**Research Journal of Psychology (RJP)**

**Online ISSN:** 3006-7219
**Print ISSN:** 3006-7200
Volume 3, Number 1, 2025, Pages 321 – 332
**Journal Home Page**
**https://ctr.rjmss.com/index.php/19/about**

# The Impact of Online Learning on University Students' Mental Health During the COVID-19 Pandemic: A Study of Academic Stress, Uncertainty Tolerance, and Psychological Wellbeing

**Almas Fatima[1], Imran Ashraf Malik[2], Ayesha Ahmad[3] & Tahir Aziz[4]**

[1]*MS Clinical Psychology, Riphah Institute of Clinical and Professional Psychology, Riphah International University Lahore, Pakistan, Email: almasfatima2017@gmail.com*
[2]*MPH, Ph.D. Scholar, Department of Psychology University of Karachi, Sindh, Pakistan, Email: imranashrafmalik@yahoo.com*
[3]*PhD Scholar, Institute of Clinical Psychology, University of Karachi, Sindh, Pakistan, Email: aishsahmad0@gmail.com*
[4]*Department of Psychology, Hazara University Mansehra, Email: tahir.yousfzai@gmail.com*

**ARTICLE INFO**

***Article History:***

| | | |
|---|---|---|
| *Received:* | *January* | *12, 2025* |
| *Revised:* | *February* | *13, 2025* |
| *Accepted:* | *February* | *14, 2025* |
| *Available Online:* | *February* | *16, 2025* |

***Keywords:***

*Online learning, Academic Stress, Intolerance of Uncertainty, Psychological Wellbeing*

***Corresponding Author:***
*Imran Ashraf Malik*
***Email:***
*imranashrafmalik@yahoo.com*



## ABSTRACT

*The purpose of this study was to explore the phenomenon of online learning during COVID-19 academic stress, intolerance of uncertainty and psychological wellbeing among university students. The hypothesis of this study was that there is likely to be a relationship between academic stress, intolerance of uncertainty and psychological well-being among university students and academic stress will negatively predict psychological well-being among university students. The data was collected online from the target sample of university students with an age range of 19 to 25 years using correlational research design with purposive sampling strategy. Scoring sheet of The Perception of Academic Stress Scale, Intolerance of Uncertainty Scale and Ryff's Psychological Wellbeing Scale were administered on the sample population to assess the level of academic stress, intolerance of Uncertainty and Psychological wellbeing in them. The data was statistically analyzed through Statistical Package for the Social Sciences (SPSS) 23. According to hypothesis, the results of the study showed that there is significant positive correlation between Academic stress, intolerance of uncertainty and Psychological Wellbeing and academic stress predicting psychological wellbeing. Therefore, Teachers, educators, institutional administration, students, and parents will benefit from this research in understanding the current online learning environment and its effects on Pakistani students' education.*

## Introduction

In the last month of 2019, COVID-19, a novel corona virus, was discovered in a seafood market in Wuhan, China (Huang et al 2020). COVID-19 was mentioned as a pandemic by the Director General of the World Health Organization (WHO) in March of the next year. Most governments around the world have adopted a similar strategy to combat the spread of this highly infectious disease, requiring lockdown, social/physical separation, restricting face-to-face teaching and learning, and reducing immigration. (Gonzalez, 2020). On February 26, 2020, the appearance and attack of this deadly virus was discovered in Pakistan. Two cases were primarily reported, one of the students from Karachi University and the other from Islamabad. Following then, the number of positive cases has climbed at such a rapid rate that there have already been 271,875 total cases recorded (including 1,486 new cases), 236,586 recovered (with an 87 percent recovery rate), and 5,777 deaths (with 2.1 percent death rate). It was estimated that 1,219 confirmed cases per million people are recorded per day (Corona Tracker, 2020). In Lahore, Punjab's capital, 46,930 positive people were discovered. This terrible infection has claimed the lives of 808 Lahore residents, including 5 in the last 24 hours (PDMA Punjab, 2020).

