Pakistan Journal of Psychological Research, 2025, Vol. 40, No. 1, 189-205

https://doi.org/10.33824/PJPR.2025.40.1.12

Role of Personality Traits and Coping Strategies as Predictors of Post-Traumatic Growth in COVID-19 Recovered Patients

Alina Shahid and Saima Dawood

University of the Punjab

The present study was conducted to explore the role of personality traits and coping strategies as predictors of the post-traumatic growth in recovered patients of corona. A sample (N = 111) including men (n = 42) and women (n = 69) recovered patients of COVID-19 with age range of 20-45 years, was recruited through purposive sampling. Following a correlational research design, the personality traits, coping strategies and post-traumatic growth (PTG) were assessed in recovered patients of COVID-19 by using The Post-Traumatic Growth Inventory, Big Five Inventory, and Ways of Coping Scales- Revised. The results indicated that PTG was positively associated with emotion-focused and problem-focused coping strategies and three personality traits i.e., agreeableness; conscientiousness, and openness. According to multiple hierarchical regression analysis, three personality traits: Conscientiousness; openness, and agreeableness positively predicted post-traumatic growth (PTG) in recovered patients. Similarly, emotion-focused coping strategies (escape-avoidance, accepting responsibility, positive re-appraisal & distancing) also contributed to the development of post-traumatic growth (PTG). Furthermore, mediation analysis showed that emotion-focused and problem-focused copings have mediated the relationship between personality traits and post-traumatic growth. The findings of the study helped the professionals to identify the factors which contributed in adaptive coping strategies and PTG. The COVID-19 pandemic has been a novel and challenging phenomenon around the globe of 21st century, therefore, the present results would be helpful for mental health practitioners to address the negative effects to deal with pandemic or any crisis situation and they may use post-traumatic growth as a protective variable which could be used to prepare individuals for any crisis situation.

Keywords. Post-traumatic growth, coping strategies, personality traits; COVID-19, corona survivors, COVID-19 - an adversity

---

Alina Shahid and Saima Dawood, Centre for Clinical Psychology, University of the Punjab, Lahore, Pakistan.

Correspondence concerning this article should be addressed to Saima Dawood, Centre for Clinical Psychology, University of the Punjab, Lahore, Pakistan. Email: sd_khanpk@yahoo.com

The COVID-19 has been declared as a serious and novel adversity of 21st century for the whole world. The people experienced extreme fear of dying, life uncertainty and faced physical and mental health problems due to pandemic. The challenge was not only related to health but people experienced lots of financial problems. The mere thought of not going outside as well as loss of personal freedom were traumatizing, and caused emotional distress in the community. Overall, the fear of getting the virus made the individuals extremely fearful and resulted in emotional turbulences during pandemic and aggravated psychological issues. Wang et al. (2020) reported that 54% of population experienced a moderate to severe degree of psychological impacts of COVID-19, 17% having depression, 29% experiencing anxiety, and 8% facing severe stress. According to Favieri et al. (2020), the pandemic significantly exacerbated the economic, social, and interpersonal issues, around half of respondents, especially women reported serious decline in psychological well-being with about 5% of people having PTSD symptoms. Yang and Ma (2020) reported that post-pandemic around 74% individuals had poor emotional well-being mainly influenced by factors such as age, marital status, proximity to the outbreak, and worries of infection.

Acharya (2020) reported that 42% of students reported severe stress and 68% experience excessive worry about studies during lockdown. Students were under stress on not having access to internet, delay in academic years and most importantly uncertainty about the situation. Chi et al. (2020) found signs and symptoms of post-traumatic stress disorder (PTSD) along with anxiety, depression, and sleep related issues in students during corona. Another study by Nie et al. (2020) with patients of COVID-19 indicated depression in 36% and anxiety in 39%. People who lost their significant ones due to corona had shown high risk of psychological issues, along with insomnia, anxiety, depression, and PTSD in people across the globe during this pandemic.

Lai et al. (2020) explored the COVID related experiences of health care providers and found that workers compromised their own physical and psychological health while rescuing others. The health care providers; fighting with this deadly disease to keep people save were suffering from serious mental health issues such as distress, depression, anxiety, insomnia and other psychological issues. Likely, Yin et al. (2022) found an increase of 4% PTSD symptoms (during COVID-19 pandemic) in healthcare staffs and found female health care workers being more sensitive during COVID-19.

