# COVID-19 AND ITS IMPACTS ON THE UNIVERSITY STUDENTS: A CASE STUDY OF BS STUDENTS AT ISLAMIA COLLEGE PESHAWAR

Rais Gul<sup>1</sup> Mohammad Shafi<sup>2</sup>

#### **Abstract**

Covid-19 has hit nearly each country. Its socio-economic consequences are unprecedented and so are its psychological impacts. This article examines how COVID is taking its toll on the mental health of university students. Sixty (60) male students of BS degree program at Islamia College, were randomly selected, and their responses to an open ended questionnaire were collected via WhatsApp considering the prevailing situations. The data was then subjected to thematic analysis. The findings revealed that the students experienced psychological panic in the existing conditions. They were worried about the iob security of their earning members, uncertain academic journey, elearning---internet availability, poor IT skills, unfamiliarity with and lack of affordability of new mode of pedagogy etc. Their fears regarding contracting the virus themselves, or by some of their family members and the stigma associated to the illness, and the treatment meted out to the diseased were like sword of Damocles hanging over them. It is suggested that psychological health matters must not be ignored by policy makers. Arranging online classes in effective and feasible ways, the assurance of job security of the earning members, and overcoming stigmatization phenomenon, in such a crisis, would lessen students' psychological burden. Also, a number of guiding principles are given to be observed in a situation like COVID.

**Key Words:** COVID-19, Psychological, Social Isolation, Uncertainty, Stigma, Students, Epidemic.

#### 1. Introduction

# 1.1. Psychological Cost of COVID

Research has shown that people experience diverse psychological impacts in the face of traumatic situations, like

<sup>&</sup>lt;sup>1</sup> Lecturer in Sociology Islamia College Peshawar

<sup>&</sup>lt;sup>2</sup> Assistant Professor, Area Study Centre, University of Peshawar

COVID. (Bonanno & Mancini, 2012). Global reports say that the poor and health workers are more hardly hit. (Brooks, 2020). The degree of socio-psychological problems unfolding amid COVID, are yet to be fathomed (Mancini, 2020). Some might face short-lived psychological panics to be followed by resilience and adaptability (Bonanno, 2004). Still there are others who are likely to develop complicated symptoms which require clinical interventions. Yet, there are people who will emerge stronger (Mancini, 2019). No segment of society, however, is immune to this potential danger. The hard-hit, however, would be the job losers, their family members, those suffering from social isolations, those exposed to the virus, and indeed those internalizing the fear of COVID (Monroe & Simons, 1991). WHO's officials—DG<sup>3</sup> and RDE<sup>4</sup>—therefore, stated that this pandemic will permeate every fabric of society. Hence, the states are to be extra-careful about the mental health of their citizens (WHO, 2020).

The hardest-hit regions of South Asia, also include Pakistan surpassing china in terms of infections tally (Rezwan, 2020). Like rest of the World, COVID, has deteriorated the mental health of Pakistani people manifold. The depressions, and anxiety--- manifesting in the form of fear, irritability, and frustration--- have reached new heights amidst COVID. Also, learners in the higher education of Pakistan, are mentally too vulnerable to the onslaught of the virus, to be ignored (The News, 2020).

# 1.2. Mental Health of University Students in the Face of COVID-19

Educational landscape has witnessed drastic changes across the globe, resulting in the unprecedented challenges for the

<sup>&</sup>lt;sup>3</sup> Director General

<sup>&</sup>lt;sup>4</sup> Regional Director for Europe

students. The newly emerging scenario has put the mental health of the students at risk, too. (Beckstein, 2020). Educational Institutions' closure, amid COVID, has induced them to stick to a new lifestyle, which has worried them in many respects (R. Ghazawy, et al. 2020). Loneliness, anxiety and depression are what students battling with, around the globe (Hall, 2020). Many reports, hence, unveiled that public health crisis like COVID, is equally disastrous to the mental health of both the general masses and learners in higher education (Mei et al, 2011). University students' vulnerability to such a crisis is unearthed by so many studies (Tomoda et al., 2000; Stallman, 2010). Many stressors—life stage transitions, academic pressure, accommodation problems, adjusting to new physical settings and new mode of pedagogy and uncertain future — exacerbate students' psychological worries. (Heckman et al., 2014).

A sizable number of Egyptian, Turkish, and Malaysian university students have experienced severe psychological setbacks, amidst COVID (Bayram and Bilgel, 2008). Similarly, 24.9% of college students in China have suffered from anxiety in the face of COVID (Cao et al., 2020). So is the case of Australian and Canadian students in their initial years of study (Farrer et al., 2016). In the US as Son (et al, 2020) revealed that out of 195 students, 71% were suffering from stress and anxiety during COVID. The stressors include fear and worry about their own health, and their loved ones (91%), Social isolation (86%), academic pressure (82%). Students, whom relatives or acquaintances have contracted the virus were more prone to depression, anxiety and stress in China (Cao et al., 2020).

#### 1.3. Pakistan's Scenario

Higher education commission (HEC) Pakistan, is focusing on the utilization of the available means to ensure the elearning in the current crisis (National Institute of Health, 2020).

