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**Indeed Death is nearer; Moderating Role of Resilience
in the Relationship between Fear of COVID-19 and
Death Anxiety**

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Indeed Death is nearer; Moderating Role of Resilience in the Relationship between Fear of COVID-19 and Death Anxiety

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Abstract

Purpose: To determine the moderating effect of resilience for Fear of COVID-19 in predicting death anxiety among COVID sufferers and general population of Pakistan.

Methodology: A cross-sectional study was conducted on adults ($N=300$), COVID-19 sufferers ($n=150$) and general population ($n=150$) from 24th September 2021 to 10th June 2022. All participants who fulfilled the inclusion/exclusion criteria were included. Data collection was done by purposive sampling technique from different universities, institutions and hospitals of Pakistan. The questionnaires were filled out by participants, for this purpose revised death anxiety (RSAD), Connor-Davidson resilience (CD-RISC) and Fear of COVID-19 (FCV-19S) scales were used to access death anxiety, resilience and Fear of COVID-19. After data collection, data were used for further analysis using SPSS 21. Descriptive measurements were calculated for scales and subscales. Moderation analysis was used to find out moderating effect of resilience for fear of COVID-19 in predicting death anxiety among COVID-19 sufferers and general population.

Findings: The alpha coefficient of all scales and subscales ranged from .64 to .93. Mean, standard deviation and skewness, kurtosis values fulfilled the assumption of normal distribution of data. Moderating effect of resilience for fear of COVID-19 in predicting death anxiety, showed significant interaction effect of resilience and fear of COVID-19 on death anxiety only among COVID-19 sufferers, the interaction effect found to be explain 3.4% variance on death anxiety. The computation of slopes of model graph for these results indicates that $t=1.34$ ($p>.001$) for lower level of resilience, $t=4.81$ ($p<.001$) for middle level and $t=5.67$ ($p<.001$) for higher level. Values shows significance of moderation for middle and higher level of resilience among COVID-sufferers. A significant increase was observed in death anxiety with respect to increase in fear of COVID-19 at moderate and higher level of resilience. But moderating effect of resilience for fear of COVID-19 in predicting death anxiety among general population was non-significant.

Recommendations: Providing training about prevention strategies of COVID-19 through media can help people to deal with it. Various strategies such as acceptance of anxiety and negative emotions, maintaining a healthy lifestyle, social contacts and fostering self-efficacy should be recommended to include in psychological interventions for treatment of death anxiety and effectively cope up with fear of COVID-19. It would be beneficial to include more targeted variables that were not available in this study, such as social benefits, social support, use of health, and welfare services.

Keywords: COVID-19, death anxiety, resilience, fear of COVID-19, SARS

1.0 INTRODUCTION

Coronavirus disease-19 also known as SARS (Severe Acute Respiratory Syndrome) was first detected in the city of Wuhan, China in December, 2019. It had become the most pernicious, devastating and challenging universal health issue in all over the world by mid-May 2020. As reported by World Health Organization (2021), it has affected 224 countries and caused the death of more than two million people globally since January 2021. It caused physical and psychological complications for individuals who are infected with COVID-19.

“Living in worry invites death in a hurry” American Proverb

On February 26, 2020, the first two cases of COVID-19 in Pakistan were reported in two big cities, i.e., Karachi and Islamabad. The virus spread in the whole country due to fast transmission and lack of proactive steps, and at least one confirmed case was reported in each district. In Asia, Pakistan had become the third largest number of confirmed cases, and the second largest number in South Asia, and the world's 12th largest number of confirmed cases. As the coronavirus spreads, people were becoming more concerned about their death. Several studies showed that poor mental health is mostly associated with death anxiety (Menzie & Nimrod, 2019; Menzie et al., 2019). People have the cognitive capacity to ponder and predict their own death, and as a result, people live their lives forever shadowed by the awareness that they will grow, bloom and inevitably, diminish and die' (Yalom, 2008).