The use of internet and other important technologies in online learning to create educational resources, deliver teaching, and manage programs (Fry, 2001). To be effective and efficient for teachers, companies and organizations must have a thorough awareness of the welfare and disadvantages of online learning. Through the implementation of online learning methodologies, COVID-19 has a significant positive impact on learning quality and success (Gonzalez et al., 2020).

E-learning performance is controlled by several factors, including accessibility, the use of appropriate tools, course material, and evaluation methods. For teachers and students, e-learning, like any other teaching method, offers advantages and disadvantages. Apart from the population-based benefits of e-learning during the pandemic, other benefits mentioned include improved benefits, access to resources regardless of location or time, and price and air pollution reductions, such as reduced carbon dioxide discharges due to reduced traffic (Rosenberg, 2001). Online classes have set of challenges, such as limited internet access, incompetent internet connections, and responders' lack of technological knowledge. Some advantages, such as schedule flexibility, can also be disadvantages, particularly for students who have difficulty with self-discipline (Attardi, 2015).

### Academic Stress

Described as the body's response to academic demands that are beyond students' adaptive skills. During their academic careers, 10–30% of students are expected to experience any level of academic stress. Academic stress has a significant impact on students attending universities with high academic standards. The most major health obstacle for university students has been identified as academic stress (Johnson, 2010).

It causes a highly concerning health issue. Stress affects not only adults; the loads of daily life, even in elementary school, have led to an increase in the occurrence of this disorder in children and teenagers, in which both endogenous and exogenous demands combine to adversely affect students' academic performance and achievement (Caldera et al., 2007).

Many professors and students throughout the world have expressed dissatisfaction with the changeover to an online delivery modality. Faculty members have already begun developing lesson plans for their students who will be receiving online training. Online education at any

university is not a original way of delivery. Many instructors are willing to employ online platforms as the primary mode of delivery or as a supplement to traditional classroom training. However, there's always the possibility that some teachers who aren't tech-savvy won't be able to handle it. (Attardi, 2015). As a result of the change to online mode, the faculty's ability to work with existing technology has been tested.

Moreover, computers and IT equipment are in high demand at home for parents, children, and other relatives who work from home. Working from home, as a result, would be a difficult task for the professors. Furthermore, many colleges lack the infrastructure and resources required to quickly begin delivering online courses. What about pupils who do not have a computer or internet connection at home? Is it possible to offer music and art courses entirely online, including laboratories and practical? What happens if students are incapable of completing their coursework online? The quality of online education is a serious issue that must be addressed.

**Intolerance of Uncertainty**

The intolerance of Uncertainty (IU) is a natural part of life; we can never be fully assured of what will occur next. Many people enjoy confusion and live lives that are full of adventure: they frequently score high on personality tests that assess ‘openness to experience.' Others find uncertainty aversive, uncomfortable, or stressful, and fail to work in such circumstances. They may have negative views about uncertainty and try to prevent it, or they may try to monitor or eradicate it using strategies. Psychologists refer to these reactions as "intolerance of uncertainty." People who are intolerant of uncertainty are often described as acting as if they have a phobia of uncertainty or as if they are "allergic to uncertainty." (Tabia et., al 2008)

IU explains in the sense of worry and discusses some of the unhelpful methods that people with high IU use to manage their feelings. One of the most critical aspects of GAD therapy is the attempt to improve the client's ability to accept uncertainty, which is often referred to as the "embracing uncertainty” obstacle