Adversities result in traumas and negative experiences, sometimes with no boundaries and limitations, however, it has been

observed that some individuals report positive outcomes and changes in their lives (Chi et al., 2020; Kalaitzaki et al., 2020) and this phenomenon is called post traumatic growth (PTG) (Tedeschi & Calhoun, 1996). When individuals struggle emotionally with the challenging ordeals of certain life events, they tend to develop positive strengths out of these difficulties. These positive strengths may include different aspects of life such as, insight of new possibilities in life; improvement in close relationships; changed religious beliefs, thus appreciating life more and accepting personal growths (Tedeschi & Calhoun, 1996). The literature also favors the importance of some positive aspects of the COVID-19 pandemic; though the negative outcomes are more and worse. Kalaitzaki et al. (2020) highlighted the encouraging consequences; resilience and PTG in the health care professionals dealing with COVID-19 patients. The study also encouraged future studies in this direction rather focusing only on negative outcomes during crisis. Chi et al. (2020) also found that 67% students exhibited PTG after pandemic; showing effective coping within crisis situation.

While going through a life crisis, it is a big challenge to achieve new appraisal of life or personal growth. These relatively new changes may vary from one individual to another, therefore, the concept of PTG is multidimensional (Joseph et al., 2005; Mapplebeck et al., 2015). There are few factors (i.e., psychological, social and cognitive) which may predict PTG. One is coping through which cognitive and behavioral efforts are made to manage internal or external ordeals that are challenging and exceeds an individual's resources (Lazarus & Folkman, 1984). Coping strategies may classify as emotion-focused and problem-focused coping. Emotion-focused coping focuses on the internal emotions a person encounters during some unfavorable time; thus, helps an individual to manage emotions for a new challenge of life. The problem-focused coping is mostly used when there is a likelihood to change certain things; working on stressor not on internal emotions. People experiencing trauma tend to use both of these mechanisms of coping strategies (Folkman & Lazarus, 1988b). The former style includes those ways which involve emotions such as accepting responsibility; distancing; self-controlling; positive reappraisal and escape-avoidance while later involves facing a crisis with planned steps like confrontative coping; planful problem solving, and seeking social support (Folkman & Lazarus, 1988a). Depending on the situation, they can switch from one approach to other, such as looking for social support, serve both emotion and problem focused coping (Vitaliano et al., 1987). Interestingly, studies on deadly disease like cancer and stroke also suggested the significance of coping in

developing PTG in patients as well as in their caregivers (Khan et al., 2020). Ullah (2023) assessed the severity of common psychological disorders and post traumatic growth in flood affectees of Baluchistan found out that: PTG has a negative association with psychological disorders (depression, anxiety, OCD, and somatic symptoms), suggesting that higher PTG plays its role in reducing severity of these psychological conditions.

Polizzi et al. (2020) studied pathways towards recovery and resilience in the time of stress during COVID-19 and emphasized the use of some effective coping strategies which decreased stress and increased resilience (growth) in people in the past. Those coping strategies were acceptance based coping, mindfulness practice, and behavior activation which were effective in building distress tolerance, increasing social support, goal directedness and meaning in life. Veer et al. (2021) explored the psychological and social aspects and resilience during lockdown. Positive appraisal and social support are positively related with resilience and partly with low levels of stress. The findings highlighted resilience and social support as protective factors in the time of crisis and may play their role in reducing stress in individuals.

Another important factor is personality related to traits, which consists of trait which we have inherited from our ancestors and in combination of our life experiences make up the structure of our personalities. Individuals use their physical and emotional strengths to cope with crisis and to gain experience (King, 2011). The five major constructs of personality were found after validation of personality profiles which are openness, conscientiousness, extraversion, agreeableness, and neuroticism. These factors are involved in cognitive processing and facilitate PTG as openness promotes innovative experiences, optimism, internal locus of control and coherence (Tedeschi & Calhoun, 2004). Several studies emphasized the role of personality and coping strategies on PTG as Park and Folkman (1997) viewed PTG as one of the coping strategies, while others view PTG as an outcome of several factors like coping strategies, personality make-up and environmental support (Tedeschi & Calhoun, 2004).

Evidence suggests that three of the personality traits (conscientiousness, openness and agreeableness) positively predicted post-traumatic growth in corona patients. Similarly, emotion-focused coping strategies such as escape-avoidance, accepting responsibility, positive re-appraisal and distancing have developed post-traumatic growth in corona patients as well. Furthermore, emotion-focused and

problem-focused copings have mediated the relationship between personality traits and post-traumatic growth (Shahid, 2020).

