Mental Health Effects of Covid-19 outbreak among University's Students

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Abstract: Background: The corona virus (COVID-2019) spread rapidly in the whole world, reasoning an epidemic of severe infectious pneumonia[1] The continuous spread of the epidemic, is likely to affect the students' mental health.[2] In light of the outbreak of COVID-19 in Pakistan, the researcher feels the same pressure among students in the premises of university. This was the basic point that diverts the mind of the researcher to initiate a research study to determine the awareness level, response to precautionary measures and psychological effects of COVID-19 outbreak upon University's student.

Methods and materials: A sample of 206 University's students was selected among those, who were residing in hostel on day of outbreak i.e. 13 march 2020. Both genders (142 males, 64 female) were included in the selected sample. A proportionate Radom sampling techniques was applied for the selection of sample. A questionnaire consisted of 27 items was developed to measure the awareness level, response to precautionary measures and psychological effect of COVID-19 outbreak. The data was collected through a team of M.Phil students that were studying in SS&PE department of Gomal University. The data collected from all those students, participated in competitive sports activities. The data were analyzed by applying (frequency, percentage, mean, non-parametric chi-square test and t-test as statistical tools with help of SPSS software version, 25.

Results: The result of the study shows that the university's students 56.04% were well aware of COVID-19. 50.1% of total university students were of the opinion to adopt the proper precautionary measures. The study observed that University's students 42.72% were psychologically depressed regarding the COVID-19 outbreak in Pakistan. In response to compare the responses of the urban and rural university's students, it was found that urban university's students were more psychologically disturbed as compare to rural university's students due to outbreak of COVID-19 than the rural students (p < .05). With reference to compare the stance of athletes and non-athletes, no difference was observed between their stance about awareness (p > .05), response to precautionary measures and psychologically effect of COVID-19 outbreak (p > .05).

Conclusion: The University's students were well aware of COVID-19, the Students were psychologically depressed regarding the COVID-19 outbreak in Pakistan, urban students were more psychologically affected by the COVID-19 outbreak than the rural students. It was also concluded that male and female and athletes, non-athletes were having the same psychological effect. However, the population was of the opinion that their response will be positive with special reference to adopt precautionary measures.

Keyword: COVID-19, Awareness, Precautionary Measures, psychological effects, students

1. INTRODUCTION

The coronavirus belongs to a group of viruses that may cause different effects, for example, pneumonia, fever, breathing trouble, and lung disease Coronaviruses have a place with the Coronaviridae family. Corona signifies to crown-like spikes on the external surface of the virus; consequently, it was named as a coronavirus.[3] Its first case was reported as cold in 1960. As indicated by the Canadian research 2001, around 500 patients were distinguished as Flu-like framework. 17-18 of them were affirmed as contaminated with corona strain by polymerase chain response. Corona was treated as a non-fatal infection till 2002. Various reports issued with the verifications of spreading the corona to various nations, for instance, the United States America, Taiwan, Singapore, Hong Kong, Thailand and Vietnam in 2003. A few patients of extreme respiratory syndrome were found caused by corona and they are fatally more than 1000 cases were reported in 2003. For microbiologists, it was proved as a dark year. At the point when microbiologists began focusing to understand these problems. They finish up and understand the pathogenesis of illness and discovered as coronavirus after an intense exercise. As A matter of

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fact, a total number of 8096 cases were found as affected with corona infection. So in 2004, World health organization and other disease control and prevention centers articulated as "emergency state ". Another Hong Kong medical report confirmed 50 cases of severe respiratory syndrome form which 30 were affected with corona virus contaminated. In 2012, medical reports of Saudi Arabian showed a number of effected cases and deaths.

Corona viruses are small in size (065–0125 nm diameter) and have a single-stranded RNA (as a nucleic material), its size going from 026-032kbs long. The corona virus' family subgroups are beta (b), alpha (a), delta (d) and gamma (c), corona virus. At the beginning of 2020, Wuhan (China) a developing business center encountered a erupted of a corona virus that caused of more than 1800 deaths and contaminated more than 70000 persons inside the initial 50 days of the epidemic. This disease was accounted for to be a member of the corona virus group B. The Chinese specialists named this virus as Wuhan-corona virus/ 2019-nCov (2019 novel corona virus).The ICTV (International Committee on Taxonomy of Viruses) named this infection as COVID-19 orSARS-CoV-2. Corona virus belongs to the Coronavirinae subfamily. Various human corona viruses' types differ in how severe the subsequent disease becomes, and to what extent they can spread. The Common sorts of corona virus are alpha corona virus (229E), NL63 alpha corona virus and OC43 beta corona virus & HKU1 beta coronavirus.

