Effect Of Defense Mechanisms and Coping Strategies on Psychological Wellbeing Among University Students During the Covid-19 Pandemic

Naeem Aslam Chughtai[*]
Sumaira Zareef[**]
Amaar Ahmed[***]
Maryam Khan[****]

Abstract

COVID-19 is one of the stressful and anxiety-producing events of the 20th century. Defense mechanisms and mechanisms are psychological processes that guard the individual against anxiety. This research aims to see university students' coping and defense mechanisms during the outbreak of COVID-19. Moreover, it aimed to see the effect of defense mechanisms and coping strategies on psychological well-being among university students during the COVID-19 pandemic. A sample of 300 students was taken from different universities in Pakistan. This was a cross-sectional study. Results showed that coping strategies like self-distraction, active coping, emotional support, venting, positive reframing, and religious coping were positively associated with psychological well-being while, substance use coping, behavior disengagement, self-blame coping, and venting were negatively associated with psychological wellbeing. The defense mechanism of humor, suppression, pseudo-altruism, idealization, passive aggression, displacement, splitting, and rationalization was positively related to psychological well-being, while devolution was negatively related to psychological well-being. The comparison of gender differences in defense mechanisms showed that males scored high on humor,

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[*]   Assistant Professor, National Institute of Psychology, QAU, Islamabad naeemaslam@nip.edu.pk

[**]   Mphil Scholar, National Institute of Psychology, QAU, Islamabad samairazareef091@gmail.com

[***]   Lecturer, National University of Modern Language, Islamabad ammarphd19@nip.edu.pk

[****] Ph.D. Scholar, SWPS University, Wroclaw, Poland maryamaurangzeb@gmail.com

and idealization, while female students scored high in the defense of anticipation, undoing, denial, dissociation, and somatization. The hierarchical multiple regression showed that the defense mechanisms; acting out, devaluation, and undoing, were the significant negative predictor of well-being, while displacement, rationalization, humor, suppression, and Idealization were the positive predictors of well-being. Moreover, coping strategies of denial, active coping, positive reframing, and humor were the significant positive predictors of well-being while self-blame coping was the negative predictor of psychological well-being.

Keywords: COVID-19, defense mechanisms, anxiety, coping strategies, university students.

Introduction

Defense mechanisms and coping styles are involuntary processes based on psychological mechanisms that safeguard the individual from the origination of anxiety by creating awareness related to external or internal stressors or vulnerabilities (American Psychiatric Association, 1994). Therefore, individuals are generally unaware of these progressions as they function. Defense mechanisms tend to mediate a person's reaction to emotional conflicts along with internal and external stressors. The level of defensive functioning ascertains an optimal adjustment in the management of stressors among higher adaptive levels. These defenses generally maximize satisfaction and permit the conscious responsiveness of ideas, and feelings along with their consequences (Sakamoto, 1981). They also provide a possible balance among contradictory motives. The need for defense mechanisms emerges when the animalistic demands of id create a dispute with the idealistic superego of a person. To sustain mental homeostasis to shield the conscious mind from the provisions of such conflicts, the ego utilizes various defense mechanisms; examples of defenses at this level are suppression, sublimation, self-observation, altruism, self-assertion, humor, affiliation, and anticipation.

In literature, defense mechanisms are explained as a sequence of comparatively involuntary reactions to internal or external factors comprising behaviors and thoughts (Cramer, 2000). Characteristic defenses are usually classified hierarchically according to the levels. Mature defenses (e.g., humor, altruism, suppression, anticipation, sublimation) are noticeable among those with higher levels of success related to work as well as relationships and therefore tend to have lower levels of psychopathology; neurotic or intermediate defenses (e.g., reaction formation, repression, displacement) are less flexible but exist across all levels of life functioning; while immature defenses (e.g., denial, acting out, passive aggression, projection) are connected with difficulty in expressing, regulating and understanding emotional occurrences (Vaillant et al., 1986). Coping is continuously altering behavioral and cognitive incongruities that are initiated by an individual to counter the demands which are predominantly demanding and are perhaps beyond individual resources and/or capacities. Coping encompasses three main components: the basis of the stress (stressor or the occasion); cognitive appraisal (which

comprises the assessment of the event as being fearsome, positive or irrelevant and concurrent valuation of accessible coping resources present in the environment as well as the individual) and coping mechanisms.