Evidence also depicts that coping, such as denial and adaptive coping, to be positively associated with developing PTG in patients recovered from cancer (Ali et al., 2022). In Pakistani context, Khan et al. (2020) highlighted that high neuroticism was linked with increased anxiety and depression during the COVID-19 outbreak. Conversely, conscientiousness was associated with more positive attitudes towards health measures such as social distancing and vaccination (Khan et al., 2020). People who involve in ruminative and healthy reflective processes regarding their trauma are more likely to report elevated PTG, depicting the mediating role of emotion-focused coping between personality traits such as neuroticism and PTG (Linley & Joseph, 2004). When stressors are professed as uncontrollable such as epidemics or large-scale disasters, problem-focused coping may be less effective (Zhou et al., 2015)

The present study aimed to determine the factors that contribute to physical as well mental healing in COVID-19 survivors. It also seeks to identify the adaptive coping strategies and the positive personality traits used by the COVID-19 survivors as a mean of growth. The strategies used by them to overcome stressful and life threatening event would serve as guidance for other individuals to adapt healthy living styles in dealing with unfortunate events in future. Further, the study also aimed to provide an understanding about the post traumatic growth in the survivors of adversities as well as highlighting the strengths which could be useful to deal with future challenges.

Objectives

1. To see the relationship between personality traits, coping strategies, and post-traumatic growth in COVID-19 recovered patients.
2. To see the predictive role of personality traits and coping strategies in post-traumatic growth among COVID-19 recovered patients.
3. To see the mediating role of coping strategies between personality traits and post-traumatic growth in COVID-19 recovered patients.

Method

Research Design

Cross-sectional research design was used to explore the psychosocial predictors of PTG in recovered patients of COVID-19 as

well as to see relationship between personality traits and coping strategies with PTG in recovered patients of COVID-19.

Sample

COVID-19 patients (N = 111) including men (n = 42) and women (n = 69) of age ranges from 20-45 years were taken as sample through purposive sampling. The sample size was determined through G-power Analysis. The recovered patients of COVID-19 having any co-morbid physical disease such as chronic liver, kidney, lung diseases; or cancer were excluded from the study. Those who experienced and recovered from COVID-19 were included in the research.

Measures

Big Five Inventory (BFI; John & Srivastava, 1999)

Big Five Inventory measures five major dimensions of personality: Extraversion (8 items); Agreeableness (9 items); Conscientiousness (9 items); Neuroticism (8 items), and Openness (10 items). The items are endorsed on a five-point Likert scale which ranged from 5 (*Strongly Agree*) to 1 (*Strongly Disagree*). The scoring range for each dimension is as follows: Extraversion (8-40); Agreeableness (9-45); Conscientiousness (9-45); Neuroticism (8-40) and Openness (10-50). High score on extraversion reflects gregariousness, assertiveness, excitement-seeking, positive emotions and warmth. High score on agreeableness reflects trust, straightforwardness, altruism, compliance, modesty and tender-mindedness. High score on conscientiousness reflects competence order dutifulness achievement striving self-discipline deliberation. High score on neuroticism reflects anxiety, angry hostility, depression, (self-consciousness, impulsiveness and vulnerability. High score on openness reflects curiosity, artistic nature, wide interests, feelings, and etc. The Cronbach's alpha ranged from .52 to .65 in moderate range (John & Srivastava, 1999).

Ways of Coping Scales- Revised (WCS-R; Folkman et al., 1986)

Ways of Coping Scales- Revised measures eight coping strategies i.e., Confrontative Coping (6 items); Distancing (6 Items); Self-Controlling (7 items); Seeking Social Support (6 items): Accepting Responsibility (5 items); Escape Avoidance (8 items); Planful Problem Solving (6 items) and Positive Re-appraisal (7 items). The items are rated on a four-point Likert scale ranging from 0 (*Not Used*) to 3 (*Used a Great Deal*). The score range is 0 to 198. High scores on emotion-focused coping reflects ability of proactive management of

stressors and high scores on problem focused coping are indicative of managing stress by regulating emotions. The reliability scores of subscales ranged from .60 to .75. Scores of coping strategies ranged from .76 to .81 for emotion-focused and problem-focused coping for the present study, falling in acceptable to good range.

Post-Traumatic Growth Inventory (PTGI; Tedeschi & Calhoun, 1996)

PTGI was used to assess the positive impact related to survival of an individual after experiencing some traumatic event in life. The 21-item scale includes 5 factors: New Possibilities; Relating to Others; Personal Strength; Spiritual Change, and Appreciation of Life that are being rated on a five-point Scale. The number of items and scoring range on each factor is: Relating to Others (7 items, 0-35 points); New Possibilities (5 items, 0-25 points); Personal Strength (4 items, 0-20 points); Spiritual Change (2 items, 0-10 points); and Appreciation of Life (3 items, 0-15 points). Items are rated on a six-point Likert scale from 0 (*No Change*) to 5 (*Very Great Change*). High scores indicate: enhanced relationships and compassion (Relating to others); recognition of new life paths (New Possibilities); increased resilience and inner strength (Personal Strength); deeper spiritual understanding (Spiritual Change); and greater life appreciation (Appreciation of Life). The reliability of post-traumatic growth inventory was .97 for the present study which was excellent.