The COVID-19 severity was characterized dependent on the clinical aspects as chest X-ray, laboratory testing, and counting asymptomatic contamination, moderate, mild, extreme and serious cases. Very short researches are found about how HCoV spreads starting with one individual to other. In any case, scientists accept that the infections transmitted through liquids in the respiratory system, for example, mucus. There are some basic reasons of Corona viruses spreading such as sneezing and coughing without mask, shaking hands with a person who has affected from virus, touching a item that has been affected by virus and afterward touching the body parts as eyes, nose, or mouth of some animal corona viruses, for instance, FCoV (feline corona virus), can spread by contact from feces.

The National Institutes of Health (NIH) recommend that some individuals have the most noteworthy danger of developing entanglements due to COVID-19. They include Youngsters, Individuals aged 65 years or more, pregnant women. Corona viruses will contaminate most of the people eventually during their lifetime. Corona viruses can transform adequately, which makes them so

contagious. the Symptoms of Corona virus includes Fever, Breathlessness, Cough, Sore Throat, It might take 2–14 days for an individual to see indications after contamination. For effective patients, the subsequent diagnostic procedures are used; (RT-PCR) to find out the up nucleic corrosive of sputum SARS-CoV-2, swabbing of throat, and emissions tests of the lower respiratory band. In COVID-19 patients, the white blood cell (WBC) can be differ. Leukopenia, lymphopenia and leukocytosis, have been accounted for, though lymphopenia found most common. As well as the treatment is concerned until now, there are not still any anti-viral drug that explicitly hit/treat the human corona virus, so some medicines are playing a just supportive role. In this regard, IFNs (in vitro, interferons) are partially proved to be effective against corona virus. Ribavirin with IFNs may have expanded action in vitro when contrasted with IFNs alone defend against some type of corona virus; be that as it may, the adequacy of this combination in vivo requires further assessment. The treatment is indicative, and therapy of oxygen signifies the significant treatment intercession for cases with serious contamination. Mechanical ventilation might be fundamental for respiratory failure cases refractory to therapy of oxygen, although hemodynamic treatment is a basic source for control septic shock.

Prevention is the most excellent practice to minimize the COVID-19 effects taking into consideration the absence of successful cure. Still now, there is not found any type of vaccine and the best prevention is to keep away from exposure to the infection.[15] As there is not any cure, so treatment incorporates over-the-counter (OTC) drugs and self-care. Individuals can make a few measures, as well as: 1) avoiding and resting overexertion.2) Drinking sufficient water. 3) Refraining from smoky area and smoking. 4) Taking ibuprofen, acetaminophen for torment and fever. 5) Applying sanitizer 6) A specialist can examine the infection through taking a respiratory fluids sample, for instance, mucus from the blood or nose. 7) Set recommendations to overcome contamination epidemic.[9] To stop transmission, effective persons should stay at home and rest during disease. They ought to stay away from contact with other people. Covering the nose and mouth with a mask as sniffling or coughing can stop transmission. It is imperative to discard tissues after utilize and keep up cleanliness all around the residance. There are some following primary measures to prevent corona virus are as using face mask; covering sniffles and cough with tissues; washing hands constantly with soap or sterilize with hand sanitizer, avoiding contacts with effective persons; keeping up a right distance from others; and refraining from eye, nose, and mouth contact with dirty hands.

A corona virus pestilence had been spreading in different parts of the world including China since December, 2019. The particular epidemic caused of so many human death from disease as well as terrible mental pressure. There have been medical reports regarding the mental effect of the outbreak on the whole population, clinical staff, patients, kids, and adults.[17] the COVID-19 may have strong negative consequences for wellbeing and can cause genuine mental issues including intense pressure, sleep deprivation, uneasiness, and chronic depression.[18] The COVID-19 virus, not long after its development not just caused various deaths in China however quickly spread to different other nations too The rise of SARS-CoV-2 and the hazard of impending endemics have brought into the front line the dire need to plan for the outcomes of related epidemics and pandemics. The result of such flare-ups harm physical as well as mental health too, in this manner, it is important to distinguish psychological health problems and to appropriately use successful therapies. As of now, the main focus is given to the physical health that incorporates therapies and treatment to pneumonic symptoms. Subsequently, overlooking the profound significance of mental health, followed by the viral disease, disengagement, confined social activities, upset sleep, lockdown, and manufactured news; causing pressure, uneasiness, and depression. Epidemic as well as infodemic presents serious issues for general health that may additionally increase the danger of psychological sicknesses

The World Health Organization pronounced illness of corona virus, as COVID-19, to be a PHEIC (Public Health Emergency of International Concern) in January.2020. World Health Organization articulated that there is a major risk of COVID-19 spreading for various nations of the World. It also determined that corona virus can be exposed as a pandemic in March 2020. WHO and other health authorities around the globe are acting to contain the COVID-19 outbreak. But the emergency is creating stress through the populace. The following considerations have been created by the WHO Department of Mental Health and Substance Use that may be utilized in correspondences for psychosocial and mental well-being in different groups of people during the outbreak.