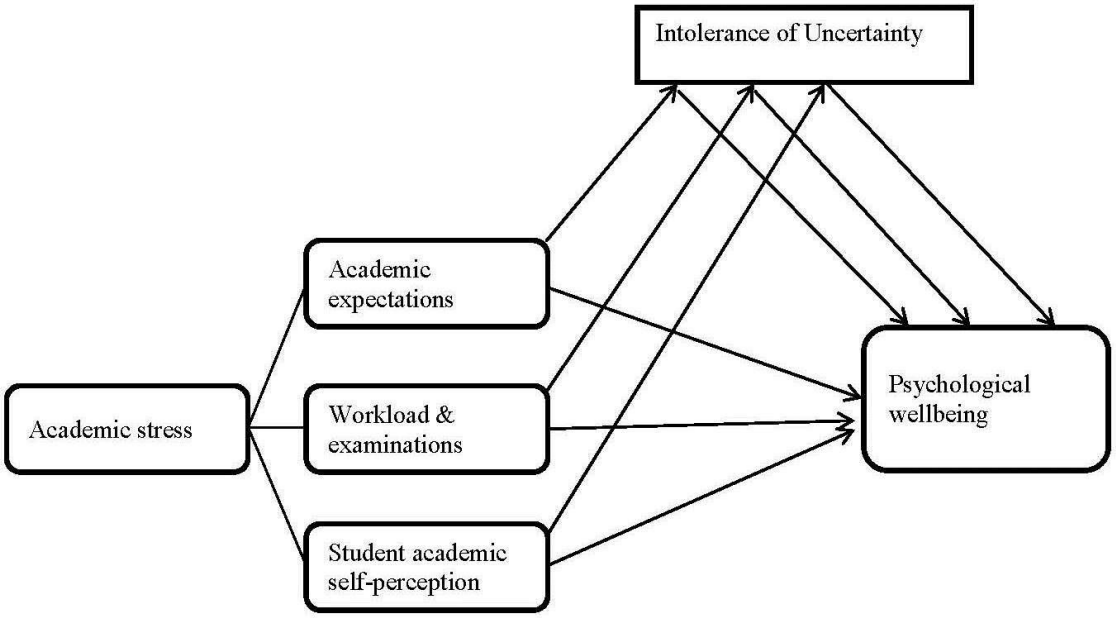
According to the definition of (IU), “a dispositional trait that arises from a collection of negative beliefs about uncertainty and its consequences and includes the propensity to respond negatively on an emotional, cognitive, and behavioral level to uncertain situations and events” (Tanveer et., al 2020).

**Psychological Wellbeing**

Psychological Wellbeing within the eudaimonic perspective, psychological well-being is described as the realization of one's real potential. This differs from the subjective well-being perspective (Ryff, 1995). Psychological well-being is viewed as the product of a well-lived life, and it is a significant aspect in students' development in adjusting to college/university life. As a result, this concept usually includes characteristics such as self-acceptance, supportive relationships, autonomy, environmental mastery, personal development, and life aim. (Stallman 2010). Students at the university level must adjust to a new learning environment while also dealing with increased academic pressure. (Cooke et al., 2006). This stage is believed to be one of the highest anxiety and lowest psychological well-being stages in the life cycle, with heightened levels of psychological distress compared to the general population (Stallman, 2010). Several studies have shown that university students have lower levels of psychological well-being (Sandoval, 2017). A large percentage of university students displayed a medium level of psychological well-being in a study, showing that it reflects their degree of adjustment adaptation (Sandoval et al., 2017).

Students' troubles with academic transition can result in psychological stress and mental health problems. Among university students, complex and severe psychiatric illnesses are becoming increasingly widespread (Adlaf, Gliksman, Demers, & Newton-Taylor, 2001). A survey of college and university students in the United States found that half of them reported depressed symptoms shortly after beginning their studies (Le Fur et al., 2001) It is also found that 45 percent of students in an Australian study reported feeling emotional distress (Schweitzer, 1996). University students' anxiety levels are substantially higher than the general population's (Adlaf, 2001), it's important to look deeper into these problems to get a clearer understanding of their actual mental health condition.

**Figure 1: Proposed Study Model**




## Rationale of the Study

The purpose of this study was to analyze how online learning during this pandemic contributes to academic stress and intolerance of uncertainty and how in turn this academic stress and intolerance of uncertainty is affecting the psychological wellbeing of university students. During this pandemic the relationship between these variables was studied specifically among university young adults to analyze the problems that they are facing in online learning. Hence, this study aimed at filling the gaps in literature by exploring new dimensions of the relationship between academic stress, psychological wellbeing and intolerance of uncertainty of university students during this pandemic.