Procedure

At first, the study was approved by Departmental Doctoral Program Committee (DDPC) and then permission was taken from the authors of the tools to use in present research. After permission, researcher uploaded English and Urdu versions on Google Forms to collect data through online mode as during pandemic face to face administration was not possible. The participants were given the written guidelines to fill the questionnaires. Both English and Urdu versions of questionnaires were given, but most of the participants preferred to fill the forms in English. Consent was taken from the participants. Nature and purpose of study was explained to the participants. Anonymity of respondents, confidentiality of their information was assured. It was made sure that participants did not suffer any repercussions after their participation in this study. Participants were given the right to withdraw from study at any time. Participants were thanked for their cooperation during the data collection.

Results

The present research aimed to identify the psychosocial predictors of PTG in recovered patients of COVID-19. Results were derived through descriptive and inferential analyses of the study variables.

Table 1: *Correlation Matrix Co-efficient of PTG, Personality Traits and Coping Strategies (N = 111)*

#	Variables	1	2	3	4	5	6	7	8
1	PTG	-							
2	Agree	.56***	-						
3	Cons	.75**	.55**	-					
4	Neu	.03**	.00	.08	-				
5	Open	.59**	.41**	.49**	.02	-			
6	Extra	.10	-.03	.02	-.31**	.15	-		
7	EFC	.59**	.40**	.55**	-.01	.32**	-.08	-	
8	PFC	.51**	.21*	.39**	-.18	.43**	.30**	.59**	-

Note. PTG = Post-traumatic Growth; Agree = Agreeableness; Cons = Conscientiousness; Neu = Neuroticism; Open = Openness; Extra = Extraversion; EFC = Emotion-focused Coping; PFC = Problem-focused Coping.

*$p < .05$. **$p < .01$. ***$p < .001$.

The results in Table 1 indicate that PTG was positively related with three personality traits and both of the coping strategies. There was moderately positive relationship between PTG, agreeableness; conscientiousness, and openness. Furthermore, emotion-focused and problem-focused copings have also showed significant positive relationships with PTG and personality traits except for neuroticism. Extroversion appeared to have a significant negative relation with neuroticism. Conscientiousness also showed a significant positive relation with agreeableness and openness. It is proposed for present study that there is likely to be a positive significant relationship between personality traits and PTG in recovered patients of COVID-19 is partially proved as PTG is positively related with three personality traits. Similarly, there is likely to be a positive significant relationship between coping strategies and PTG in recovered patients of COVID-19, as results showed that both emotion-focused and problem-focused coping were positively correlated with PTG. Overall findings of correlation analysis reflects the results in the line of proposed hypotheses in the present research.

Table 2: *Personality Traits and Coping Strategies as Predictors of Post-Traumatic Growth in COVID-19 Recovered Patients (N =111)*

	PTG	
Predictors	ΔR^2	*B*
Model 1	.30***	
Agreeableness		.15**
Conscientiousness		.42***
Neuroticism		.02
Openness		.21**
Extraversion		.05
Model 2	.39***	
Emotion-focused coping		.17*
Problem-focused coping		.11
Total R^2	.69***	

Note. *$p < .05$. **$p < .01$. ***$p < .001$.

To explore the predictors of PTG in recovered patients of COVID-19, two sub-scales of coping strategies and five traits of personality were added as the predictors of PTG in the regression model. The Table 2 shows Model 1 with 30% of the variance in PTG as $F = 33.51$, $p < .000$ and indicated that conscientiousness; openness, and agreeableness were significantly and positively predicting PTG. In the second model, subscales of coping strategies were added which caused 39% change in variance as $F = 35.03$, $p < .000$. The second model indicated that emotion-focused coping was positively predicting PTG. Furthermore, problem-focused coping did not predict PTG in these results. Therefore, personality traits and coping strategies being predictive of PTG was partially proved.

Mediation analysis was conducted to see significant positive mediating role of coping strategies between personality traits and PTG in recovered patients of COVID-19. Significant mediation analysis is presented in the Table below.