Do not connect the malady to a particular nationality. Must compassionate to each individual who is suffered from this pandemic although belong from any nation. Any Nation who is suffered by corona virus need our help, empathy, and consideration. Try not to indicate individuals with the malady as "cases of corona virus", "victims" "families of COVID-19 "or "the infected people". It is critical to isolate an individual whose test of COVID-19 is positive and to decrease stigma. And its necessary for her/him to avoid watching, listening, and reading the news about corona virus. Secure yourself and be helpful to other people. Discover ways to enhance constructive and hopeful information and positive images of nearby persons who have suffered from COVID-19. For example, individuals' stories who are victim of this pandemic or who have encouraged a friend or member of family and felt pleasure to share their experiences. Respect carers and health workers helping individuals influenced with COVID-19.

In Wuhan, the coronavirus malady (COVID-19) has been documented as the reason for a respiratory ailment, it initially started in China in December, 2019 and rapidly spread far and wide. The COVID-19 is an very pathogenic and transmittable viral disease which brought results of serious condition of respiratory SARS-CoV-2. It was found by The genomic investigation that SARS-CoV-2 is medically recognized as serious respiratory syndrome-like (SARS-like) bat infections, along these lines bats might be the likely primary repository. In beginning, no one can had the knowledge about this pandemic and its remedies but with the passage of time, and its rapidly transmission man to man has been affirmed largely and now each individual has knowledge about its severity. There is not any medically confirmed immunization accessible or antiviral medication to be used against corona virus. In any case, as clinical trials, few broad medications of antiviral have been analyzed against this outbreak, brought about clinical convalescence. Currently, primary importance is given to the physical health. Hence, ignoring the importance of psychological health, followed by the viral infection. There are limited studies that have investigated awareness level and the COVID19 pandemic effect on psychological health. Therefore, the current study was conducted to examine the awareness level, responses regarding precautionary measures and psychological effect of COVID-19 outbreak on university students.

Objectives
Following were the study objectives.
To find out the awareness of the university's students regarding COVID- 19.

To identify the precautionary measure among the university's students regarding outbreak of COVID-19 in Pakistan
To determine the effect of COVID-19 outbreak upon the psyche among university students in Pakistan

To measure the deference between athlete and non-athlete's awareness level, expected response of precautionary measure and psychological affect in respect of COVID-19 outbreak in Pakistan

To measure gender wise (Male and Female) deference of awareness level, expected response of precautionary measure and psychological affect among university students in respect of COVID-19 outbreak in Pakistan

To measure the locality wise (rural and urban) difference of awareness level, expected response of precautionary measure and psychological effect in respect of COVID-19 outbreak in Pakistan

2.   RESEARCH QUESTIONS
Whether university's students are well aware regarding COVID- 19 (Corona Virus)

Whether university student's response of precautionary measure will be up to the mark regarding outbreak of COVID-19 in Pakistan

Whether COVID-19 outbreak significantly negative affect the psyche of university students in Pakistan Whether University athlete's awareness level, expected response of precautionary measure and psychological affect in respect of COVID-19 outbreak is significantly deferent then non-athlete.

Whether there is a significant gender wise (Male and Female) deference in awareness level, expected response of precautionary measure and psychological affect among university students in respect of COVID-19 outbreak in Pakistan

Whether there is a significant locality wise (rural and urban) difference in awareness level, expected response of precautionary measure and psychological affect in respect of COVID-19 outbreak in Pakistan.

3.   METHODS AND MATERIALS
All those students enrolled in and residing in hostels were treated as population. The total students residing in hostels were 2060 (1420 male, 640 female) due to researcher limitations (i.e. time, finance, availability) the researcher took sample from the population following Gay (2003) suggestions for sampling and took 10% sample from the whole

population. The researcher selected 206 students 142 males and 64 female) from all the hostels including girls hostel as the sample of the study through proportionate random sampling technique.