The more the fear of economic loss, academic delay, etc., the higher the anxiety level among the students in Pakistan. Also, Pakistan, has yet to get to the desired level in terms of e-learning. Not to ignore that social isolations, lack of direct student-teachers interactions, and connectivity issues are the ostensible challenges, hitting the minds of the learners (Kwary & Fauzie, 2018). Salman et al (2020), confirmed that students are experiencing mental shocks in Pakistan, in the face of COVID, and that religious/spirituals strategies are their coping techniques. Specifically, students hailing from remote settings—having no access to internet, and poor background---- are more depressed (Rezwan, 2020). In this regard, Rs1.13 trillion (\$7 billion) stimulus package has been announced by the federal government of Pak to support the poor families (The News, 2020). Khan, Chaudhary, & Choudhry (2020), in the context of Pakistan, concluded that out of 112, 90 % learners stated that COVID hit students psychologically, while 71% of the students considered COVID to be source of fear for them. Also, 85% students identified that untrained and non-cooperative teachers, delay in the award of degrees, and prolongation of the semester were contributing to learners' stress. The study showed that female students were more nervous than their male counterparts. Faroog, Rather & Mansoor (2020) unearthed the obstacles making the medical students worrisome in Pak, which include little or no training of faculty in online mode of teaching, poor or no internet connectivity, online assessments, and problems with understanding the unique dynamics of E-education.

# 2. Theoretical Framework Underlying the Study

The present study is based on the theoretical grounds of 'Epidemic Psychology Model [EPM]' introduced by Strong (1990). EPM, explains that once a novel/major epidemic disease emerges, it is followed both by the "plagues of fear, panic, suspicion and stigma; and by mass outbreaks of moral

controversy, of potential solutions and of personal conversion to the many different causes which spring up". This pandemic caused by corona virus has resulted in the same situation, and the worries of students, their interpretation of the situations, etc., in the analysis section, validate the theoretical approach put forward by Strong (1990

The implication of EPM theory in the context of this study is that students like other segments of populations are tightly griped by fear in terms of their unclear academic journey, contracting the virus by them or by their near and dear ones, fear of being stigmatized, losing their source of income, and indeed fear of being uncertain about what is in store for them in the face of COVID. The other aspects discussed by Strong (1990), though, have resurfaced amidst COVID, but not the area of focus of this article.

# 3. Factors leading to psychological problems in the masses including students amidst COVID.

# 3.1.1. Social Isolation [Henceforth SI] and its Psychological Impacts

Berg as quoted by Tarantola (2020) defined that SI is the state of being disconnected with family, friends, and the members of society. Zakaria (2020) stated that though SI is desired in the face of COVID, but, the likely fallouts include depression and even suicidal thoughts. Therefore, SI in the corona-hit world is likely to be accompanied by depression and anxiety--- the kissing cousins- (Ellis, 2020; Chidambaram, 2020). SI in its detrimental side is tantamount to smoking 15 cigarettes a day. (Ellis, 2020; Carthaus, 2020).

Wright (2020) described that due to COVID, living alone has now turned into social isolation rather loneliness—'Lacking the ability to see, converse with, hug, or spend time with friends',

-- leads to anxiety, even exacerbate mortality. Florida State University 2018, revealed that loneliness may cause cardiovascular ailment and stroke, obesity, premature deaths and increase risk of dementia by 40% (Wright, 2020: Holt-Lunstad, & Smith, 2016). If this self-isolation and lockdown is prolonged, it will decrease physical activity, leading to increased risk of frailty and fractures (Mushtaq et al., 2014). Coan, as quoted by Wright (2020), argued that the amount of mental calmness with physical touch is far greater than the digital touch. Social isolation, he remarked, to be tantamount to death sentence. Therefore, psychologists emphasized that being together is highly needed for our physical and mental wellbeing. (Wright, 2020).

#### 3.1.2. The Vulnerable and Social Isolation/Lockdown

Mobarak & Zachary (Yale economists) as quoted by Hussain (2020) said that strict lockdowns will lead to deaths from deprivation and preventable diseases. Hyat (2020) argued that during COVID, the poor are on the receiving end. Sattar (2020), hence, revealed that forcing the have and have-nots alike to observe the protocol of COVID, considering capitalist economy, is nonsensical. Hussian (2020), argued, that strict lockdowns are terribly hot potato to sustain. Malik (2020) described that the pandemic hit-hard the unprivileged and cause more inequality and poverty. The Lancet Psychiatry (2020), revealed that the poor bear the brunt of any pandemic, earthquake or flood due to failure of institutions. Akhtar (2020) pinpointed IMF concerns, that "if the rich and state do not come forward to protect the vulnerable, the unrest, anger and resentment will emerge".

# 3.1.3. Stigma of COVID and its Psychological Cost

Corrigan (2020) argued that *stigma* associated with physical and mental diseases is no less harmful than the disease itself as evident from decades of research. The COVID, unfolding the stories across the world that those carrying the virus, the suspects and their families and friends are subjected to stigma (WHO, 2020). Which is tantamount to racism, sexism, and ageism (Corrigan, 2020; Rotholz, 2015). Ebola and MERS etc.,--

previous pandemics-- had provoked xenophobia and stigma, like COVID. The sizable number of reports, from across the world show that stereotyping, harassment and bullying hurled at the people who have seemingly caused the spread of the virus. (Roy, 2020; APA, 2020: Earnshaw; 2020). Due to fear of being stigmatized, people conceal their status, resulting in the spread of the virus on a much larger scale. (APS, 2020: Earnshaw; 2020: Roy, 2020). The stigma factor, pit us against one another, in the times we are supposed to be cooperative (Earnshaw, 2020; WHO, 2020).