In this context, researchers suggested a hierarchy of seven levels of defense mechanisms (Perry, 1990) and four strategies of coping (Carver et al., 1989). Coping has been categorized into problem-focused or emotion-focused coping, this concept is among the most sought-after and employed among studies considering coping. Certain behaviors, like planned problem-solving, can be categorized as problem-focused coping and assigned to actions that are aimed to diminish the stress factor or lessen its impact. While, behaviors such as positive reappraisal, escape/avoidance, accepting responsibility, self-controlling, and distancing can be characterized as emotion-focused coping that focuses on actions that are intended to minimize, reduce or prevent the emotional suffering produced due to the stressful state of affairs. Problem-focused coping might be aimed at the environment (procedures, barriers, or modifying environmental pressures) or at the self - finding alternative channels of gratification, reducing ego involvement, or changing goals - (Endler & Parker, 1990).

Most of the time it's not just life stress but it can also involve a person's eccentric response to life stress that can become a source of psychopathology (Vaillant, 1994). It is demonstrated that frequent usage of problem-focused coping but not avoidant coping predicts psychological well-being (Cai et al., 2020). Some studies have recently found that psychological defense mechanisms are also associated with television, alcohol, and junk food items (Potterat, 2013). Knowledge about the functioning of defense mechanisms helps understand psychotherapy. For instance, projection is reported as the least successful defense (Peglar & Borgen, 1984). However, the use of project has the pragmatic and cathartic value. A study demonstrated patient who shows incomplete projection has more guilt feelings (Sakamoto, 1981). Further, studies demonstrated that different defenses emerge at different developmental periods and these are part of normal development with slight gender differences (Cramer, 2015). The significance of defense mechanisms related to well-being has been fundamentally studied. However, only a few studies have considered the normally accepted hierarchical

organization of defenses and employed reliable and valid tools for the assessment. In the present article, it is investigated how defense mechanisms are associated with various psychological aspects of well-being. Based on the hierarchical organization of defenses, higher emotional and physical functioning is associated with high-adaptive defenses, while worse physical and emotional health, passive decisional preferences, psychosomatic symptoms, and repression are associated with mental inhibition defenses. Based on prior literature disavowal defenses tend to promote higher emotional functioning and lower anxiety by denying death-related anxiety. On the other hand defenses like, image distortion defenses, comprise both major and minor image-distorting defenses, as demonstrated in an experimental study based on cancer patients, active defenses were predicted to create sleep disturbances and therefore lowered the probability of survival (Di Giuseppe et al., 2018).

The devastating outbreak of coronavirus offers an exclusive perspective into the human psyche and the way in which individuals decide to react or make up their understanding regarding the prevailing pandemic psychology in the form of empathy, resilience, self-sacrifice, and individuals turning to faith (Alyanak, 2020; Koenig, 2020). The vulnerability involved in the entire process and the realization of the helplessness to save one's self and loved ones blatantly appear during such times (Gilbert et al., 2020). Furthermore, prior studies related to evolutionary psychology tell us that survival instincts are unavoidable and therefore emerge during crisis-like situations (Lee, 2020). A study by Wang et al. (2020), found that after the coronavirus outbreak in China, there was an increase in the levels of depression, anxiety, and stress among people. Similarly, previous studies performed on the psychological impact of outbreaks, such as SARS and Ebola, intricate the same view that traumatic reactions, panic, and stress are usual responses to uncertainty (Wang et al., 2020). While the notion of a defense mechanism has been rejected for a few years by academic psychology, however, recent empirical studies have revived interest in defenses. Cognitive psychologists have now established the existence of unconscious psychological progressions, a necessary element for defenses. Social, personality,, and developmental

psychologists have all found indications for defense mechanisms that expound on psychological functioning (Cramer, 2000). Therefore, early detection of maladaptive defensive functioning may be helpful.

The present investigation intended to identify and present the role of defense mechanisms and coping strategies in influencing the well-being of individuals in the wake of natural calamities like COVID-19. The situation still endangers humanity and is not completely eradicated. Also, it can model similar conditions when one needs to understand the desired aspects of coping strategies and the role of defense mechanisms under such traumatic exposures. Further, gender-based differences among such preferences would not only refresh the literature but also, highlights the current trends enabling individuals to get adapted to the unprecedented challenges of the time. The study covers the negative as well as positive points of the subject thus, bringing up an evidence-based approach to managing personal responses to pandemic and related situations.

Objective of the Study
 the relationship between coping strategies, defense mechanisms, and psychological well-being among young adults.

Research Methodology

To see young adults' coping strategies and defense mechanisms during lockdown situations. Moreover, it aimed to see the relationship between coping strategies, defense mechanisms, and psychological well-being among young adults.