The study was descriptive in nature and normative survey method was use to collection. A self-developed questionnaire consisted of 27 items was preferred as instrument for data collection. The questionnaire was developed with collaboration other research's colleagues and literature review. To collect the relevant data from the respondents, a data collection team was prepared consisted of 7 MPhil (4 males and 3 female) students. They were properly guided about all the items of the questionnaire by the research. The instructions were also made clear by the researcher for the data collection. The female students collected the data from girl's hostel's students and male student from boys' hostels respectively. They were given only one night for the data collection, because the university was going to close from next morning. The collected data was handed over to the researcher for further process. The independent variable of the study was outbreak of COVID-19 which was based on the perceptions of the students and dependent variables were awareness, precautionary measures and psychological status of students studying in Gomal University. The questionnaire was made on ration scale by following likert type scale having five different options from strongly disagree to strongly agree from all variables of the study and range of the items was 1-5 respectively. The range of negative items were reverse.

Validity and reliability are two important phases in instrument development. The validation of content validity was done through experts. The formula of content validity ratio is $CVR=(Ne-N/2)/(N/2)$. The reliability of the questionnaire was measured using Cronbach's Alpha which was appeared as .883 laying in strong correlation coefficients.

The gathered data was analyzed by using the chi-square test and Independent Sample t-test as statically tool with help of SPSS.

4. RESULTS:

Table # 1 Awareness of University Students (Boarder) about COVID-19

S.N	Awareness	SDA F %age	DA F %age	UD F %age	A F %age	SA F %age	Mean	Chi-Square
1.	I know the about prevention of coronavirus,	0 0%	0 0%	0 0%	122 59.2%	84 40.8%	4.40	186.58*
2.	I know its relation to immune efficiency	3 1.5%	0 0%	0 0%	142 68.9%	61 29.6%	4.25	261.34*
3.	I know about the infection of coronavirus	3 1.5%	61 29.6%	3 1.5%	81 39.3%	58 28.2%	3.63	7.01*
4.	I know that corona transmit from person to person	0 0%	0 0%	3 1.5%	84 40.8%	119 57.8%	3.57	125.65*
5.	I know about the safety measure	0 0%	3 1.5%	3 1.5%	145 70.4%	55 26.7%	4.22	103.11*
6.	I know it can be transmitted from animals to human	29 14.1%	0 0%	29 14.1%	119 57.8%	29 14.1%	3.57	141.97*
7.	I have full knowledge about its initial symptoms,	0 0%	29 14.1%	0 0%	148 71.8%	29 14.1%	3.85	137.48*
8.	I know about the coronavirus	3 1.5%	0 0%	3 1.5%	90 43.7%	110 53.4%	4.49	117.96*
Awareness		**2.33%**	**5.65%**	**2.5%**	**56.4%**	**35.09%**		

*Significant at alpha level (0.05)

The table showing the responses of university students regarding the awareness about COVID-19. Total 8 items were asked and the total percentages shows that majority of the students agree (56.4%) that they were aware about the COVID-19. On the other hand, 35.09% students respond strongly agree with the statement, 5.65% were disagree, 2.50% were undecided and 2.33% were strongly disagree with the statement. The researcher concluded that majority of the students were well aware about the COVID-19. From the output of Tables1 above, χ (1) =186.58 and p=.000, χ(2) =261.34 and p=.000, χ(3)=7.01 and p=.000, χ(4)=125.65 and p=..00, χ(5)=103.11 and p=.000, and χ(6)= 141.97 and p=.000 and χ(7)=137.48 and p=.000 χ(8)=117.96 and p=.000. The "p" value of the testing items of awareness level from X (1) to X (8) is less than .05, so the statistic is considered significant. Hence the data explains that the university's students are well aware about COVID-19 or the response of the University's students about awareness of COVID-19 is statistically found significant.

Table # 2: The non-parametric Chi-Square table show university's students response to precautionary measures in respect of COVID-19 outbreak

S.N	Precautionary Measures	SDA F %age	DA F %age	UD F %age	A F %age	SA F %age	Mean	Chi-Square
1.	I will wash my hands frequently (after every 2 hours)	33 16%	0 0%	0 0%	115 55.8%	58 28.2%	3.80	51.44*
2.	I will avoid touching the nose, mouth, and eyes	56 27.2%	0 0%	6 2.9%	86 41.7%	58 28.2%	3.43	64.52*
3.	I will use a mask regularly	0 0%	28 13%	0 0%	104 50.5%	74 35.9%	4.08	42.68*
4.	I will use mouth wash to avoid the infection	3 1.5%	0 0%	12 5.8%	123 59.7%	68 33%	4.23	180.52*
5.	I will use disinfectants in my living room and home	0 0%	33 16%	6 2.9%	112 54.4%	55 26.7%	3.91	118.15*
6.	I will take care of proper ventilation	36 17.5%	0 0%	32 15%	80 38.8%	58 28.2%	3.60	28.64*
Total Precautionary Measures		**10.3%**	**4.8%**	**4.4%**	**50.1%**	**30.4%**		