Table 3: *Mediating Role of Coping Strategies Between Personality Traits and Post-Traumatic Growth (N = 111)*

	Post -Traumatic Growth					
	Emotion-focused Coping			Problem-focused Coping		
	B	*SE*	95% CI	*B*	*SE*	95% CI
Agreeableness	.57	.23	[.19, 1.09]	.39	.15	[.02, .60]
Conscientiousness	.46	.24	[.04, 1.00]	.48	.14	[.19, .65]
Neuroticism	-.02	.23	[-.58, .44]	-.39	.15	[-.61, -.00]
Openness	.66	.23	[.37, 1.17]	.28	.16	[-.12, .50]
Extraversion	-.30	.26	[-1.02, .59]	.45	.25	[.03, 1.0]

Hayes et al. (2004) model was used for mediation analysis. According to the results in Table 3, emotion-focused coping was significantly mediating the relationship between PTG and agreeableness, conscientiousness, and openness traits respectively. However, emotion-focused coping did not mediate the relationship between neuroticism, extraversion, and PTG. Furthermore, problem-focused coping was positively mediating relationship of PTG with personality traits i.e., agreeableness, conscientiousness, extraversion, and negatively with neuroticism. It did not mediate the relationship between openness and PTG. Therefore, hypothesis about the mediating role of coping (problem-focused coping) was proved except for openness.

Discussion

The present research aimed to examine the role of personality traits and coping strategies as predictors of post-traumatic growth in recovered patients of COVID-19. The findings of the present study indicated that there was moderately positive relationship between PTG, agreeableness; conscientiousness, and openness. Furthermore, emotion-focused and problem-focused copings have also showed significant positive relationships with PTG and personality traits except for neuroticism. Extroversion appeared to have a significant negative relation with neuroticism. Conscientiousness also showed a significant positive relation with agreeableness and openness. While, exploring the predictors of PTG, Personality traits: Conscientiousness; openness, and agreeableness were significantly and positively predicting PTG. Also, emotion-focused coping came out to be positively predicting PTG. However, problem-focused coping did not predict PTG in these results. Mediation analysis was conducted to test the hypothesis: there is a significant positive mediating role of coping strategies between personality traits and PTG in recovered patients of COVID-19. Emotion-focused coping was significantly mediating the relationship between PTG and agreeableness; conscientiousness and openness traits respectively. However, emotion-focused coping did not mediate the relationship between neuroticism; extraversion and PTG. Furthermore, problem-focused coping was positively mediating relationship of PTG with personality traits: Agreeableness; conscientiousness; extraversion, and negatively with neuroticism. It did not mediate the relationship between openness and PTG.

The findings of the present study are supported by several researches such as Shakespeare-Finch et al. (2005) studied the effects of personality and coping on PTG in emergency ambulance personnel.

They found that four of the personality traits i.e., extraversion; openness; conscientiousness, and agreeableness and positive coping including self-controlling and re-appraisal was significantly predicting PTG in ambulance personals (Shakespeare-Finch et al., 2005). The results are in line with present study as three of the personality traits: Openness; conscientiousness, and agreeableness (except for extraversion) as well as emotion-focused coping were predicting PTG in recovered patients of COVID-19. Moreover, the relationship between these personality traits and PTG was also observed to be mediated by emotional-focused coping in the present study. These results suggest that there would be a noticeable increase in PTG when an individual with these personality traits utilizes emotional-focused coping in a difficult situation. Specifically, the findings are consistent with Pakistani research by Ifthikar et al. (2021) which observed similar patterns of personality traits enhancing resilience and post-crisis recovery among individuals facing health-related traumas.

Shahid (2020) suggested that three of the personality traits (conscientiousness, openness, and agreeableness) positively predicted post-traumatic growth in corona patients. Karanci et al. (2012) also examined factors contributing to the PTG in a Turkish community. Three of personality domains: Agreeableness; conscientiousness, and openness were significantly predicting PTG in Turkish community. These findings are also strongly supporting the present research as these personality domains were positively related to and predicted PTG in survivors of COVID-19. Similarly, Wang et al. (2013) found that open mindedness in personality along with other factors such as positive coping was strongly predicting PTG in accidentally injured patients. This finding is also similar in nature to the present research as openness showed significant positive association with PTG came out as a strong predictor of the later in recovered patients of the COVID-19, depicting a tendency of open-minded and creative people towards growth on experiencing a crisis.

Shahid (2020) also found that emotion-focused coping strategies such as escape-avoidance, accepting responsibility, positive re-appraisal and distancing have developed Post-traumatic growth in corona patients as well. Furthermore, emotion-focused and problem-focused copings have mediated the relationship between personality traits and post-traumatic growth. Sheikh (2004) found problem-focused coping as partially mediating the relationship between extraversion and PTG in heart patients. This outcome is in line with findings of present study, as extraversion trait showed a positive relation with PTG and problem-focused coping and the later also mediated the relation between these two. This suggests that patients

who had extraversion component in personality (considerate, careful, worrisome and outgoing) personalities might have used problem-focused coping to develop PTG after battling with COVID-19.