# 3.1.4. Uncertainty and Fear amid COVID

Robinson (2020) said that uncertainty may increase the level of anxiety manifold. Studies revealed that anticipating pain is calmer than anticipating uncertainty. As scientists have concluded that pain of losing the job is lesser than the pain of job uncertainty. The data shows that psychological setbacks are more fatal than a car crash. Scientist argues, stress as a result of uncertainty and fear make people age faster and die sooner (Robinson, 2020). Clark (2020) argues that the more susceptible you are to uncertainty in the pandemic-hit world, the more anxious you are. The uncertainties revolve around the birth, growth, decay of COVID and the post-pandemic world are too overwhelming and fear-inducing. Phillips (2020) argued that threatening contagion and unknown terrified dangers associated with COVID, forced us into survival mood. We are restricting ourselves to our houses but also fearing social isolation. These feelings of care and fear, land us more into anger and uncertainty, until we have an effective coping mechanism, he argued.

# 4. Methodology

#### 4.1. Research Design

The study is qualitative in nature. Furthermore, it's a Case Study---- "an intensive, systematic investigation of a

single individual, group, community or some other unit in which the researcher examines in-depth data relating to several variables" (Woods, 1980).

#### 4.2. Limitations

Considering the lockdown in Pakistan, the face-to-face interview was not feasible. Moreover, only male students' responses were noted. Hence, to examine COVID's psychological impacts on the female University students, in Pakistan's context, another study is required. Moreover, the demographic profile of the students show that majority of them were from poor or middle socio-economic background, hence, another study is recommended to check the psychological impacts of the phenomenon on the students who are from well-off families.

# 4.3. Participants/Sample

The participants, students of BS (N#60), randomly selected at Islamia College University Peshawar, served as research participants. Majority of the participants (90%) were from poor or middle socio-economic backgrounds i.e., their families' monthly income was from Rs.15000 to Rs. 50000. Only 14 students had smooth access to internet. The remaining 46, hailing from remote settings like erstwhile FATA, Chitral, Dir Upper and Lower etc., had poor or no access to internet. Also, the majority of the participants (76%) were the part of joint family settings.

#### 4.4. Data Collection Instruments and Procedure

An online open-ended questions, derived from the study of previous literature on COVID was administered to the participants during the peak times of COVID lockdown in Pakistan --- May, June, and July 2020. The nature of questions emerged were composed of factors such as social isolation, stigma, fear and uncertainty, and how they affect students' mental health amid COVID.

#### 4.5. Analysis of the data

The cross-sectional data collected were then subjected to thematic analysis to find out the degree of similarities and dissimilarities between primary and secondary data.

# 5. Findings and Analysis

#### 5.1. Social Isolation and the students

Majority of the students were psychologically least disturbed by the social isolation in the face of COVID. Because, they were connected with their family members physically and with their friends digitally. However, their being disconnected physically with friends, and the academic and recreational environment of the university was making them upset. Those without internet service felt being imprisoned. Some students, for instance, described that, they had never imagined to be cut-off from internet facility. They were submerged in domestic activities due to which they could not devote to their classes, and the lack of space in joint family system, further, aggravated their problems. Rahman (2020) had arrived at the same findings. Qaiser et al. (2012), too, have linked poor academic performance with low socio-economic standing and large family size.

# 5.2. Stigma and the Students

Gluck, (2019) says that stigma is "a mark of disgrace or reproach." Also, quoting Pedneaul, he described that "Stigma is a perceived negative attribute that causes someone to devalue or think less of the whole person".

The students were not experiencing social stigma directly because, neither they nor their relatives and friends had been diagnosed corona positive until then. However, they did think that if they or any of their family member caught the virus, they would indeed be treated with discrimination and would be reduced to social outcast. As one student opined: "An elderly

person died a week back in our vicinity due to corona, was buried unceremoniously. Even his family members were akin to untouchables". Another student said that infected were treated like criminals. WHO DG, therefore, directed, "The greatest enemy we face is not the virus itself; it's the stigma that turns us against each other. We must stop stigma and hate!" (Sulleh & Prempeh, 2020).

The students expressed that to avoid stigma they would not disclose, even if they had symptoms, Mendoza (2020) revelations showing UPPI-DRDF, study on HIV stigma index, in 2019, also, authenticate this. "Stigma is prevalent; it is the silent killer that fuels the spread of HIV", the study concluded. Mendoza (2020) has unfolded the merciless attitude meted out to Marako by his neighbors, because his father contracted the virus. Marako as he quoted described, "They said if they get sick too, it's my father's, and our family's fault," he said. "They used to be nice neighbors; now they dread us." His family was forced to close its convenience store because people don't want to buy from them anymore (Mendoza, 2020). These apprehensions are compatible the pandemic-based psychology with phenomenon of stigmatization can manifest itself in three negative outcomes—people avoid being tested or getting medical care, compelling people not to disclose their disease, and keeping away people from adopting healthy behavior (USAID, 2020).