* significant at alpha level (0.05)

The table showing the responses of university students regarding the intentions of students to follow the precautionary measures about COVID-19. Total 6 items were asked and the total percentages shows that majority of the students agree (50.1%) that they will follow the precautionary measures of COVID-19. On the other hand, 30.4% students respond strongly agree with the statement, 10.3% were strongly disagree, 4.8% were disagree and 4.4% were undecided with the statement. The researcher concluded that majority of the students were intend to follow the precautionary measures of COVID-19. The above Tables 2 depicts that, $\chi(1) = 51.44$ and p=.000, $\chi(2) = 64.52$ and p=.000, $\chi(3)=42.68$ and p=.000, $\chi(4)=180.52$ and p=..00, $\chi(5)=118.15$ and p=.000, and $\chi(6)= 28.64$ and p=.000, the "p" value of the testing items of response to precautionary measures from X (1) to X (6) is less than .05, the statistic is considered significant. Hence the table 2 confirmed that university's student's responses of precautionary measure in respect of COVID-19 outbreak will be up to the mark or the response of the University's students about precautionary measures of COVID-19 will be up to the mark and statistically significant.

Table # 3:The non-parametric Chi-square statistics showing the psychological effect of COVID-19 outbreak upon the University's students in Pakistan.

S.NPsychological effect of COVID-19	SDA F %age	DA F %age	UD F %age	A F %age	SA F %age	Mean	Chi-Square
1. The health emergency in Pakistan has reduced my confidence	29 14.1%	0 0%	91 44.2%	57 27.7%	29 14.1%	3.26	51.68[*]
2. The health emergency in Pakistan have put me under mental stress	29 14.1%	29 14.1%	33 16%	115 55.8%	0 0%	3.13	104.60[*]
3. The health emergency in Pakistan have to lead me toward anxiety	58 28.2%	0 0%	0 0%	90 43.7%	58 28.2%	3.43	9.94[*]
4. I will avoid random crowed (visiting shopping malls, market, cities, etc.)	29 14.1%	0 0%	58 28.2%	33 16%	86 41.7%	3.71	40.40[*]
5. I will avoid cultural gathering (marriages and condolence gathering)	29 14.1%	57 27.7%	0 0%	87 42.2%	33 16%	3.18	41.53[b]
6. I will avoid social interaction (vesting friends and family members)	0 0%	0 0%	0 0%	173 84%	33 16%	4.16	95.14[*]
7. I will confine my sport activities	0 0%	0 0%	0 0%	120 58.3%	86 42.2%	4.41	5.61[*]
8. I am satisfied with the actions taken by the government for the prevention of coronavirus	29 14.1%	29 14.1%	90 43.7%	0 0%	58 28.2%	3.14	49.26[*]
9. I think the role of media is positive upon the health emergency in Pakistan	29 14.1%	29 14.1%	0 0%	148 71.8%	0 0%	3.43	137.48[*]
10. Governmental facilities are sufficient	33 16%	29 14.1%	0 0%	58 28.2%	86 41.7%	3.65	40.40[*]
11. I am satisfied with the facilities in the hospitals in Pakistan	62 30.1%	28 13.6%	0 0%	87 42.2%	29 14.1%	3.10	47.16[*]
12. Closing education institution is a positive step toward controlling the corona	0 0%	0 0%	62 30.1%	86 41.7%	58 28.2%	3.98	6.68[*]
13. I trust that the government will control the spread of coronavirus	0 0%	0 0%	29 14.1%	90 43.7%	87 42.2%	4.28	34.43[*]
Total Psychological effect of COVID-19	**12.22%**	**7.52%**	**13.56%**	**42.72%**	**24.0%**		

The table showing the responses of university students regarding the psychological effects of COVID-19. Total 13 items were asked and the total percentages shows that majority of the students agree (42.72%) about the psychological effects of COVID-19. On the other hand, 24.4% students respond strongly agree with the statement, 12,22% were strongly disagree, 7.52% were disagree and 13.56% were undecided with the statement. The researcher concluded that majority of the students showed agreement that there is significant psychological effect of COVID-19 on university students. Tables 3 explain that, $\chi(1) = 51.68[a]$ and p=.000, $\chi(2) = 104.60[b]$ and p=.000, $\chi(3)= 9.94[c]$ and p=.000, $\chi(4)= 40.40[b]$ and p=..00, $\chi(5)= 41.53[b]$ and p=.000, and $\chi(6)= 95.14[d]$ $\chi(7)= 5.61[d]$ and p=.018,

$\chi(8)= 49.26^b$ and p=.000, $\chi(9)= 137.48^c$ and p=.000, $\chi(10)= 40.40^b$ and p=.000, $\chi(11)= 47.16^b$ and p=.000, $\chi(12)= 6.68^c$ and p=.035, $\chi(13)= 34.43^c$ and p=.000. The "p" value of all the testing items of psychological effect from X (1) to X (13) is less than .05, the statistic is considered significant. Hence the table 3 confirmed that majority of the university's student have the stance that they are psychologically depressed due to COVID-19 outbreak. Statistically outbreak of COVID-19 has significantly affect the university's students psychologically.