Fear is psychological component of the COVID-19. FCV-19 (Fear of COVID-19) is created by the high rate of infection and death in all over the world because it has become the most common psychological response during pandemic of COVID-19 (Wang et al., 2020). The main reason for fear of COVID-19 is the uncertainty about how terrible it is and how people that suffered from COVID and those who don't suffer have fear about it. The stressors that play a vital role in the increase of COVID-19 fear include uncertain prognosis, serious resources deficiencies for treatment. Media usage can also be related to increasing fear of COVID-19. Such a link between increased media usage and increased fear has been found in previous pandemic outbreaks (Bulck & Custers, 2009) and also for the current COVID-19 pandemic (Chao et al., 2020; Hamidein et al., 2020; Jungmann & Witthöft, 2020). Those individuals who had higher health anxiety experienced heightened fear about having contracted the virus and suffered more serious consequences (Asmundson & Taylor, 2020).

Fear has physical reactions that include sweating, elevated heart rate and high dopamine levels that make them highly anxious. In addition to the physical signs of anxiety and fear, individuals also suffered from emotional consequences like being exhausted, distress out of control or a feeling of sudden death. With higher levels of fear, when reacting to COVID-19 individuals may not think fairly and logically. In result, it can cause stressful feeling that cause unusual levels of emotional avoidance and induce death anxiety in response to it. Strong positive associations showed by simultaneous validity study the fear of COVID-19 raises death anxiety depression fear and reduces the satisfaction of life.

During the COVID-19 pandemic, death anxiety should not be ignored. Socrates proposed two explanations for death anxiety (Hardt, 1979). Socrates regarded death as either a dreamless sleep or a journey of soul into another world. He described death as a separation of the soul from the

body at the end of his life. Death anxiety, or fear of mortality, is found in all individuals, but it becomes more intense in critical situations involving death (Menzie & Menzie, 2020). According to existentialist thought, "fear of death" or "death anxiety" is man's most fundamental dilemma (Kandemir, 2020). A study found that many psychological and social aspects, such as a lack of purpose in life and thus a sense of meaninglessness in one's own existence (Blazer, 1973; Bolt, 1978; Durlak, 1972), general anxiety psychopathology (Gilliland & Templer, 1986; Golden & Kupperman, 1978), as well as an external locus of control facilitate death anxiety manifestation (Glass, McGee & Trent, 1981). According to McDonald and Hilgendorf (1986), the incorporation of the negative images of death and mid-life crisis (Ciernia, 1985) can trigger death anxiety.

Fear of death or obsession was COVID-19 strongest prediction. Interestingly, obsessive thoughts as being functionally linked with symptoms of fear (Salkovskis, 1985). In context of the pandemic, people who have stressful thoughts about their own death or that significant others have increased fear of COVID-19. The outcome of this study is consistent with old studies and the relation between death obsessions and coronavirus perceived risk was examined (Yildirim & Güler, 2021). The study indicates that death anxiety is clearly the existential distress which is mostly related to the COVID-19 spread. Hence, death is an unavoidable occurrence that causes a decreased sense of security and increased anxiety (Alkozei et al. 2019). It is mainly related to the intensity of fear that individuals experience in difficult situations such as this COVID-19 pandemic. Although life does not come with map, everyone encounter twists and turns, from everyday challenges to traumatic events with more lasting impact, such as the death of a loved one, a life-altering accident, or a serious illness. Every change has a different impact on people, bringing with it a unique flood of thoughts, strong emotions, and uncertainties.

People, on the other hand, often adapt well to life-changing and stressful situations over time. People have enough ability to control stressful events and reduce negative emotions if they use mindfulness and coping strategies effectively (Damirchi et al., 2020). Being resilient does not mean that a person will not face difficulty or distress, because there are various protective factors which were also considered of great importance. For example strong emotional bond with family members at the time of COVID-19 is considered necessary to provide support and community resources such as peer group support is also considered of great importance.