In present research emotion-focused coping positively predicted the PTG but problem-focused coping was not found as a positive predictor. This might be ascribed to the unknown nature of the trauma experienced. As, COVID-19 was unknown, where direct action (problem-solving) may not always be possible or effective, thus limiting the utility of problem-focused strategies. Wild and Paivio (2004) studied psychological adjustment, coping and emotional traumatic regulation as predictors of PTG in students with traumatic history. Active coping such as accepting responsibility and subjective well-being were predicting PTG in trauma survivors. On present study, similar results were obtained as accepting responsibility, a domain of emotion-focused coping, was positively predicting the PTG in recovered patients of COVID-19. Mattson et al. (2018) elaborated the role of coping strategies in developing PTG. They studied personality factors and their impact on PTSD and PTG. They found that coping and positive personality traits (openness) positively predicted the development of PTG. Through mediation analysis, they depicted that coping partially mediated the relationship between personality factors and PTG. Their findings are in accordance with the present study as coping strategy (emotion-focused coping) was mediating the relationship between personality traits and PTG in recovered patients of COVID-19. Present study also reported a high relationship of PTG with conscientiousness and moderate relation with agreeableness which is supported by literature also (Galea, 2018). Furthermore, these traits were also found to be predicting PTG in COVID-19 recovered patients. The study didn't report significant relationship of Neuroticism with PTG and coping strategies. However, a negative association between neuroticism personality trait and PTG with problem-focused coping being mediator was observed. This revealed that problem-focused coping facilitates the PTG in individuals who are more neurotic. This is also denoted by research evidence (Prati & Pietrantoni, 2009).

Limitations and Suggestions

1. Following the lockdown due to COVID-19 pandemic, the data was collected online through Google forms so this research is limited in this aspect.
2. The sample size of the study was small; a large sample could have large to yield better results.

3. For better outcomes data should be collected from different geographical boundaries, as this research was on the COVID-19 survivors from Pakistan only. So, future researches can be designed for survivors from different geographical regions.

Future Implications

The PTG is a significant notion to explore. If the factors contributing to the development of PTG are known, it would be convenient to plan and implement interventions for people who suffer life adversities. This proves successful in identifying factors underlying PTG and offers information to mental health professionals for formulating interventions and spread awareness among trauma survivors to adapt these changes to grow positively out of their life crisis. With increasing mental health issues after this deadly pandemic, this study will help mental health professionals to cater psychological needs of the people as well as victim of COVID-19/other adversities to adapt these changes in personality to achieve PTG. In addition, this study is also a contributor in indigenous literature.

Conclusion

The present research established three personality traits i.e., conscientiousness, openness, and agreeableness as correlates of PTG in COVID-19 recovered patients. Similarly, it also established emotion-focused coping strategies (such as positive re-appraisal self-controlling, accepting responsibility distancing & escape-avoidance) as a correlate of PTG in them. Furthermore, this study also established coping strategies (emotion-focused coping and problem-focused coping) as mediators between personality and PTG in COVID-19 recovered patients.

References

Acharya, S. (2020), Stress in the students after lockdown due to outbreak of corona virus (COVID-19). *Social Science Research Network*. http://dx.doi.org/10.2139/ssrn.3627022

Ali, U. A., Iftikhar, N., Amat-Ur-Rasool, H., Ahmed, M., Hafeez, J., & Carter, W. G. (2022). The Psychological Impact of coronavirus Disease 2019 on patients attending a tertiary healthcare facility in Pakistan: A Cross-Sectional study. *Healthcare*, *10*(6), 1049. https://doi.org/10.3390/healthcare10061049

Chi, X., Becker, B., Yu, Q., Willeit, P., Jiao, C., Huang, L., & Veronese, N. (2020). Prevalence and psychosocial correlates of mental health outcomes

among Chinese college students during the coronavirus disease (COVID-19) pandemic. *Frontiers in Psychiatry, 11*.

Favieri, F., Forte, G., Tambelli, R., & Casagrande, M. (2020). The Italians in the time of coronavirus: Psychosocial aspects of unexpected COVID-19 pandemic. *The Lancet*. https://doi.org/10.2139/ssrn.3576804

Folkman, S., & Lazarus, R. S. (1988a). Coping as a mediator of emotion. *Journal of Personality and Social Psychology, 54*(3), 466-475.

Folkman, S., & Lazarus, R. (1988b). *Manual for the ways of coping questionnaire*. Consulting Psychologists Press.