Table # 4:Independent sample t-Test showing the difference between male and female university's students' responses regarding awareness, precautionary measure and psychological effect of COVID-19 outbreak

Testing Variable	Gender	N	Mean	S.D	Df	F	Sig	T	Sig. (2-tailed)
1. Awareness level of university's students about COVID-19	Male	142	4.12	.397		.002	.961	.062	.951
	Female	64	4.12	.401					
2. The response of university's students about precautionary Measures of COVID-19	Male	142	3.84	.796	204	.024	.877	-.042	.966
	Female	64	3.84	.786					
3. The psychological effect of COVID-19 outbreak upon the university's students	Male	142	3.60	.419		.004	.950	-.072	.943
	Female	64	3.61	.420					

In response of first testing variable (awareness level of university's students about COVID-19), the table 4 depicts the mean of male students 4.12, SD ±.397, mean of female students 4.12, SD = ±.401, f = .002 Sig.= .961 > a= .05, t = .062 sig = 951 > a = .05. Hence the t statistic confirms that no significant difference was found between the response of male and female university students in respect of their awareness level about COVID-19. With reference to 2nd testing variable (Response of university's students about precautionary Measures of COVID-19), the table 4 shows that the mean of male students 3.84, SD = ±.796, mean of female students 3.84, SD = ±.786, f = .024 Sig.= .877 > a= .05, t = -.042 sig = 966 > a = .05. the t statistic ratifies that there was no significant difference between the stance of male and female university students about Response of precautionary Measures of COVID-19. Similarly, with reference to the 3rd testing variable (Psychological effect of COVID-19 outbreak upon university students), no significant difference was confirmed between the stance of male and female athletes.

Table # 5: Independent sample t-Test showing the difference between athlete and non-athlete university's students' responses regarding awareness, precautionary measure and psychological effect of COVID-19 outbreak

Testing Variable	Athlete or Non Athlete	N	Mean	S.D	Df	F	Sig	T	Sig. (2-tailed)
1. Awareness level of university's students about COVID-19	Athlete	102	4.12	.372		3.552	.061	.088	.930
	Non-athlete	104	4.12	.424					
2. The response of university's students about precautionary Measures of COVID-19	Athlete	102	3.82	.774	204	.546	.461	-.363	.717
	Non-athlete	104	3.86	.813					
3. The psychological effect of COVID-19 outbreak upon the university's students	Athlete	102	3.66	.405		2.507	.115	1.855	.065
	Non-athlete	104	3.55	.426					

The above table 5 reveals in response of 1st testing variable (awareness level of university's students about COVID-19), the mean of students' athlete 4.12, SD ±.372, Non- athletes 4.12, SD = ±.424, f = .3.55 Sig.= .061 > a= .05, t = .088 sig = 930 > a = .05. therefore, the t statistic data explains that there is no significant difference between the response of athletes and non-athletes in respect of their awareness level about COVID-19. Similarly, the table shows when testing 2nd variable (Response of university's students about precautionary Measures of COVID-19), the mean of Athletes 3.82, SD = ±.774, non-athletes 3.84, SD = ±.813, f = .546 Sig.= .461 > a= .05, t = -.363 sig = .717 > a = .05. the data reveals that no significant difference is observed between the athletes and non-athletes' response regarding precautionary measures of COVID-19. With reference to 3rd testing variable (Psychological effect of COVID-19 outbreak upon university's students) the table shows the mean of Athletes 3.66, SD = ±.405, non-athletes 3.55, SD = ±.426, f = 2.507 Sig.= .115 > a= .05, t = 1.855 sig = .065 > a = .05. Hence no significant difference is found between the stance of athletes and non-athletes of the university.