Sample of the Study

The sample included 300 participants with 128 males and 172 females. The age ranged from 20 to 30 years (M=22.45, SD=1.89). The minimum education was 14 years and the maximum was 18 years. Almost 94% were single and 6 % were married. It was an online survey and data was collected through Google Forms using a purposive sampling technique. Data were collected from the different universities of Pakistan. The demographic variables included were age, gender, education, designation, monthly income, and marital status. Almost 22.7% of the sample was with education

BA/BSC, 63% have a master's degree while almost 13.7% are with M.Phil., and 7% are with Ph.D. Almost 89.3% of the sample comprised full-time students.

Measures

Defense Style Questionnaire (DSQ). The defense-style questionnaire was developed by (Andrews et al., 1989). It has 40 items that measure 20 defense mechanisms (i.e., four defenses related to mature factor; four related to neurotic factor, and 12 related to immature factor). Each item is rated on the 9 points Likert scale ranging from 1(strongly disagree) to 9 (strongly agree). DSQ is a vastly used scale for measuring defense mechanisms.

Brief Cope Inventory (BCI). The brief cope was originally developed by (Carver et al., 1989) and translated into Urdu (Akhtar, 2005). It consists of 28 items and 14 subscales. Each item is rated on the 4 points Likert type scale ranging from 1 (I do not do this at all) to 4 (I do this a lot). Each subscale has two items. A high score on each subscale indicates the more use of that coping style while the lowest score on the subscale indicates the rare/less use of that coping style.

Warwick Edinburg Mental Wellbeing Scale. (Tennant et al..2007) devised the Warwick Edinburg Mental Well-Being Scale. It consists of 14 items and it is a 5-point Likert-type scale with response options ranging from 1 (strongly agree) to 5 (strongly disagree). The high score on the scale shows that individuals have good mental well-being, while the low scale indicates poor psychological well-being. The alpha reliability of the well-being scale is .89 (Tennant et al., 2007).

Procedure of the Study

Data collection was done online by employing Google Forms. Written instructions were given to the respondents to fill out the questionnaires. Participants were assured about the confidentiality of the data. The participants in the study were informed about the entire process verbally. It was also explicitly conveyed to participants that the information provided by them would be used only for research purposes. Data was analyzed by using IBM SPSS 21. Alpha reliability, descriptive analysis, bivariate correlation, independent sample t-test, and hierarchal regression analysis were done for hypotheses testing.

Results and Analysis

The statistical analysis consists of descriptive and inferential statistics. Descriptive statistics include mean, standard deviation, skewness, range, and Cronbach's α. whereas, in inferential statistics, Pearson product-moment correlation, the hierarchical multiple regression, and the independent sample *t*-test were computed.

Table 1
Alpha Reliabilities and Other Psychometric Properties Of Scales Used In The Study (N=300)

Scales	items	*M*	*SD*	α	Potential	Actual	Skewness
Mature factor	8	46.99	8.47	.46	9-72	14-72	-.33
Neurotic factor	8	47.65	8.80	.50	9-72	14-70	-.59
Immature factor	24	132.32	21.67	.74	24-216	32-212	-.30
Psy. Wellbeing	14	51.62	7.72	.82	14-70	14-70	.13
Brief Cope	28	76.13	10.11	.77	28-112	38-112	-.12

Note. M = mean; *SD* = standard deviation; Psy. Wellbeing = Psychological Wellbeing

Table 1 shows the alpha reliability of the scales. The alpha reliability of the scales is satisfactory. The values of skewness are in an acceptable range. The alpha coefficients value Psychological Well-being Scale is .82. Brief Cope inventory is .76. Further Cronbach alpha for the immature factor is .74, the Neurotic factor is .50, and for mature factor is.46. The minimum and maximum scores are also given in the actual range. Skewness value indicates how much the distribution of score for a variable deviates from the normal distribution. The skewness values are in an acceptable range.