Folkman, S., Lazarus, R. S., Dunkel-Schetter, C., DeLongis, A., & Gruen, R. J. (1986). Dynamics of a stressful encounter: Cognitive appraisal, coping, and encounter outcomes. *Journal of Personality and Social Psychology, 50*(5), 992-1003. https://doi.org/10.1037/0022-3514.50.5.992

Galea, M. (2018). Predicting post-traumatic growth among a sample of Maltese Tertiary students. *Psychology, 9*(11), 2561-2572. https://doi.org/10.4236/psych.2018.911146

Hayes, S. C., Strosahl, K., Wilson, K. G., Bissett, R. T., Pistorello, J., Toarmino, D., & Stewart, S. H. (2004). Measuring experiential avoidance: A preliminary test of a working model. *The Psychological Record, 54*(4), 553-578.

Hinton, P. R., McMurray, I., & Brownlow, C. (2014). *SPSS explained* (2nd ed.). Routledge.

Ifthikar, Z., Fakih, S. S., Johnson, S., & Alex, J. (2021). Post-traumatic stress disorder following COVID-19 pandemic among medical students in Riyadh: A cross-sectional study. *Middle East Current Psychiatry, 28*(1). https://doi.org/10.1186/s43045-021-00127-3

John, O. P., & Srivastava, S. (1999). The Big-Five trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research* (Vol. 2, pp. 102-138). Guilford Press.

Joseph, S., Linley, P. A., Andrews, L., Harris, G., Howle, B., Woodward, C., & Shevlin, M. (2005). Assessing positive and negative changes in the aftermath of adversity: Psychometric evaluation of the changes in outlook questionnaire. *Psychological Assessment, 17*(1), 70-80.

Kalaitzaki, A. E., Tamiolaki, A., & Rovithis, M. (2020). The healthcare professionals amidst COVID-19 pandemic: A perspective of resilience and posttraumatic growth. *Asian Journal of Psychiatry*, (52). https://doi.org/10.1016/j.ajp.2020.102172

Karanci, A. N., Işıklı, S., Aker, A. T., Gül, E. I., Erkan, B. B., Özkol, H., & Güzel, H. Y. (2012). Personality, posttraumatic stress and trauma type: Factors contributing to posttraumatic growth and its domains in a Turkish community sample. *European Journal of Psychotraumatology, 3*(1). https://doi.org/10.3402/ejpt.v3i0.17303

Khan, S., Siddique, R., Shereen, M. A., Ali, A., Li, J., Bai, Q., Bashir, N., & Xue, M. (2020). Correction for Khan et al., "Emergence of a Novel Coronavirus, Severe Acute Respiratory Syndrome Coronavirus 2: Biology and Therapeutic Options." *Journal of Clinical Microbiology*, *58*(8). https://doi.org/10.1128/jcm.01297-20

King, C. R. (2011). *Personality traits and user behavior* [Unpublished doctoral dissertation]. Texas A & M University.

Lai, J., Ma, S., Wang, Y., Cai, Z., Hu, J., Wei, N., & Tan, H. (2020). Factors associated with mental health outcomes among health care workers exposed to coronavirus disease 2019. *JAMA Network Open*, *3*(3). https://doi.org/10.1001/jamanetworkopen.2020.3976

Lazarus, R. S., & Folkman, S. (1984). Stress, appraisal, and coping. Springer.

Linley, P. A., & Joseph, S. (2004). Positive change following trauma and adversity: A review. *Journal of Traumatic Stress*, *17*(1), 11-21. https://doi.org/10.1023/b:jots.0000014671.27856.7e

Mapplebeck, C., Joseph, S., & Sabin-Farrell, R. (2015). An interpretative phenomenological analysis of posttraumatic growth in people with psychosis. *Journal of Loss and Trauma*, *20*(1), 34-45. https://doi.org/10.1080/15325024.2013.821375

Mattson, E., James, L., & Engdahl, B. (2018). Personality factors and their impact on PTSD and post-traumatic growth is mediated by coping style among OIF/OEF veterans. *Military Medicine*, *183*, 475-480.