The students even highlighted the cases within their families, friend and acquaintances, who once developed symptoms of mild flue, fever, throat itches etc. and they fearing to be put in corona suspected category, avoided even to visit the hospitals for routine medical check-up. Such a psychology, they expressed, is prevailing in the corona-hit world. Georgia Department of Public Health (2020), revealed that more ironic is the indiscriminate stigmatizations of communities and nationalities—China virus, Wuhan virus etc. Brigden, as written by Ro (2020), argued that stigmatization amidst COVID, is the repetition, witnessed during TB—resulted in the irreparable losses to the communities. Considering **EPM**, these response are natural. As Strong (1990) argued that **EP** unfolds itself in the

forms of fear and suspicions plus phased stigmatizations—avoidance, segregation and abuse and end - at least potentially — in pogroms. Also, the situation reflects the Hobbesian nightmare - the war of all against all, as explained by strong.

# 5.3. Fear, Uncertainty and Students in COVID-19

Marker & Alyward (2011), revealed that uncertainty accompanied with COVID, instill threat-processing in the brain. Emamzadeh (2020), argued, that no clue of future in COVID crisis, force minds to jump to the worsts (Lee et al., 2010). Marker (2020), said, peoples' are mentally overwhelmed by the volatile stock market, their health and the health of their near and dear ones.

Three main fear inducing reasons, mentioned by the students were, loosing of jobs by their earning members, uncertain educational career and that lest they or their family members fall victim to COVID. Weill Cornell Medicine Psychiatry (2020) findings validate that unemployment, fear of being ill and the lack of control over present and future are causing mental panic among the masses, students are no exception. Also, the mentioned responses of the students, below, are very much compatible with the epidemic of fear aspect of Strong (1990) EPM, which says that as a primary response to pandemic/epidemic one is overwhelmed by the fear that he and his near and dear ones might have contracted the virus already, also the fear that virus can be transmitted through so many means as is the case of COVID. Also, when very little is known about the actuality of the disease and unfolding events, the fear exacerbates.

#### 5.4. Economic Factor and Student Worries

Most of the students were worried that a single earner of their family in KSA<sup>5</sup> or within Pakistan may turn jobless or have already lost their jobs due to the lockdowns, and other measures of the government. Other studies validate that losing the job is

<sup>&</sup>lt;sup>5</sup> Kingdom of Saudi Arabia

one of the stressors associated to the crisis. Peng (et al, 2012), for instance, argued that the fear of students about losing source of income intensify their anxious feelings. Broman et al (1997), also, revealed: "Emotional distress arising from job loss affects both the job loser and other family members'. In the backdrop of global financial crisis 2007-08, the rates of depression, anxiety, alcohol, and drug use gone up in many countries. In Great Recession of 2008, 13 % increase was witnessed in suicides linked to unemployment-- over 46,000 lives lost due to unemployment and income inequality in that year alone (Classen & Dunn, 2012; Milner et al., 2014; Nordt et al., 2015). Coe & Enomoto (2020) and Babakhel (2020), unveiled unemployment is the immediate outcome of pandemics. So far 30 million, people have become jobless in USA. In Pakistan, 12.3m to 18.5m, are likely to lose their jobs. In Pakistan's context, worth reading is Bari's (2020) article highlighting the fate of those who have either lost their earnings or likely to lose due to COVID.

#### 5.5 Fear of Educational Career in the face COVID

Students revealed that they had uncertainty about the fate of their educational journey. HEC and university high-ups are talking about on-line classes, ignoring the fact that a sizable number of students in the KP province, couldn't make access to online classes for one reason or another. Also, students had reservations that many of their courses were laboratory oriented, which indeed, would be missing. Many of them also, highlighted that living in joint families, they lack study-friendly setting plus connectivity and other problems. Only, 14 (20. %) students were living in the areas with internet facility. To meet study needs and take online classes was depend on internet connectivity, but, they didn't have that support. The directives by HEC to launch online classes had, therefore, added to their worries, students argued. Rehman (2020), too, revealed, "Most of the students had no

availability of internet to reap the benefits of online classes". Connectivity and accessibility problems to devices like laptops/ desktops, smart phones or tablets, and the poor financial status of the students are the hurdles in the way of e-learning (Potnis, 2020; India Today Web Desk, 2020; UNESCO, n.d.). It is pertinent to note that majority of the students in this study were from rural settings having low socio-economic backgrounds. Ali's (2020), hence, argued that transition to digital learning, as recommended by HEC amidst COVID, could hardly be meet within lowerincome or remote areas. Also, Gabol (2020), revealed that the students who lives in FATA, Baluchistan, Gilgit-Baltistan and AJK, where 3G technology is yet to be installed, are facing hardships even to recharge their SIMs, get internet packages, or reload balance, let alone online classes. Hoodbhoy (2020) expressed that restricted internet access is, a genuine issue, demanding for an immediate solution. Rizvi & Haider (2020), too, identified the obstacles in the way of digital learning in Pakistan's context. Rehman (2020), in this regard opined: "nondisciplined lifestyle, lack of focus, less attention span for online learning is a reality, people's shyness from e-learning and being camera consciousness are also practical issues being faced by both the students and teachers". Also see (1.3. Pakistan's Scenario in this article).