Table 2

Relationship Between the Coping Strategies and Psychological Wellbeing Among the University Students (*N*=300)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Self-distraction	-	-.17**	-.14**	.01	-.14**	.40**	.37*	.35*	24*	-.17*	.38*	.15*	.39*	.34*	26*
2 Substance use			.30**	.16**	32**	-.23**	-.08	-.24*	-.20*	.38*	-.25*	.18**	-.31*	-.44*	-.23*
3 Beh. Disengagement				.29**	.68**	-.20*	,195**	,341**	-.08	.58*	-.21*	.120*	-.18*	-.29*	-.18*
4 Self-blame					30**	-.04	.021	.06	.08	.37*	-.01	.52**	.04	.01	-.11*
5 Denial						-.09	-.20**	-.32**	-.04	.64**	-.23**	.06	-.19**	-.31**	-.09
6 Active coping							.38**	.48**	.52*	-.16*	.51*	.09	.45*	.41*	.42*
7 Emotional support								.54**	.59*	-.17**	.39*	.12	.38*	.34*	.29*
8 Planning									.49*	-.25**	.58*	.16**	.60*	..57*	.41*
9 Use of support										-.14*	.35*	.06	.53*	.39*	.31*

10	Venting	-.22**	-.08	-.18**	-.30**	-.17**
11	Positive refra ming		.11	.47**	.56**	.45**
12	Humor			.09	.03	.08
13	Acceptance				.57**	.34*
14	Religion					.39**
15	Psy. Wellbeing					-

Note. Psy. Wellbeing = Psychological wellbeing; Beh. Disengagement= Behavior disengagement

*p<.05, **p <.001

Table 2 shows university students' coping skills and psychological well-being. Coping strategies like self-distraction, active coping, emotional support, venting, positive reframing, and religious coping were positively associated with psychological well-being while, substance use coping, behavior disengagement, self-blame coping, and venting were negatively associated with psychological well-being. Active coping (*r*=.42), planning (*r*=.41), positive reframing (*r*=.45), and religious coping (*r*= 39) were strongly and significantly related to psychological well-being. Substance use, behavior disengagement, self-blame coping, and venting, were negatively associated with psychological wellbeing. It also means that positive coping is significantly positively related to psychological wellbeing while active avoidant coping is negatively associated with psychological wellbeing.

Table 3

Relationship between the Defense Mechanisms and Wellbeing Among University Students (N=300)

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	Sublimation	-	.35**	.07	.10	.15**	,42**	.49**	.13*	.20**	.28**	,24**	.20**	.05	.30**	-.12*	.37**	-.05	,37**	.16**	.20**	.11
2	Humor			.07	.17**	-.01	.35**	.44**	.31**	.25**	.29**	.30**	.26**	.10	.32**	-.12*	.36**	-,13*	.49**	.30**	.18**	.28**
3	Anticipation				.27**	.39**	.08	-.05	.37**	.39**	.10	.08	.42**	.26**	-.01	.41**	.08	.45**	.15*	.11	.36**	-.01
4	Suppression					.14*	.21**	.08	.23**	.22**	,17**	.06	,14*	,14*	.03	.22*	.22*	.21*	.22**	.30**	.21**	.29**
5	Undoing						.12*	.08	,32**	.27**	.24**	.10	.29**	.18**	.15**	.22*	.08	.32*	.26**	.09	.30**	-.06
6	Pseudo altruism							.46**	.15*	.11	.37**	.35**	.17**	.04	.25**	-.20*	.54*	-.21*	.32**	.35**	.14*	.21**
7	Idealization								.26**	.16**	.49**	.45**	.09	-.08	.36**	-.31*	.48*	-.27*	.44**	.25**	,14*	.30**
8	Reaction formation									.31**	.26**	.20**	.22**	.16**	.06	.15*	.17*	.19*	.39**	.17**	,40**	.09
9	Projection										.13*	.14*	38*	.16**	.09	.25*	.20*	.18*	.20**	.16**	.30**	.07
10	Passive aggression											.39**	.12*	-.05	.22**	-.23*	.45*	-.19*	.45**	.46**	.32**	.22**

11	Acting out	.13*	.20**	.36**	-.17**	.35**	-.15**	.41**	.25**	.21**	-.03
12	Isolation		.25**	.19**	.24*	.20*	.23*	.23**	.05	.13*	-.01
13	Devolution			.15**	37*	-.07	.41**	.17**	.01	.25**	-.15*
14	Autistic fantasy				-.19**	.25**	-.10	.34**	.28**	.08	-.01
15	Denial					-.25**	,71**	-.05	.01	.16**	-.01
16	Displacement						-.30**	.38**	.39**	.16**	.32**
17	Dissociation							-.04	-.03	.22**	-.03

Table 3 shows the relationship between the defense mechanism and well-being among university students. Humor, suppression, pseudo-altruism, Idealization, passive aggression, displacement, splitting, and rationalization are positively related to psychological well-being, while devolution is negatively related to psychological well-being. Humor and suppression are from mature defense mechanisms. Pseudo-altruism and idealization are from neurotic factors. Passive aggression, displacement, splitting, and rationalization, are immature factors that are positively related to psychological well-being.