There are many factors which play an important role increasing the resilience of an individual by changing the person's response to stress and adversity and also protect a person against the possible negative effect of stressors (Fletcher & Sarkar, 2013). Adaptability is one of the key factors in resilience, as it enables a person to bounce back from negative life events, disturbances, and illness; and it allows them to adapt to new circumstances to keep up their psychological health (Ciarrochi et al., 2008). As, fear of COVID-19 and alarming situation of COVID can make a person psychologically stressed which leads them to become psychologically unhealthy and having more death anxiety, so person should be psychologically resilient enough to show less fear and death anxiety. On the other hand personal attributes such as positive concept, self-efficacy, and hopeful about self, are considered as effective skills which allows a person to cope up with fear of COVID-19 and having no negative effect on his or her daily life functioning. Because these are basically the strengths that a person can use in order to give positive response to different challenges like in pandemic of COVID-19. It is human nature that they become desensitized as time passes and

become more resilient in order to grow and achieve a life that is good enough, not a fearful and a disturbing one which leads them to maintain their mental health despite of having fear of COVID-19. So, personal attributes and resilience are one of the essential components of achieving a suitable level of mental health.

Theoretical Perspective

Terror Management Theory (TMT) was developed by social psychologists based upon Ernest Becker's ideas (Solomon et al., 2021). The main focus of theory is that how fear of death influence human's thinking and behavior. This is a dual defense model, well explains how people can protect themselves against their concerns about death (mortality salience) and how they can protect their worthiness, self-esteem and sustainability. As current pandemic has not only thrown people's lives into disarray, but it has also had a significant impact on their mood, sense of well-being, and as a result, their overall mental health. So, If people do not find appropriate coping mechanisms, then anxiety about fear of unknown and what will happen next can lead them to mental discomfort and stress. In regard to this, this theory highlights the importance of using proximal and distal defenses in order to overcome death anxiety (Pyszczynski et al., 1999). When our death related thoughts are in our conscious level, our proximal defenses get activated which helps people to overcome their death related thoughts by denying their vulnerability to things that could kill. In order to ensure their longer life this system also help peoples to engage in healthier behavior and attitudes.

In contrast distal defenses get activated when these thoughts remain no longer in our conscious level but still highly approachable. This system helps people to focus more on maintaining their faith on their cultural worldview and boost their self-esteem. Hence they can use resilience power as a distal and proximal defense which helps them to continue their daily life activities in order to achieve their life goals by providing a clear sense of where they are actually headed in life. This indicates that those who considers their life in a more positive way, they possess higher positive attitude towards their life. They also experience less death anxiety because of having higher level of death acceptance. People should know that this life is temporary and will be erased by death. Hence, they should detach their selves from having deep fear of living a meaning less life. It was seen in previous researches people who have greater resilience power learn to survive and cope with environmental problems, they usually do not get frustrated in stressful situations and recovers quickly. It also helps people to survive better and make them stronger to handle troubles in a better way (Henderson & Milstein, 1996).

2.0 MATERIALS AND METHODS

This descriptive Cross-sectional study was carried out, all while keeping the ethics. Information was gathered from different cities' institutions and hospitals of Pakistan after granted approval for data collection from higher authorities. Study was done on a representative sample of ($N=300$) adults, including ($n=75$) male and ($n=75$) female and also those who were not affected ($n=75$) male and ($n=75$) female. The participants who were presented with the symptoms of COVID-19 but tested negative were excluded from the study. A non-probability purposive sampling technique was used. In university settings, students were approached while in hospital settings, clinicians and patients were approached.

2.2 Measures

2.2.1 Revised Death Anxiety Scale (RSAD)

Revised death anxiety scale measures fear of death (Thorson & Powell, 2007). It is comprised of 25 items, grouped into seven subscales “fear of uncertainty bad missing out on things (2-items)”, “fear of pain associated with death (6-items)”, “concern over disposition of one’s body”, “fear of helplessness and loss of control (4-items)”, “afterlife concerns (6-items)”, “fear of decomposition (3-items)”, “concern over leaving instructions on how things should be done after one’s death (4-items)”. The instrument is valid and reliable ($\alpha=.83$) as reported by (Thorson & Powell, 2007). Higher scores indicate higher death anxiety and lower scores indicate lower death anxiety.