# 5.6. Fear of Contracting the Virus

Ten students revealed that their family members were showing the signs, and their tests had been sent for screening. What if they were corona positive? They had frequent encounter with them even handshaking. Also, some students viewed that it was too difficult for them to observe social distancing fully. They told, that they had to care the elderly members of their families, and their norms didn't allow them to avoid human touch—pressing of hands and feet--- of their parents, grandparents, and other elderly and handshaking. The students, also pointed out that the symptoms like flue, fever, throat infections, chest infections

etc. --- once treated as common diseases--- were now mindboggling for them. As a student revealed that he and few of his family members were suffering from flu and fever. But, they had sleeplessness and anxiety due to that. Finally, the illness was over, but, they paid a psychological cost. One of the students described that the way corona surfaced, and spread to the whole world was enough proof that sooner or later, they too were to be affected, which was worrisome for them. Clark findings, as quoted by Dastagir (2020), also, verified that the danger [COVID) heading towards them—slowly and mysteriously--was psychologically more devastating. Coe and Enomoto (2020) revealed that the more the events unfolding, the more anxious the people become. Psychological worries in terms of personal loss, economic and physical security, uncertain future, and not being able to live a desires life, was to rub salt to peoples' wounds. Similarly, another student revealed, that practicing frequent hand washing, avoiding hand shaking, observing social distancing etc. were as if, they [the student] were internalizing the fear in the guise of preventive measures.

#### Conclusion

The article studied the psychological impacts of various factors such as, social stigma, fear, uncertainty and social isolation etc. on the university students (Case study of Islamia College), in the face of COVID. The findings revealed that being connected digitally, and to a great extent even physically with the world around them, students were not experiencing the devastating psychological effects of social isolation. **Joint** families, social networking, and least disruption of routine businesses even amid COVID were the ostensible causes, safeguarding them from plunging into psychological panic due to SI. However, the fear of stigma associated with the corona disease, in case the students or their family members contracted the virus, death or loss of job of an earning member were looming large on their mental horizon. Moreover, they had worries regarding their educational journey amidst COVID. Poor

and no connectivity, low socio-economic standings, lack of class room like environment, untrained faculty and the transition from conventional pedagogy to digital pedagogy, were things, making them upset.

Furthermore, the article, authenticate the **Epidemic Psychology Model** of Strong (1990), considering the findings of both primary and secondary data. It is suggested that psychological health be given priorities in the face of such a crisis. Job security to the earning members can mitigate students' worries manifold, hence, the government need to adopt viable rules in this regard. The stigmatization phenomenon intensify the psychological pains, hence, an effective strategy to treat the infected and their families with respect, and to ensure that people don't pit against one another due to stigmatization, rather they are to take on the virus/disease, is intensely needed. The government and universities across the country now should equip the learner and the faculty with all the skills and requirements of e-learning-turning this crisis into opportunity--- which is direly needed, and may serve as a blessing in disguise.

#### References

- Akhtar, A.S. (2020, April 17). Dangerous Classes. Dawn Islamabad.
- Ali, N. (April 2<sup>nd</sup> 2020). Students Disappointed with Online Teaching System Amid COVID. *Daily Times*.
- American Psychological Association (2020, March 25). Combating Bias And Stigma Related to COVID-19. *APS*. Retrieved from: <a href="https://www.apa.org/topics/covid-19-bias">https://www.apa.org/topics/covid-19-bias</a> on 17<sup>th</sup> April 2020.
- Babakhel, M. A. (21st May 2020). COVID and Governance. *Dawn Islamabad*.
- Bari, F. (2020, May 15). Relief and Rehabilitation. Dawn Islamabad.
- Bayram, N. and Bilgel, N. (2008) The prevalence and sociodemographic correlations of depression, anxiety and stress among a group of university students. *Social Psychiatry and Psychiatric Epidemiology*, 43, 667–672
- Beckstein, A. (July 24<sup>th</sup> 2020). How are international students coping with the Covid-19 pandemic?. From: <a href="https://www.timeshighereducation.com/student/blogs/how-are-international-students-coping-covid-19-pandemic">https://www.timeshighereducation.com/student/blogs/how-are-international-students-coping-covid-19-pandemic</a>.
- Bonanno, G. A., & Mancini, A. D. (2012). Beyond resilience and PTSD: Mapping the heterogeneity of responses to potential trauma. Psychological Trauma. *Theory, Research, Practice, and Policy*, 4, 74–83.
- Bonanno, G. A. (2004). Loss, trauma, and human resilience: Have we underestimated the human capacity to thrive after extremely aversive events? *American Psychologist*, *59*, 20–28.
- Broman, C. L., Hamilton, V. L., & Hoffman, W. S. (1997). The impact of unemployment on families. *Michigan Family Review*, 2(2).
- Brooks, D. (2020, April9). "I Feel Like I'm Finally Cracking and I Don't Even Know Why". *New York Times*.
- Cacioppo, J. T., & Patrick, W. (2008). Loneliness: Human nature and the need for social connection. WW Norton & Company.
- Cao W, Fang Z, Hou G, Han M, Xu X, Dong J, Zheng J. The psychological impact of the COVID-19 epidemic on college students in China. From: https://pubmed.ncbi.nlm.nih.gov.
- Carthaus, A. (2020, April 01). Coronavirus and mental health: 'We are not made for social isolation'. From: <a href="https://www.dw.com/en/coronavirus-and-mental-health-we-are-not-made-for-social-isolation">https://www.dw.com/en/coronavirus-and-mental-health-we-are-not-made-for-social-isolation</a> on 6 July 2020.
- <u>Chidambaram</u>, P. (2020, April 21). The Implications of COVID-19 for Mental Health and Substance Use. Retrieved from: https://www.kff.org/coronavirus-covid-19/issue-brief/the-