Table 6: Independent sample t-Test showing the difference between rural and urban university's students' responses regarding awareness, precautionary measure and psychological effect of COVID-19 outbreak

Testing Variable	Locality	N	Mean	S.D	Df	F	Sig	T	Sig. (2-tailed)
1. Awareness level of university's students about COVID-19	Rural	118	4.21	.352		8.700	.004	3.959	.000
	Urban	88	4.00	.422					
2. The response of university's students about precautionary Measures of COVID-19	Rural	118	3.98	.732	204	3.114	.079	2.974	.003
	Urban	88	3.65	.832					
3. Psychological effect of COVID-19 outbreak upon university's students	Rural	118	3.52	.441		27.124	.000	3.442	.001
	Urban	88	3.72	.358					

In respect of 1st testing variable (awareness level of university's students about COVID-19), the table 6 depicts the mean of rural students 4.21, SD ±.352, mean of urban students 4.00, SD = ±.422, f = 8.700 Sig.= .004 < a= .05, t = .3.95 sig = .000 < a = .05. Hence the data explains that significant difference is observed between the responses of urban and rural students about awareness of COVID-19. The table reveals while testing the 2nd variable (Response of university's students about precautionary Measures of COVID-19), the mean of rural students 3.98, SD = ±.732, urban students 3.65, SD = ±.832, f = 3.114 Sig.= .079 > a= .05, t = 2.974 sig = .003 < a = .05. The t statistics ratify that there is a significant difference between the stance of urban and rural students regarding response of precautionary measures of COVID-19. Similarly, in respect of 3rd variable (Psychological effect of COVID-19 outbreak upon university's students), the mean of rural students 3.52, SD = ± .441, urban students 3.72, SD = ±.358, f = 27.124 Sig.= .000 < a= .05, t = 3.442 sig = .001 < a = .05. the data reveals that significant difference is observed between the stance of rural and urban students regarding Psychological effect of COVID-19 outbreak.

5. DISCUSSION:

One of the main focus of the current study was to know the awareness of the students regarding COVID-19, in this perspectives the results of the study indicates that University students were well aware about COVID-19. the same result was supported by Khasawneh et al., in his study conducted on Jordanian medical students and found, that 95% students were well aware regarding COVID-19 and have enough knowledge to prevent their selves from this pandemic situation. The author further clarified that the main reason of their Knowledge about COVID-19 is different social media engines which help to keep them update about this pandemic situation of COVID-19.[22,23,24,25] In respect to precautionary measures of the university students regarding COVID-19, the study in hand found, that majority of the university's student's responses were up to the mark and statistically significant to adopt the precautionary measures of COVID-19. The same was sported in the study of Alfahan and Zhong that precautionary measures such as hand washing (87.0%) and staying at home (83.1%) were adopted by participants.[26,27] The study in hand, also found that the Students were psychologically

depressed regarding the COVID-19 outbreak in Pakistan. The same results are supported by Cao et al., indicated that all the people in the world suffering from unboreable psychological pressure including students. The author also indicated that 21% of the population experiencing from moderate anxiety and the same anxiety rate is increasing among the college students.

6. CONCLUSION

The university's students were well aware of COVID-19. It was observed that university's students are ready to implement all the precautionary measures through which they can eradicate the effect of COVID-19 among the society. Apart from the awareness and positive response to precautionary measures it was also observed that the Students were psychologically depressed regarding the COVID-19 outbreak in Pakistan. Urban students were more psychologically affected by the COVID-19 outbreak than the rural students. It was also concluded that male and female and athletes, non-athletes were having the same psychological affect due to COVID-19 outbreak.

Recommendations of the Study

As the current study showed that the students are psychologically depressed due to Covid-19, therefore they may be given online training and awareness through the media that how they can cope with the situation so that they may focus on their studies and may help their families and community to face the situation without fear and by taking the precautionary measures.

REFERENCES:

Alfahan A., S. Alhabib I. Abdulmajeed S. Rahman S. Bamuhair (2016) In the era of corona virus: health care professionals' knowledge, attitudes, and practice of hand hygiene in Saudi primary care centers: a cross-sectional study. J Community Hosp Intern Med Perspect. 6:32151. 10.3402/jchimp.v6.32151

Adhikari, S. P., S. Meng, Y.J. Wu, Y.P. Mao, R.X. Ye, Q.Z. Wang, H. Zhou, (2020). Epidemiology, causes, clinical manifestation and diagnosis, prevention and control of coronavirus disease (COVID-19) during the early outbreak period: a scoping review. Infectious diseases of poverty, 9(1), 1-12.

Bao, Y., Y. Sun, S. Meng, S., Shi, (2020). 2019-nCoV epidemic: address mental health care to empower society. Lancet 395 (10224), e37–e38 London, England.

Cui J. F., Z. L. Li (2019) Origin and evolution of pathogenic coronaviruses. Nat Rev Microbiol; 17 (3):181–92.

Centers for Disease Control and Prevention (CDC) (2003). Update: Outbreak of severe acute respiratory syndrome--worldwide, 2003. MMWR Morb Mortal Wkly Rep.52(12):241–6.

