

The study intended to examine the influence of positive cognitive triad on the perception of COVID-19 fears and anxiety. The study results highlighted the significance of the positive cognitive triad (taken as an additive model) in reducing the fears. As expected, individual's positive cognitions towards the self, the future, and the external world help reduce the perception of fears in a high crisis situation (COVID-19 pandemic). The results were found to be in line with the cognitive model of anxiety (Clark & Wells, 1995) and the information processing perspective of anxiety (Prins, 2001) which emphasized the role of cognitive constructs and processes such as attention, judgment, and memory. In the present study, respondents probably were able to appraise the crisis as controllable, thinking they could take all possible precautionary measures such as wearing a mask, keeping away from gathering, and developing and maintaining healthy habits to avoid infection. The optimistic outlook of respondents and faith in themselves probably helps reduce the fears from the disease. Changing the cognition and outlook is important in coping with any crisis situation, including the COVID-19 pandemic fears. Coping, largely, entails altering the appraisal and cognition of the demanding event and adjusting the physical and emotional responses (Cai et al. 2021). Positive thinkers feel that they have adequate resources to face the problem (Carver & Scheier, 1998; Cantor et al. 1991). People with the positive cognitive triad probably develop a fighting spirit, positive emotions, and motivation, which lower their fears and anxiety. A study has found that one's belief in a good life, being hopeful for a positive future, and positive reinterpretation of events help in coping with the problem (Vazquez et al. 2021). The study result also supports the positive psychological approach in dealing with the negative emotions (Sin & Luybomirsky,





2009), here perception of fears from the pandemic. According to Waters et al. (2020), positive psychology enhances individuals' competencies and enables them to be creative and constructive, supporting people to cope with the crisis. Positive psychology interventions have continued to play a significant role in enhancing psychological well-being (Pawelski, 2020).

Although positive cognitive triad, when taken as an additive model, predicted COVID-19 fears negatively, it is also important to examine its distinct sub-factors (independent model/factor) for theory as well as for practice. The results showed that two dimensions of the construct, positive cognition of the self and the future had a significant negative influence on the COVID-19 fears. People with a positive cognition of the self, experienced reduced level of fear and anxiety from the pandemic. Reasons could be that such people believe in their ability, feel positive emotions, and get motivated to deal with the pandemic in a pragmatic manner. This feeling of self-worth probably energizes and motivates them to develop plans and strategies to prevent themselves from getting infected. Respondents of the study probably have enough knowledge to believe that they can easily adapt and follow those behaviors and practices that keep the disease away.

Studies have reported that people with a positive view of the self are resilient, self-efficacious, determined (Wagnild & Young, 1990), and capable of meeting future challenges (Scheff, 1990). A positive view of the future enables people to be hopeful and be optimistic about the time to come.

The present study found that positive cognition of the future also reduces the perception of fears of the global pandemic. One reason could be that such people hope that negative events or the present global crisis is temporary and short-lived, and the normalcy in life will prevail because the people/world will find the solution to the problem. Researchers have shown that hope is goal-oriented (Snyder, 2000) and helps for psychological adjustment during crisis (Madan & Pakenham, 2014). A recent study concluded that hope diminished the anxiety response to risk infection from the COVID – 19 (Zhang et al. 2021).

### **Conclusion, Implications and Limitations**

The global pandemic (COVID- 19) created an unprecedented mental health crisis, causing negative feelings such as fears, anxiety, depression, etc., in all sections of society worldwide. Finding ways to cope with mental health problems in such a crisis has become an important task of professionals. The present study empirically explored the positive cognitive triad in the

perception of fears from COVID-19. It showed the significance of the positive cognitive triad in lessening the fears from the current global pandemic. The study revealed that people who have positive cognition of the self, the future, and the world are less likely to experience the fears and anxiety from the highly contagious COVID – 19 diseases. Alternatively, people having negative cognitive triad may experience more fears and anxiety from this pandemic. In general, the findings also supported that a positive psychological approach helps deal with people's psychological problems.

The study has significant implications for people in general and for mental health professionals in particular. During counseling, mental health professionals may try to cultivate and maintain positive cognitions, especially about the self and the future, while helping them deal with this pandemic. Mental health professionals may try the needy people to realize their strengths develop self-confidence, and actively use those strengths to assess the situations causing fears, and all these may help reduce the perception of fears. Similarly, the professionals may also ensure that people can see their future in a more positive light, be hopeful and optimistic about the crisis in the sense that every problem has a solution and the world will come out with tangible solutions, thus putting an end to the present crisis. With these positive cognitions, people may easily face the present crisis and experience well-being. Studies have supported that such cognitive skills can be learned (Stice et al., 2007). Findings of the present study may also be used in addressing the other similar pandemic in future if any. People should try to build positive cognitions about themselves and their future and apply those in their daily lives to experience less fear from this pandemic. The present study has theoretical implications as well. The study offers evidence-based contribution in the literature of the role of the positive cognitive triad in particular and contributions of positive psychology in general in addressing mental health problems especially fear.

The study suffers from some limitations, indicating that its findings should be taken with some caveats. The first limitation is that the study used a sample that consisted of social media and internet users. This online population (social media and internet users) is considered as non-representative sample (Rice et al., 2017), which affects the power of generalizability of the study result. In future research, it is advisable to use random sampling procedures to make the sample representative and the results generalizable. The second limitation is that the study is co-relational, which prohibits inferring causal relations between the examined variables. The use of experimental design will help to infer a causal relationship. The third limitation is that the data



were collected from one part of the country, and the sample mainly was from urban areas and very few from rural areas, which may reduce the power of generalizability of the study findings. Replication of the study incorporating more respondents from rural areas may give better insight. However, notwithstanding the limitations mentioned above, the present study's findings threw light on the use of positive cognitive triad in coping with fears of the pandemic and other similar situations.

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### **Competing Interests**

The author has declared that no competing interests exist.



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