2.2.2 Connor-Davidson Resilience Scale (CD-RISC)

The CD-RISC measures the individual’s ability to cope with stress and adversity (Connor & Davidson, 2003). The scale is a widely used instrument consisting of 25 items, grouped into five domains: "personal competence, high standards, and tenacity" (8 items), “trust in one’s instincts”, “tolerance of negative affect and strengthening effect of stress” (7 items), “positive acceptance of change and secure relationships” (5 items), “control” (3 items), and “spiritual influences” (2 items); (Connor & Davidson, 2003). It has an internal consistency reliability coefficient of $\alpha = 0.89$ of CD-RISC as reported by (Connor, Davidson, & Lee, 2003). Each item of the scale is rated on 5 point likert type scale, ranging from 0 (not true at all) to 4 (true nearly all of the time). The final composite scores for CDRISC range from 0-100 that is obtained by adding up all the items of the scale. A high score on this measure indicates greater reported resilience, while a low score reflects greater vulnerability towards stress.

2.2.3 Fear of COVID-19 Scale (FCV-19S)

Fear of COVID-19 Questionnaire is a 7 item scale designed to measure the extent to which a person fears COVID-19 (Ahorsu et al., 2020). The scale indicates the extent to which individual agree with each item 1 (strongly disagree) to 5 (strongly agree). The measure has good internal consistency = 0.89 as reported by (Ahorsu et al., 2020). Higher scores procured on this scale shows higher level of fear of COVID-19. Scale is valid and indicated good reliability = 0.91 when study was conducted in Pakistani context (Malik et al., 2021).

2.3 Statistical Analysis

The statistical package for social sciences version 21 was used for data entry and analysis. Descriptive measurements were calculated for scales and subscales of the present study. The effect of moderator resilience on the relationship between study variables among COVID sufferers and general population were determined by the use of moderation analysis.

2.4 Ethical approval

The research was fully presented and an informed consent procedure was followed, all while keeping the ethics. Permission was granted by higher authorities of hospitals and institutions and they signed approval after explanation on study procedure for completion of research.

3.0 RESULTS

3.1 The Study Participants

The sample consisted of 300 adults of both COVID sufferers and general population age range above 21 were included. There were 150 male participants and 150 female participants, in which both were included 75 male and 75 female COVID sufferers and also 75 male and 75 female from general population. They were from different socio-economic status, family system and of different education level.

Table 1: Mean, Standard Deviation, Alpha Reliability Coefficient for Fear of COVID-19, Death Anxiety, Resilience, Personal Competence and Tenacity, Trust, Accepting Change Positively Control, and Spiritual Influence (N=300)

Variables	K	A	Mean	SD	Range		Skewness	Kurtosis
					Potential	Actual		
FCV	07	.84	19.83	6.20	7-35	0-33	.001	-.243
RDAS	25	.64	50.94	10.95	0-100	12-94	.352	1.57
CDRSC	25	.93	56.7	19.5	0-100	0-100	-.285	-.232
PCT	08	.79	19.78	6.34	0-32	0-32	-.453	-.056
TISS	07	.85	17.84	6.37	0-28	0-28	-.319	-.447
ACP	05	.73	10.69	2.95	0-20	0-20	.382	.671
CTRL	03	.65	7.13	3.04	0-12	0-12	-.100	-.779
SL	02	.72	5.28	2.30	0-8	0-8	-.474	-.728

Note. FCV= Fear of COVID-19, RSDA= Death Anxiety, CDRSC= Resilience, PCT= Personal Competency and Tenacity, TISS= Trust; ACP= Acceptance, CTRL= Control, SI= Spiritual Influence.

The alpha coefficient of all the scale and subscales ranges from .64 to .93 indicates that they are valid for further analysis. The values of Skewness and Kurtosis is less than 2 fulfilling the assumption of normal distribution.