Table 4

Gender Differences in the Use of Defense Mechanism among University Students (*N*=300)

Variables	Male (*n*=128)		Female (*n*=172)		*T*	*p*	*LL*	*UL*	*Cohen's d*
	M	*SD*	*M*	*SD*					
Sublimation	11.62	3.45	11.78	3.41	0.40	0.68	-.95	.62	0.04
Humor	13.38	3.09	12.52	3.40	2.25	0.02	.11	1.61	.26
Anticipation	10.02	3.45	11.52	3.51	3.69	0.01	-2.30	-.70	0.43
Suppression	11.34	3.53	11.65	3.41	0.76	0.44	-1.10	.49	0.08
Undoing	9.61	3.27	10.92	3.73	3.17	0.01	-2.12	-.50	0.37
Pseudo-altruism	13.29	3.25	13.30	2.98	0.02	0.98	-.72	.70	0.00
Idealization	12.91	3.43	12.16	3.03	2.00	0.04	.01	1.49	0.23
reaction formation	11.35	3.66	11.64	3.60	0.68	0.49	-1.12	.55	0.07
Projection	10.58	3.17	11.02	3.51	1.11	0.26	-1.21	.33	0.13
Passive aggression	12.51	3.70	12.97	3.22	1.14	0.25	-1.25	.33	0.13
Acting out	12.31	3.57	12.36	3.78	0.11	0.91	-.90	.80	0.01

Isolation	10.26	3.20	10.61	3.64	0.87	0.48	-1.15	.44	0.10
Devaluation	8.07	3.33	8.77	3.40	1.78	0.07	-1.48	.07	0.20
Autistic fantasy	12.09	4.03	11.71	4.07	0.80	.43	-.55	1.31	0.09
Denial	6.55	4.55	8.47	4.49	3.63	0.01	-2.95	-.87	0.42
Displacement	13.72	3.69	13.18	3.31	1.33	0.19	-.26	1.34	0.15
Dissociation	6.55	4.97	9.05	4.83	4.38	0.01	-3.62	-1.38	0.51
Splitting	11.48	3.75	11.20	3.88	0.62	0.53	-.60	1.16	0.07
Rationalization	14.19	2.65	13.91	3.04	0.83	0.40	-.38	.94	0.09
Somatization	10.53	3.48	11.69	3.66	2.76	0.01	-1.98	-.33	0.32

Note. *M*= mean *SD*= standard deviation

Results in Table 4, shows the utilization of defense mechanism across gender. The comparison of the difference in defenses shows that males score higher in the defense mechanism of humor, and idealization, While, women score high in the defense of anticipation, undoing, denial, dissociation, and somatization.

Table 5. Gender Differences on Coping Strategies among University Students (*N*=300)

Variables	Male (*n*= 128)		Female (*n*= 172)						Cohens
	M	*SD*	*M*	*SD*	*t*	*p*	*LL*	*UL*	*'d*
Self-distraction	6.53	1.15	6.24	1.49	1.82	0.07	-.02	.60	0.21
Substance use	2.47	1.23	2.95	1.74	2.69	.001	-.84	-.13	0.31
Behavioral disengagement	3.38	1.69	4.34	2.02	4.33	.001	-1.39	-.52	0.51
Self-blame	4.97	1.95	5.40	1.90	1.92	0.05	-.87	.01	0.22
Denial	3.42	1.77	4.50	2.02	4.81	0.05	-1.52	-.64	0.56
Active coping	6.88	1.46	6.64	1.31	1.51	0.13	-.07	.56	0.17
Emotional support	6.09	1.58	5.73	1.62	1.96	0.05	.00	.74	0.22
Planning	6.85	1.38	6.50	1.49	2.08	0.04	.02	.68	0.24
Use of support	6.43	1.54	6.22	1.65	1.11	0.26	-.16	.58	0.13
Venting	3.86	1.82	4.59	1.85	3.4	.001	-1.15	-.31	0.39
Positive reframing	6.84	1.21	6.40	1.49	2.7	0.01	.12	.75	0.32
Humor	4.61	2.09	4.87	1.85	1.15	0.25	-.71	.19	0.13
Acceptance	6.52	1.42	6.52	1.42	0.01	0.99	-.33	.32	0.01
Religion	7.27	1.26	6.72	1.53	3.32	.001	.22	.88	0.39

 To see the gender difference in coping style, an independent sample *t*-test was carried out. Results demonstrated in Table 5, indicate significant gender differences in coping style. Males score high in self-distraction coping, taking emotional support, planning coping, positive reframing, and religious coping, while females significantly score high in substance use coping, behavioral disengagement, self-blame coping, denial coping, and venting coping.