- <u>implications-of-covid-19-for-mental-health-and-substance-use/</u> on 6 July 2020.
- Clark, D. A. (2020, 29<sup>th</sup> March). Living With Uncertainty during COVID-19. *The Psychology Today*. Retrieved from: <a href="https://www.psychologytoday.com/us/blog/the-runaway-">https://www.psychologytoday.com/us/blog/the-runaway-</a> on 21<sup>st</sup> April 2020.
- Classen, T. J., & Dunn, R. A. (2012). The effect of job loss and unemployment duration on suicide risk in the United States: A new look using mass-layoffs and unemployment duration. *Health economics*, 21(3), 338-350.
- Coan, J. A., Schaefer, H. S., & Davidson, R. J. (2006). Lending a hand: Social regulation of the neural response to threat. *Psychological science*, *17*(12), 1032-1039.
- Coe, E. H. & Enomoto, K. (2020, April 2). Returning to Resilience: The Impact of COVID-19 on Mental Health and Substance Use. From: <a href="https://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/returning-to-resilience-the-impact-of-covid-19-on-behavioral-health">https://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/returning-to-resilience-the-impact-of-covid-19-on-behavioral-health</a>. Retrieved on 30 June 2020
- Corrigan, P. (2020, April 7). On the Stigma of COVID-19. *The Psychology Today*.
- Dastagir, A. E. (2020, March 12). The Facts on Coronavirus aren't all Scary. So why so much fear? Retrieved from: <a href="https://www.usatoday.com/story/news/health/2020/03/12/coronavirus-fear-">https://www.usatoday.com/story/news/health/2020/03/12/coronavirus-fear-</a> on 15 May 2020.
- Dworkin, S. L. (2005). Who is epidemiologically fathomable in the HIV/AIDS epidemic? Gender, sexuality, and intersectionality in public health. *Culture, health & sexuality*, 7(6), 615-623.
- Earnshaw, V. (2020, April 6). Don't Let Fear of COVID-19 Turn into Stigma. *Harvard Business Review*.
- ELLIS, E.G. (2020, March 25). What Coronavirus Isolation Could Do to Your Mind (and Body). Retrieved on 11<sup>th</sup> April 2020 from: <a href="https://www.wired.com/story/coronavirus-covid-19-isolation-psychology/">https://www.wired.com/story/coronavirus-covid-19-isolation-psychology/</a>.
- Emamzadeh, A. (2020, March 02). Coronavirus: Countering Your Fears. *Psychology Today*.
- Farooq F, Rathore FA, Mansoor SN (2020). Challenges of Online Medical Education in Pakistan During COVID-19 Pandemic. *J Coll Physicians Surg Pak*; 30(6):67-69
- Farrer, L. M., Gulliver, A., Bennett, K., Fassnacht, D. B. and Griffiths, K. M. (2016) Demographic and Psychosocial Predictors of

- Major Depression and Generalized Anxiety Disorder in Australian University Students. *BMC Psychiatry*, *16*, *241*
- Gabol, I. (2020, March 31). Student, Faculty, Express Reservations Over Online Education System. *Dawn Islamabad*.
- Georgia Department of Public Health (2020). COVID-19: Stigma. Retrieved from: <a href="https://dph.georgia.gov/covid-19-stigma">https://dph.georgia.gov/covid-19-stigma</a> on 5th May 2020.
- Gluck, S. (2019, October 23). What Is Stigma?, Healthy Place.
- Hall, R. (18th Nov.2020). Students feel vulnerable': how Covid-19 has put a strain on mental health. *The Guardian*
- Hawkley, L. C., & Cacioppo, J. T. (2010). Loneliness matters: A theoretical and empirical review of consequences and mechanisms. *Annals of behavioral medicine*, 40(2), 218-227.
- Heckman, S., Lim, H. and Montalto, C. (2014) Factors related to financial stress among college students. *Journal of Financial Therapy*, 5, 3
- Holt-Lunstad, J., & Smith, T. B. (2016). Loneliness and social isolation as risk factors for CVD: implications for evidence-based patient care and scientific inquiry. From: https://heart.bmj.com/content/heartjnl/102/13/987.full.
- Hoodbhoy, P. (2020, April 25). HEC: Seize the Corona Moment. *Dawn Islamabad*.
- Hussain, K. (2020, April 16). The Great Lockdown Debate. *Dawn Islamabad*.
- Hussain, S.M. (2020, April 18). Cure Worse Than Disease. *The News International*
- Hyat, K. (2020, 16th April). Patterns of Life. The Daily News
- Khan, M. Y., Chaudhary, F., & Choudhry, A. (2020). Interplay of COVID-19 induced Stress and Psychological Effects on Students' Language Learning: A Mixed Approach. *Global Regional Review*, V (III), 1-12.
- Kwary DA, Fauzie S. Students' achievement and opinions on the implementation of e-learning for phonetics and phonology lectures at Airlangga University. *Educ. Pesqui.* 2018; 44.
- Lal, M. (2015, December 23). Information bombardment in the under developed society is blessig or Curse? Retrieved on 7 July 2020 from:

  <a href="https://www.researchgate.net/post/Information\_bombardment\_i">https://www.researchgate.net/post/Information\_bombardment\_i</a>
  n the under developed society is blessig or Curse.
- Lee, J. K., Orsillo, S. M., Roemer, L., & Allen, L. B. (2010). Distress and avoidance in generalized anxiety disorder: Exploring the relationships with intolerance of uncertainty and worry. *Cognitive Behaviour Therapy*, 39(2), 126-136.