Table 2: Mean, Standard Deviation, Alpha Reliability Coefficient for Fear of COVID-19, Death Anxiety, Resilience, Personal Competence and Tenacity, Trust, Accepting Change Positively Control, and Spiritual Influence among COVID Sufferers (N=150)

Variables	K	α	Mean	SD	Range		Skewness	Kurtosis
					Potential	Actual		
					FCV	07		
RSDA	25	.62	50.9	1	0-100	12-94	.53	1.0
CDRSC	25	.93	56.7	19	0-100	0-100	-.28	-.23
PCT	08	.79	18.4	6.6	0-40	0-32	-.18	-.26
TISS	07	.85	16.3	6.2	0-35	0-28	-.19	-.47
ACP	05	.73	10.8	2.7	0-25	2-20	.63	.88
CTRL	03	.65	6.5	3.0	0-15	0-12	.11	-.65
SL	02	.72	4.9	2.3	0-10	0-8	-.35	-.82

Note. FCV= Fear of COVID-19, RSDA= Death Anxiety, CDRSC= Resilience, PCT= Personal competency and Tenacity, TISS= Trust; ACP= Acceptance, CTRL= Control, SI= Spiritual Influence

Table 3: Mean, Standard Deviation, Alpha Reliability Coefficient for Fear of COVID-19, Death Anxiety, Resilience, Personal Competence and Tenacity, Trust, Accepting Change Positively Control, and Spiritual Influence among General Population (N=150)

Variables	K	α	Mean	SD	Range		Skewness	Kurtosis
					Potential	Actual		
					FCV	07		
RSDA	25	.62	50.9	11.1	0-100	26-88	.19	2.0
CDRSC	25	.93	65.8	17.9	0-100	0-97	-.60	.38
PCT	08	.79	21.1	5.7	0-40	0-32	-.70	.59
TISS	07	.85	19.3	6.1	0-35	0-28	-.49	-.20
ACP	05	.73	10.5	3.1	0-25	0-20	.25	.46
CTRL	03	.65	7.7	2.9	0-15	0-12	-.32	-.66
SL	02	.72	5.6	2.1	0-10	0-8	-.57	-.64

Note. FCV= Fear of COVID-19, RSDA= Death Anxiety, CDRSC= Resilience, PCT= Personal competency and Tenacity, TISS= Trust; ACP= Acceptance, CTRL= Control, SI= Spiritual Influence

Table 4: Moderating effect of resilience for fear of COVID-19 in predicting Death anxiety among COVID-19 sufferers (N=150)

	B	p	95%CL	
			LL	UL
Constant	66.49***	.000	43.2	89.7
FCV	-.6211	.246	-1.67	.433
RES	-.4306	.009	-.752	-.108
FCV x RS	.0186	.013	.003	.033
R ² .195				
ΔR ² .034				
F 11.8				
ΔF 6.28				

* $p < .05$, ** $p < .01$, *** $p < .000$

Table 4 demonstrates that the main effect of fear of COVID-19 on death anxiety is positive in nature but not significant ($p > .001$). The resilience is found to be significantly negative predictor of death anxiety. The findings also show the significance ($p < .05$) of interaction effect of moderator and predictor (I-e, resilience and fear of COVID-19 on outcome variable that is, death anxiety among COVID-19 sufferers, the interaction effect found to be explain 3.4% variance on death anxiety. The model graph reveal for these results was also obtained which is given as follows:

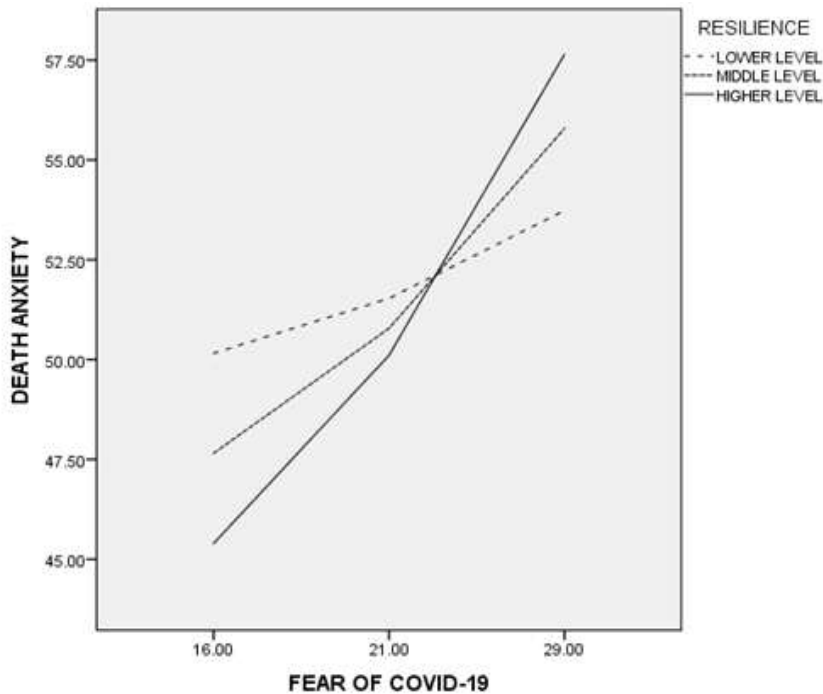


Figure 1: Moderation effect of resilience on fear of COVID-19 in predicting death anxiety among COVID sufferers.

The computation of slopes indicates that $t=1.34$ ($p>.001$) for lower level of resilience, $t=4.81$ ($p<.001$) for middle level and $t=5.67$ ($p<.001$) for higher level. The values show that moderation is significant for middle and higher levels of the resilience among COVID sufferers. The moderation effect is such that a significant increase is observed in death anxiety with respect to increase in fear of COVID-19 at moderate and higher level of resilience.

Table 5: Moderating effect of resilience for fear of COVID-19 in predicting Death anxiety among general population (N=150)

	B	95%CL		P
		LL	UL	
Constant	44.74***	31.47	58.02	.000
FCV	-.0111	-.7952	.7731	.977
RES	-.1096	-.3219	.1027	.309
FCV x RS	.0120	-.0005	.0245	.059
	R ²	.1777		
	ΔR ²	.0204		
	F	10.51		
	ΔF	3.621		

* $p<.05$, ** $p<.01$, *** $p<.000$

Table 5 demonstrates that the main effect of fear of COVID-19 on death anxiety is negative in nature but not significant ($p>.001$). The resilience is found to be negative predictor of death anxiety. The findings show the non-significance ($p>.05$) of interaction effect of moderator and predictor (i-e, resilience and fear of COVID-19 on outcome variable that is, death anxiety among general population), the interaction effect found to be explain 2% variance on death anxiety. The model graph reveal for these results was also obtained which is given as follows:

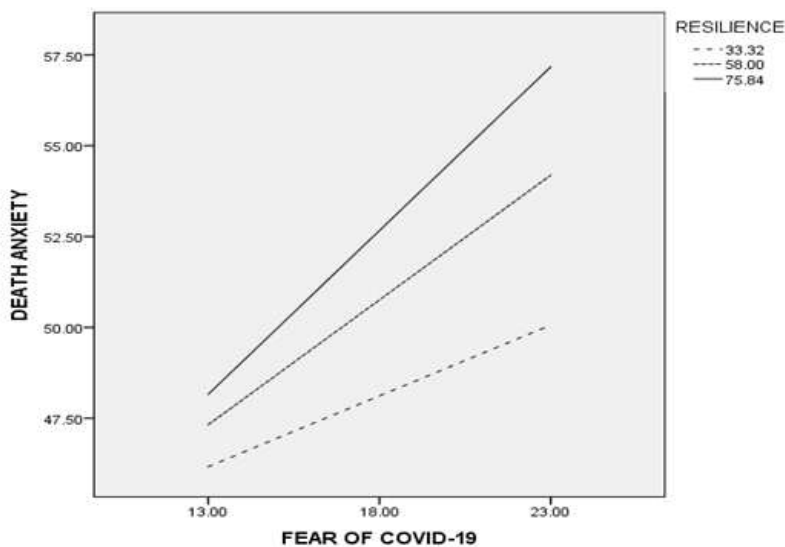


Figure 2: Moderation effect of resilience on fear of COVID-19 in predicting death anxiety among general population.

The computation of slopes indicates that $t=1.81$ ($p>.001$) for lower level of resilience, $t=4.69$ ($p<.001$) for middle level and $t=4.91$ ($p<.001$) for higher level. The values show that moderation is significant for middle and higher levels of the resilience among general population. The moderation effect is such that a significant increase is observed in death anxiety with respect to increase in fear of COVID-19 at moderate and higher level of resilience.