Table 6

Hierarchal Multiple Regression to See the Effect of Defense Mechanisms on Psychological Wellbeing

| | | Self-Reported Psychological Wellbeing | | |
| | | | Model 3 | |
	Model 1B	Model 2B	Model 3B	Bound
(Constant)	39.93**	37.29**	35.54**	[34.51, 45.35]
Projection	-0.01	-0.02	-0.06	[-0.28, 0.27]
Passive aggression	0.13	0.06	0.09	[-0.19, 0.44]
Acting out	-0.36***	-0.49***	-0.45***	[-0.62, -0.09]
Isolation	-0.15	-0.10	-0.10	[-0.42, 0.12]
Devaluation	-0.32*	-0.26	-0.31*	[-0.60, -0.03]
Autistic fantasy	-0.14	-0.20	-0.20	[-0.37, 0.09]
Denial	0.07	0.13	0.13	[-0.20, 0.33]
Displacement	0.67**	0.52**	0.49**	[0.37, 0.96]
Dissociation	0.13	0.20	0.22	[-0.11, 0.38]
Splitting	0.22	0.17	0.00	[-0.04, 0.49]
Rationalization	0.49**	0.50**	0.31	[0.15, 0.83]
Somatization	0.05	0.12	0.15	[-0.21, 0.31]
Undoing		-0.31*	-0.18	[31.73, 42.84]
Pseudo altruism		0.07	0.04	[-0.29, 0.25]

Idealization		0.69**	0.71**	[-0.26, 0.38]
Reaction formation		-0.05	-0.14	[-0.75, -0.23]
Sublimation			-0.26	[-0.36, 0.17]
Humor			0.48**	[-0.54, 0.01]
Anticipation			-0.18	[-0.43, 0.03]
Suppression			0.41**	[-0.13, 0.39]
R^2	.20	.27	.33	
F	6.17***	6.60***	6.90**	
ΔR^2		.07	.06	
ΔF		6.47**	6.19**	

Note. CI= confidence interval. *$p<.05$, **$p <.001$

In Table 6, a three-stage hierarchical multiple regression was conducted with psychological well-being as the dependent variable. The immature defense mechanisms were entered in the first regression model to see and control their effect. From the immature factor, acting out and devaluation were the significant negative predictor of well-being, while, displacement and rationalization were the positive predictors of well-being. The hierarchical multiple regression revealed that immature defense significantly contributed to the regression model, and accounted for a 20 % variance in psychological well-being. Adding the neurotic defense in the regression model 2, Undoing was the significant negative predictor of well-being while Idealization was the significant positive predictor of well-being. However, from the immature factor, acting out, displacement, and rationalization remain significant while devaluation became non-significant. The hierarchical multiple regression revealed that model 2 significantly contribute to the regression model, and additionally accounted for a .07 % variance in psychological well-being. Overall, all the predictors of Models 1 and 2 explained 27% of the variance. In the final model to see the effect of mature defense mechanisms on psychological well-being, four mature defenses (sublimation, humor, anticipation, and suppression) were entered in the regression model and the results show that the humor and suppression were the significant positive predictors of wellbeing. From immature defenses, acting out and

displacement remained significant in model 3, and from neurotic defenses, idealization remained significant in model 3. Overall, this model explained an additional .06 % additional variance. Together the independent variables accounted for 33 % of the variance in psychological well-being.

Table 7

Hierarchal Multiple Regression to See the Role of Coping in Psychological Wellbeing after Controlling the Effect of Defense Mechanisms

| | | Self-reported Psychological Wellbeing | | |
| | | | Model 3 | |
	B	2B	B	95 % CL
(Constant)	45.95**	35.65**	20.42**	[34.82, 57.09]
Age	0.36	0.31	0.30	[-0.20, 0.92]
Gender	-1.24	-1.41	0.15	[-3.02, 0.54]
education	0.75	0.69	1.15	[-0.86, 2.36]
Work status	-2.27	-2.12	-0.93	[-5.45, 0.91]
monthly income	-0.04	0.03	0.31	[-1.18, 1.09]
marital status	0.54	0.85	-0.33	[-3.47, 4.56]
Mature defense		0.25**	.12	[.10, .39]
Neurotic defense		0.09	-.10	[-.04, 22]
Immature defense		-0.03	.00	[-.09, .02]
Self-distraction			0.01	[-.65, 68]
Substance use			-0.25	[-.85, .36]
Behavior disengagement			-0.51	[-1.08, .06]
Self-blame			-0.78*	[-1.30, -.26]
Denial			0.72*	[.11, 1.32]
Active coping			0.88*	[.14, 1.62]
Emotional support			0.26	[-.40, .92]