- Malik, R.S. (2020, April 18). South Asia's Worsening Woes. *Dawn Islamabad*.
- Mancini, A. D. (2019). When acute adversity improves psychological health: A social-contextual framework. *Psychological Review*, 126, 486–505.
- Marker, C. D. (2020, April 6). How to Handle Excessive Worry Related to COVID-19. *Psychology Today*.
- Mei SL, Yu JX, He BW, Li JY. Psychological investigation of university students in a university in Jilin province. *Med. Soc.* (*Berkeley*) 2011; 24, 84–86.)
- Milner, A., Page, A., & Lamontagne, A. D. (2014). Cause and effect in studies on unemployment, mental health and suicide: a meta-analytic and conceptual review. *Psychological medicine*, 44(5), 909.
- Monroe, S. M., & Simons, A. D. (1991). Diathesis-stress theories in the context of life stress research: Implications for the depressive disorders. *Psychological Bulletin*, *110*, 406–425
- Mulligan, J. D., Gonzalez, A. A., Stewart, A. M., Carey, H. V., & Saupe, K. W. (2007). Upregulation of AMPK during cold exposure occurs via distinct mechanisms in brown and white adipose tissue of the mouse. *The Journal of physiology*, 580(2), 677-684.
- Mushtaq, R., Shoib, S., Shah, T., & Mushtaq, S. (2014). Relationship between loneliness, psychiatric disorders and physical health? A review on the psychological aspects of loneliness. *Journal of clinical and diagnostic research: JCDR*, 8(9), WE01.
- National Institute of Health (NIH). https://www.nih.org.pk/novel-coranavirus-2019-ncov/. [Accessed 5th May 2020].
- Nordt, C., Warnke, I., Seifritz, E., & Kawohl, W. (2015). Modelling suicide and unemployment: a longitudinal analysis covering 63 countries, 2000–11. *The Lancet Psychiatry*, 2(3), 239-245.
- Peng L, Zhang J, Li M, et al. Negative life events and mental health of chinese medical students: the effect of resilience, personality and social support. *Psychiatry Res. 2012; 196, 138–141*.
- Phillips, S. (2020, April 9). The Coronavirus: Coping with Fear and Uncertainty. Retrieved from: <a href="https://blogs.psychcentral.com/healing-together/2020/03/the-corona-virus-copping-with-fear-and-uncertainty/">https://blogs.psychcentral.com/healing-together/2020/03/the-corona-virus-copping-with-fear-and-uncertainty/</a> on 22<sup>nd</sup> June 2020.
- Potnis, S. (2020, May 24). How the coronavirus pandemic is re-shaping education.

  Retrieved from: https://yourstory.com/2020/05/coronavirus-pandemic-

- <u>reshaping-education-teaching?utm\_pageloadtype=scroll</u> on 30 June 2020.
- Qaiser, S., Ishtiaq, H., Zaitoon, A. & Wahab, K. (2012). Effects of Family Structure on the Academic Acievement of Students at Elementary Level in Karak District, Pakistan. *Journal of Sociological Research*, 3(2), 234 246
- Rehman, M. M. (2020, April 22). Online education in Pakistan in COVID-19 era. *Daily Times Pakistan*.
- Rezwan (31<sup>st</sup> December 2020). "2020 Roud-up: COVID-19 in South Asia". *Global Voices*.
- R. Ghazawy, E. et al. (2020). Psychological impacts of COVID-19 pandemic on the university students in Egypt. *Health Promotion International*, 2020, 1–10.
- Rizvi, S. & Haider, S. B. (2020, March 24). COVID-19 exposes lack of coherence at universities. *The Express Tribune*.
- Ro, C. (2020, April 1). The Need to Avoid COVID-19 Stigma: Lessons from TB Response. Retrieved from: <a href="https://www.forbes.com/sites/christinero/2020/04/01/the-need-to-avoid-covid-19-stigma-lessons-from-tb-response/#232d78847960">https://www.forbes.com/sites/christinero/2020/04/01/the-need-to-avoid-covid-19-stigma-lessons-from-tb-response/#232d78847960</a> on 2 July 2020.
- Robinson, B. (2020). The Psychology of Uncertainty: How to Cope With COVID-19 Anxiety. Retrived from: <a href="https://www.forbes.com/sites/">https://www.forbes.com/sites/</a> bryanrobinson/2020/03/12/the-psychology-of-uncertainty-how-to-cope-with-covid-19-anxiety/#68fc40ca394a on 20th April 2020.
- Rotholz, J. (2015). Gospel Without Borders: Separating Christianity from Culture in America. Wipf and Stock Publishers.
- Roy, A. (2020, April 12). Xenophobia & Covid-19. *The Statesman*. *New Delhi*.
- Sattar, A. (2020, April 16). The Fault of the System. *The News International*.
- <u>Sirsikar</u>, A. & <u>Ghosal</u>, K. (2020, March 21). The psychology of an epidemic. Retrived from: <a href="https://brandequity.economictimes.indiatimes.com/news/industry/the-psychology-of-an-epidemic/74746146">https://brandequity.economictimes.indiatimes.com/news/industry/the-psychology-of-an-epidemic/74746146</a> on 6 July 2020.
- Son C, Hegde S, Smith A, Wang X, Sasangohar F. Effects of COVID-19 on College Students' Mental Health in the United States: Interview Survey Study. *J Med Internet Res.* 2020 3;22(9):e21279.
- Stallman, H. (2010) Psychological distress in university students: a comparison with general population data. *Australian Psychologist*, 45, 249–257.