4.0 DISCUSSION, CONCLUSION AND RECOMMENDATION

4.1 Discussion

The result showed that resilience will have a moderating effect on the relationship between fear of COVID-19 and death anxiety. Resilience showed significantly positive moderating effect that a significant increase is observed in death anxiety with respect to increase in fear of COVID-19 at moderate and higher level of resilience. Because data collection was done during the time period when corona virus was spreading very fast, so that infection and mortality rate were high. People were very scared of this disease because of its rapid and invisible transmission and had fear of getting infected with the disease.

However, individuals with higher levels of resilience learn to survive and maintain environmental issues; they are less likely to become irritated in stressful situations, recover faster, and become better to deal with problems (Henderson & Milstein, 1996). But as the COVID-19 pandemic had not only thrown people's lives into uncertainty, and chaos, but it also involved them into an unending age of mortality, in which no one was assured of their own well-being and security. People's mental health problems were getting worse day by day because there was a spike in mortality rates due to corona virus pandemic. Resilient people also experienced an initial short raise in fear distress. They struggled to maintain psychological balance for a short period of time because of chronic situation of pandemic people have fear of getting disease and high level of death anxiety. One study result also provide support that People can experience changes in their resilience levels to cope with traumatic situation (Bonanno et al., 2005).

Usually resilience was though as a protecting factor which can play an important role to decrease in fear of COVID-19 and death anxiety, but the study results resilience moderating effect was positive because in the fight against COVID-19, at that situation resilient individuals also showed resistant to cope with this pandemic because of COVID devastating consequences and detrimental impact on people's mental health. The COVID-19 pandemic had already caused increased anxiety and panic situation in people's lives and due to increase in COVID-19, people showed some natural and normal reactions to challenging and uncertain situation that everyone finds themselves including fear, increased death anxiety and stress. There were various factors e.g. chronic fear of getting disease, people's worry about their own and the health of their loved ones, and uncertainty in COVID-19 were leading cause of development and also exacerbated the death anxiety. All these factors included COVID-19-anxiety, loneliness, PTSD symptoms in COVID sufferers, intolerance of uncertainty, having children, and living in country where the virus was starting to spread became major hindrance factors for resilience. Previous research conducted on Indians and foreigners during COVID-19 lockdown also found no significant differences in resilience and death anxiety (Kirthiga, H.J., 2020). Spiritual believes and religious influences has found greater involvement in the relationship between fear of COVID-19 and death anxiety.

4.2 Conclusion

In conclusion, the present study provided support about hindrance factors of resilience and direct support for a fundamental tenet of terror management theory regarding the death anxiety-buffering role of resilience. The study's results knowledge could be useful in designing psychological interventions to promote and strengthen resilience. The findings also provided useful information in prevention and treatment of various traumatic stressful conditions to promote the individuals' psychological health and overall well-being within the wider societal framework. Also provide evidence for a better understanding about how to cope up with fear of COVID-19 and death anxiety for better psychological adjustment to this devastating pandemic event. A more detailed study with greater scope and more representative sample may help understand future researchers to understand further dynamics of other valuable variables like religious beliefs and spiritual influence relationship with our study variables needed to be explored.

4.3 Recommendations

Providing training about prevention strategies of COVID-19 through media can help people to deal with it. Various strategies such as acceptance of anxiety and negative emotions, maintaining a healthy lifestyle, social contacts and fostering self-efficacy should be recommended to include in psychological interventions for treatment of death anxiety and effectively cope up with fear of COVID-19. It would be beneficial to include more targeted variables that were not available in this study, such as social benefits, social support, use of health, and welfare services.

5.0 LIMITATIONS AND SUGGESTIONS

The research sample was limited to Pakistanis. It cannot be generalized to other cultures. The second limitation of the study was the sample size, although the sample of 300 adults was sufficient but it diminished the generalizability factor of the study. The third limitation is self-report technique of data collection. Self-report methods give the participant's own point of view, which is both a strength and a drawback of the design. Self-reported data is also prone to inaccuracy. Due to the cross-sectional nature of data; it is not possible to determine the true relationship and direction of causality between the study variables. Future researches would need longitudinal designs to determine true causality. A mixed method study would be ideal for better understanding of factors associated to fear.

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