Planning			0.57	[-.25, 1.40]
Use support			0.19	[-.52, .89]
Venting			-0.12	[-.72, .48]
Positive reframing			0.91*	[.15, 1.67]
Humor			0.51*	[.03, .99]
acceptance			-0.01	[-.79, .77]
Religion			0.73	[-.03, 1.50
R^2	.03	.10	.35	
F	13.68	37.70***	65.85**	
ΔR^2		.08	.25	
ΔF		8.37**	7.62**	

Note. CI= confidence interval. *p<.05, **p <.001

In Table 7, a three-stage hierarchical multiple regression was conducted with psychological well-being as the dependent variable. Demographic variables (i.e., age, gender, education, work status, monthly family income, marital status) were entered at stage one of the regression to control for their effect. Defence Mechanisms (Mature, neurotic, and immature) were entered at stage two to control their effects. At stage three, the coping styles were entered to see their effect on psychological well-being.

The hierarchical multiple regression revealed that at stage one; any demographic variables do not significantly contribute to the regression model and accounted for .03 % of the variation in psychological well-being. Adding the defense mechanisms in the regression model, only mature defense significantly contributed to the psychological well-being (B=.35) and the overall model explained an additional 10% of the variation in psychological well-being. In the final model to see the effect of coping on psychological well-being, coping strategies were entered in the regression model and the results show that denial, active coping, positive reframing, and humor coping were the significant positive predictors of well-being while the self-blame was the negative predictor of psychological wellbeing and overall, this model explained additional 25 % of the variance. Overall independent variables accounted for 35% of the variance in psychological well-being.

Conclusion

COVID-19 has generated a lot of anxiety and stress in this unpredictable situation. Defense mechanisms and coping are helpful to combat stressful situations and enhance well-being. Mature defenses help in reducing stress and enhancing well-being. Adaptive coping skills or problem-solving problem skills facilitate adjustment and well-being. It is helpful for mental health professionals to understand students coping strategies and defense mechanisms to better support students who are experiencing difficulties.

Discussion

The worldwide coronavirus (COVID-19) has remarkable effects on people across the globe. There is hardly any person who is untouched by this pandemic. It has produced massive anxiety among the masses. COVID-19 has had profound effects on student's life in terms of their physical health, traveling constraints, academic challenges, and psychosocial well-being (Fraenkel & Cho 2020). The university characterizes a change in the lives of students and is itself considered a stress factor (Herrero et al., 2019). Psychological well- sms has pragmatic and cathartic value. Most of the defense mechanisms shield individuals from inner anxiety and foster psycholobeing is vital to public health (Cheung et al., 2020). People typically use defense mechanisms and coping skills to combat anxiety (Freud, 1913). According to the Freudian notion, the use of defense mechanigical health.

This study aimed to see the relationship between defense mechanisms, coping, and psychological well-being among university students during COVID-19. For this data of 300 students were taken. Defense Style Questionnaire (Andrews et al., 1989), Brief Cope Inventory (Carver et al. 1989), and Mental Wellbeing Scale (Tennant et al., 2007) were used for data collection. Data was collected through an online survey. Data were analyzed by using SPSS 22. Prior to the inferential analysis, a preliminary descriptive analysis was done. Skewness values indicate how much the distribution of score for a variable deviates from the normal distribution. The skewness values are in an acceptable range and demonstrated that the data were normally distributed (see Table 1).

The alpha reliability of the scales is satisfactory. The alpha coefficients value Psychological Wellbeing Scale is .82. Brief Cope inventory is .76. However, the alpha values of the subscales of DSQ are somewhat low. For instance, Cronbach alpha for the Immature factor is .74, the Neurotic factor .50, and the Mature factor is.46. The alpha reliability of the mature and neurotic factors is low. This may be because of the small number of items and cultural effects. In the original scale, the alpha reliability of these two scales (mature factor, α=.68) and neurotic factor (α=.72) is comparatively low as compared to the immature factor (α=.89). Item number 32 that item measures the defense mechanism of undoing, "after I fight for my rights I tend to apologize for my assertiveness", this item lowers the reliability, if this item is deleted the reliability could be. 59. It may be because of cultural differences. In Pakistani culture, being assertive sometimes considers a negative attribute. However, future research should have a look at it.