- Strong, P. (1990). Epidemic Psychology: a Model. *Sociology of Health & Illness*, 12(3), 249-259.
- Sulleh, G. & Prempeh, E. B.A. (2020, March 14). COVID-19: Stigma, flames of hysteria & fear factor will further compound the devastation of the virus. From: Retrieved from: <a href="https://www.ghanaweb.com/Ghana">https://www.ghanaweb.com/Ghana</a>
  <a href="https://www.ghanaweb.com/Ghana">HomePage/features/COVID-19-Stigma-flames-of-hysteria-fear-factor-will-further-compound-the-devastation-of-the-virus-894229">https://www.ghanaweb.com/Ghana</a>
  <a href="https://www.ghanaweb.com/Ghana-to-the-devastation-of-the-virus-894229">https://www.ghanaweb.com/Ghana</a>
  <a href="https://www.ghanaweb.com/ghana-to-the-devastation-of-the-virus-894229">https://www.ghanaweb.com/ghana-to-the-devastation-of-the-virus-894229</a>
  <a href="https://www.ghanaweb.com/ghana-to-the-devastation-of-the-virus-894229">https://www.ghanaweb.com/ghana-to-the-virus-894229</a>
  <a href="https://www.ghanaweb.com/ghana-to-the-virus-894229">https://www.ghanaweb.com/ghana-to-the-virus-894229</a>
  <a href="https://www.ghanaweb.com/ghana-to-the-virus-894229">https://www.ghanaweb.com/gh
- Tarantola. A (2020, March 27). The psychological impact of COVID-19 isolation, as explained by scientists. Retrieved from: <a href="https://www.engadget.com/2020-03-27-pyschological-impact-covid-19-isolation.html">https://www.engadget.com/2020-03-27-pyschological-impact-covid-19-isolation.html</a> on 12th April 2020.
- The News International (11th October 2020). Mental Health Problems and COVID-19. *The News International Islamabad*.
- Tomoda, A., Mori, K., Kimura, M., Takahashi, T. and Kitamura, T. (2000) One-year prevalence and incidence of depression among first-year university students in Japan: a preliminary study. *Psychiatry and Clinical Neurosciences*, 54, 583–588.
- UNAIDS (2020). Rights in The Time of COVID-19: Lesson from HIV for an Effective Community-led Response. Retrieved from: <a href="https://www.unaids.org/sites/default/files/media\_asset/human-rights-and-covid-19\_en.pdf">https://www.unaids.org/sites/default/files/media\_asset/human-rights-and-covid-19\_en.pdf</a> on 5<sup>th</sup> May 2020.
- UNESCO (n.d). "Adverse consequences of school closures".

  \*Retrieved from:

  https://en.unesco.org/covid19/educationresponse/consequences

  on 14 May 2020.
- Walsh, K., Scharf, T., & Keating, N. (2017). Social exclusion of older persons: A scoping review and conceptual framework. *European Journal of Ageing*, 14(1), 81-98.
- Weill Cornell Medicine Psychiatry (2020, March 30th). The COVID-19 Crisis: How to Cope with Fear and Social Isolation. From <a href="https://psychiatry.weill.cornell.edu/news/covid-19-crisis-how-cope-fear-and-social-isolation">https://psychiatry.weill.cornell.edu/news/covid-19-crisis-how-cope-fear-and-social-isolation</a> on 16<sup>th</sup> May 2020.
- WHO (2020, MARCH 11). WHO DECLARED CORONA A PANDEMIC. Retrieved on 10 May 2020 From: <a href="https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020">https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020</a>.
- WHO (2020). Opening Remarks at the Media Briefing on COVID-19. Retrieved from <a href="https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020">https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020</a>.

- Wilson, R. S., Krueger, K. R., Arnold, S. E., Schneider, J. A., Kelly, J. F., Barnes, L. L., ... & Bennett, D. A. (2007). Loneliness and risk of Alzheimer disease. *Archives of general psychiatry*, 64(2), 234-240.
- Woods N.F. (1980). . Nursing research: theory and practice. St Louis: Mosby
- Wright, R. (2020, March 20). How Loneliness from Corona Virus Takes its Own tall. *The New Yorker*. From: <a href="https://www.newyorker.com/news/our-columnists/how-loneliness-from-coronavirus-isolation-takes-its-own-toll">https://www.newyorker.com/news/our-columnists/how-loneliness-from-coronavirus-isolation-takes-its-own-toll</a> on 15<sup>th</sup> April 2020.
- Zakaria, R. (2020, March 05). The World after COVID-1. The Daily *Dawn, Islamabad.*