Nie, X. D., Wang, Q., Wang, M. N., Zhao, S., Liu, L., Zhu, Y. L., & Chen, H. (2020). Anxiety and depression and its correlates in patients with coronavirus disease 2019 in Wuhan. *International Journal of Psychiatry in Clinical Practice*, *25*(2), 109-114. https://doi.org/10.1080/13651501.220020.1791345

Park, C. L., & Folkman, S. (1997). Meaning in the context of stress and coping. *Review of General Psychology*, *1*(2), 115-144. https://doi.org/10.1037/1089-2680.1.2.115

Prati, G., & Pietrantoni, L. (2009). Optimism, social support, and coping strategies as factors contributing to posttraumatic growth: A meta-analysis. *Journal of Loss and Trauma*, *14*(5), 364-388. https://doi.org/10.1080/15325020902724271

Polizzi, C., Lynn, S. J., & Perry, A. (2020). Stress and coping in the time of COVID-19: Pathways to resilience and recovery. *Clinical Neuropsychiatry*, *17*(2), 59-62. https://doi.org/10.36131/cn20200204

Shahid, A. (2020). *Psychosocial predictors of post-traumatic growth in recovered patients of corona* [Unpublished master's thesis]. University of the Punjab, Lahore.

Shakespeare-Finch, J., Gow, K., & Smith, S. (2005). Personality, coping and posttraumatic growth in emergency ambulance personnel. *Traumatology*, *11*(4), 325-334. https://doi.org/10.1177/153476560501100410

Sheikh, A. I. (2004). Posttraumatic growth in the context of heart disease. *Journal of Clinical Psychology in Medical Settings, 11*(4), 265

Tedeschi, R. G., & Calhoun, L. G. (2004). Posttraumatic growth: Conceptual foundations and empirical evidence. *Psychological Inquiry, 15*(1), 1-18. https://www.jstor.org/stable/pdf/20447194

Tedeschi, R. G., & Calhoun, L. G. (1996). The Posttraumatic Growth Inventory: Measuring the positive legacy of trauma. *Journal of Trauma Stress, 9*(3), 455-471. https://doi.org/10.1002/jts.2490090305

Ullah, I. (2023). *Common psychological disorders and post traumatic growth in flood affectees of Balochistan* [Unpublished master's thesis]. University of the Punjab, Lahore.

Veer, I. M., Riepenhausen, A., Zerban, M., Wackerhagen, C., Puhlmann, L., Engen, H., Köber, G., Bögemann, S., Weermeijer, J., Uściłko, A., Mor, N., Marciniak, M. A., Askelund, A. D., Alkamel, A. A., Ayash, S., Barsuola, G., Bartkutė-Norkūnienė, V., Battaglia, S., Bobko, Y., . . . Kalisch, R. (2021). Psycho-social factors associated with mental resilience in the Corona lockdown. *Translational Psychiatry, 11*(1). https://doi.org/10.1038/s41398-020-01150-4

Vitaliano, P. P., Maiuro, R. D., Russo, J., & Becker, J. (1987). Raw versus relative scores in the assessment of coping strategies. *Journal of Behavioral Medicine, 10*(1), 1-18. https://doi.org/10.1007/bf00845124

Wang, C., Pan, R., Wan, X., Tan,Y., Xu, L., Ho, R. C. (2020). Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China. *International Journal of Environmental Research and Public Health, 17*(5), 1729. https://doi.org/10.3390/ijerph17051729

Wang, Y., Wang, H., Wang, J., Wu, J., & Liu, X. (2013). Prevalence and predictors of posttraumatic growth in accidentally injured patients. *Journal of Clinical Psychology in Medical Settings, 20*, 3-12. https://link.springer.com/article/10.1007/s10880-012-9315-2

Wild, N. D., & Paivio, S. C. (2004). Psychological adjustment, coping, and emotion regulation as predictors of posttraumatic growth. *Journal of Aggression Maltreatment and Trauma 8*(4), 97-122. http://dx.doi.org/10.1300/J146v08n04_05

Yang, H., & Ma, J. (2020). How an epidemic outbreak impacts happiness: Factors that worsen (vs. protect) emotional well-being during the coronavirus pandemic. *Psychiatry Research, 289*. https://doi.org/10.1016/j.psychres.2020.113045

Yin, Z., Zhang, W., Jia, X., Wang, X., Hao, J., Yang, Y., Zhang, X., Du, S., & Yue, X. (2022). Psychological distress of frontline healthcare workers in the intensive care unit during the early stage of the covid-19 pandemic: A qualitative study from China. *British Medical Journal, 12*(2). https://doi.org/10.1136/bmjopen-2021-049627

Zhou, X., Hetrick, S., Cuijpers, P., Qin, B., Barth, J., Whittington, C., Cohen, D., Del Giovane, C., Liu, Y., Michael, K. D., Zhang, Y., Weisz, J. R., & Xie, P. (2015). Comparative efficacy and acceptability of psychotherapies for depression in children and adolescents: A systematic review and network meta-analysis. *World Psychiatry/World Psychiatry*, *14*(2), 207-222. https://doi.org/10.1002/wps.20217

Received 25 October 2023

Revision received 29 January 2025