Cao, W., Z. Fang, G. Hou, M., Han, X. Xu, J. Dong, J. Zheng, (2020). The psychological impact of the COVID-19 epidemic on college students in China. Psychiatry research, 112934.

Dong, Y., X. Mo, Y., Hu, (2020). Epidemiological characteristics of 2143 pediatric patients with 2019 coronavirus disease in China. Pediatrics.

Government of Pakistan, (2020). Retrieved from http://covid.gov.pk/

Hymowitz MB, B.B. Hayes (2006) Maury JJ, Geller AC. Evaluation of medical students' knowledge, attitudes, and personal practices of sun protection and skin self-examination. Archives of dermatology. 1;142(4):523-4.

Jairoun A., N. Hassan A. Ali O. Jairoun M. Shahwan (2019) Knowledge, attitude and practice of antibiotic use among university students: a cross sectional study in UAE. BMC Public Health. 19:1–8. 10.1186/s12889-019-6878-y

Khan, S., R. Siddique, H. Li, (2020). Impact of coronavirus outbreak on psychological health. Journal of Global Health, 10(1).

Khasawneh A.I., A.A. Humeidan JW Alsulaiman, S. Bloukh M, Ramadan TN, Al-Shatanawi (2020) Medical students and COVID-19: Knowledge, attitudes, and precautionary measures. A descriptive study from Jordan. Frontiers in public health.;8.

Lai C. C., T.P. Shih W.C. Ko H.J. Tang (2020). Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and corona virus disease-2019 (COVID- 19): the epidemic and the challenges. Int. J Antimicrob Agents 105924.

Lippi G, M. Plebani (2020) Procalcitonin in patients with severe coronavirus disease 2019 (COVID-19): a meta-analysis. Clinica chimica acta; international journal of clinical chemistry. Jun; 505:190.

Lagier J.C., M. Million P. Gautret P. Colson J.Y. Fournier P. E, Tissot-Dupont H, Chabrière (2020). Outcomes of 3,737 COVID-19 patients treated with hydroxychloroquine /azithromycin and other regimens in Marseille, France: A retrospective analysis. Travel medicine and infectious disease. 1; 36:101791.

Li, S.W., Y. Wang, Y. Yang, (2020). Analysis of influencing factors of anxiety and emotional disorders in children and adolescents during home isolation during the epidemic of novel coronavirus pneumonia. Chinese Journal of Child Health. 1–9.

Organization W. H. (2020). Laboratory testing for corona virus disease 2019 (COVID-19) in suspected human cases: interim guidance, 2 March 2020. World Health Organization,

Peiris J. S., S.T. Lai L.L. Poon Y. Guan L. Y, Yam W Lim (2003). Coronavirus as a possible cause of severe acute respiratory syndrome. Lancet. 361: 1319–25. [Cross Ref]

Plaster A. N., J.E. Painter J. E. Tjersl and D. H, Jacobsen (2020). University students' knowledge, attitudes, and sources of information about zika virus. J Community Health. (2018) 43: 647–55. 10.1007/s10900-017-0463-z

Shereen, M., A.. Khan, S., Kazmi, A., Bashir, N. Siddique, (2020). COVID-19 infection: Origin, transmission, and characteristics of human corona viruses. Journal of Advanced Research.

Unhale, S., S. Ansar, Q. B. Sanap, S. Thakhre, S. Wadatkar, S., Bairagi, R., Biyani, (2020). World Journal of Pharmaceutical and Life Sciences.

Wang, H., S., Wang, K. Yu, (2020). COVID-19 infection epidemic: the medical management strategies in Heilongjiang Province, China.

WMHC. (2020). Wuhan Municipal Health and Health Commission's Briefing on the Current Pneumonia Epidemic Situation in Our City. 2020. http://wjw.wuhan. gov.cn/front/web/showDetail/2019123108989. Accessed 1 Feb 2020.

World Health organization (2020). Retrieved from https://www.who.int/docs/default-source/coronaviruse/mental-health-considerations. pdf?sfvrsn=6d3578af_2

Yang, Y., W. Li, Q., Zhang, L. Zhang, T. Cheung, Y.T. Xiang, (2020). Mental health services for older adults in China during the COVID-19 outbreak. Lancet Psychiatry 20 30079-1.

Zarocostas, J. (2020). How to fight an infodemic. Lancet. 395: 676. Medline: 32113495 doi:10.1016/S0140-6736(20)30461-X

Zhong N., B. Zheng Y, Li L, Poon Z, Xie K, Chan (2003). Epidemiology and cause of severe acute respiratory syndrome (SARS) in Guangdong, People's Republic of China, in February, 2003. The Lancet; 362(9393):1353–8.