To see the relationship between coping skills and well-being, results showed that coping strategies like self-distraction, emotional support, active coping, positive reframing, venting, and religious coping were positively associated with psychological well-being while substance use coping, behavior disengagement, self-blame coping, and venting was negatively associated with psychological wellbeing. Active coping (r=.42), planning (r=.41), positive reframing (r=.45), and religious coping (r= 39) were strongly and significantly related to psychological well-being. Substance use, behavior disengagement, self-blame coping, and venting, were negatively associated with psychological well-being (see Table 2). Results are in line with past literature. For instance, in a study with US public university 508 students, to see what type of coping strategies students are using, The findings showed that most frequently used healthy strategies were self-distraction, social activity, deep breathing, and relaxation, while the unhealthy coping strategies were spending time alone and eating. Those students who were using more unhealthy coping skills were more likely to depict clinical levels of anxiety and depression symptoms (Stallman et al., 2020).

To see the relationship between the defense mechanism and well-being among university students, findings showed that humor, suppression, pseudo-altruism, idealization, passive aggression,

displacement, splitting, rationalization is positively related to psychological well-being, while and devolution is negatively related to psychological well-being. Humor and suppression are from mature defense mechanisms. Pseudo-altruism and idealization are from the neurotic factor. Passive aggression, displacement, splitting, and rationalization, are immature factors that are positively related to psychological well-being (see Table 3). The findings are in line with past research. For instance, Mousavi et al. (2017) showed that mature defense mechanisms are positively associated with psychological wellbeing and defense mechanisms can predict physical and mental health. Psychological well-being is defined as happiness, satisfaction, and personal growth and represents one of the most important aspects of psychological function. Every defense mechanism has its importance. It serves in one way or another. For instance, in a study, Sakamoto (1981) demonstrated that those patients who could not project their inner anxiety completely into the external world, have more guilty feelings. In a study with university students, (Freire et al. 2016) concluded that those students who use coping skills like planning, positive reappraisal, and support-seeking, also demonstrate high psychological well-being. These findings are aligned with studies that suggest a positive relationship between adaptive coping skills and well-being (Mayordomo et al., 2015).

The utilization of defense mechanisms across gender shows that males score higher in humor (mature factor) and idealization (neurotic factor) while females score higher in the defense of denial, somatization, dissociation (immature factor), and anticipation (mature factor). For instance, in a study, findings showed that male students revealed more use of humor as a coping strategy, while female students demonstrated more use of emotional support and instrumental support as coping strategies (McArthur et al. 2019). Moreover, gender difference across the coping style shows that males score high on positive coping, and females score high on active avoidance coping. In the context of gender differences, prior studies have highlighted those psychological problems related to disorders such as dissociation and somatization are more frequent among women (Alexander et al., 2007). Besides, female coping

strategies included assessing support from others, exhausting resources, and using lifestyle and cognitive strategies (Lucke & Johnstone 2020). On the other hand, in current literature female gender is being identified as the most potent predictor related to post-traumatic stress symptomatology during COVID-19 disease (Gausman & Langer, 2020). Female coping strategies may be affected by many factors, including their societal roles, health and well-being, and the larger environment (Lucke & Johnstone, 2020). Consequently, these finding highlights intervention strategies that are specifically needed to be implemented to enhance defense mechanisms. Therefore, it is particularly pertinent to develop policies that explicitly address students' issues and foster supportive environments in pandemics and related situations.

Limitations and Recommendations

The use of self-report measures, the cross-sectional nature of data, and purposive sampling techniques are the limitations of the study. Experimental and longitudinal studies are warranted to understand the causational relationship or effect of coping and defense on well-being. Future studies should see how during the COVID-19 pandemic adaptive coping skills and defense mechanisms have helped in reducing stress and anxiety ensuring better well-being among individuals. Also, the findings have utility in devising intervention plans or health policies while dealing with pandemics and related situations.

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Citation of this Article:
Chughtai, N. A., Zareef, S., Ahmed, A., & Khan, M. (2023). Effect of defense mechanisms and coping strategies on psychological wellbeing among university students during the Covid-19 pandemic. *Pakistan Journal of Education,40* (1), 39-66.