## Hypotheses of the Study

H1. There is likely to be a negative relationship of psychological wellbeing with academic stress (academic expectations, workload and examinations, student academic self-perception) and intolerance of uncertainty, among university students.

H2 Academic stress (academic expectations, workload and examinations, student academic self-perception) and intolerance of uncertainty will negatively predict psychological wellbeing among university students.

H3. Intolerance of uncertainty is likely to mediate the relationship between academic stress (academic expectations, workload and examinations, student academic self-perception) and psychological wellbeing among university students.

## Method

The purpose of this study was to see if there was a link between academic stress, intolerance of Uncertainty, and psychological well-being among university students.

### Research Design

A correlational research design was used to investigate the relationship between academic stress, intolerance of uncertainty, and psychological wellness among university students. Purposive sampling technique was used to gather data, and the sample comprised of 240 students (N=240), male and female within the age range of 19 to 25 years. The following were the assessment measures used to collect data for this research.

The Demographic Information Sheet was designed to gather information about the participants' gender, age, education, birth order, in which semester are you studying, are you studying through Online medium? Are you satisfied with the current online learning? Current CGPA, area of residence, monthly income. family system, nature of the job, any mental health disease.

**Perception of Academic Stress Scale (PAS).** Bedewy and Gabrief (2001) developed the Perception of Academic Stress Scale (PAS=18 items) in 2015. (Four questions) in academic expectations subscale, (eight items) in workload and examination subscale, and the students' academic self-perceptions subscale has (six items) were used to identify sources of academic stress among university students) 18-item, 5-point Likert-type questionnaire. The PAS was created by combining the aspects of in these 18-1tems on 5-point Likert scale ranging from (1=strongly disagree to 5= strongly agree with a (Cronbach's alpha) of 0.7.

**Intolerance of Uncertainty.** The short version of the intolerance of uncertainty Scale was used in the study (Carleton et al. 2012). Participants were assessed through 12 items (e.g., " It bothers me that I don't have all the information that I need) on a 5-point Likert type scale ranging from 1 (not at all characteristics of me) to 5 (completely characteristic of me), higher scores will indicate higher degrees of concern. It has excellent internal consistency, reliability (=.88) and construct validity (RMSEA =.073, CFI =.95, IFI =.95, GFI =.94, and SRMR =.046), according to Sarcam et al. (2014).

**Ryff's Psychological Well-Being Scales (PWB).** A 42-item version of Ryff's Psychological Well-being measures was selected for this investigation. Respondents rated how strongly they agree or disagree with 42 statements on a 7-point scale (1 = strongly agree; 7 = strongly disagree). There are six subscales on the PWB Scale: Autonomy; Environmental Mastery; Personal Growth; Positive Relationships with Others.

## Results

The data collected was analyzed with (SPSS), version 21. To establish a link between academic stress and psychological well-being, a four-step mediation analysis was used. Table 1 shows descriptive statistics that explained the appropriate interpretation of the sample characteristics. The participants who participated in the current study were 240 University students. They were 19 to 25 ages. Gender of most participants was female. 22% was male and 78% was female and 49% were from undergraduate and 51%from postgraduate level. 55% of them were studying online. 11% of them were not studying online and 34% were doing study partially 38% of students were satisfied with online study other hand 62% students were not satisfied with online education. 35% of them report that they improved their CGPA through online education, 30% students reported not improved 24% students reported no difference and 9% students were from 1st and 2nd semester. In this current study 36% of students were from rural areas and 62% were from urban areas. 71% of the nuclear family system and 28% were from joint family system. Majority of students were satisfied with their current home environment, and 40% of students were not satisfied, 29% of them were doing jobs and 71% of them were not doing jobs.

**Table 1: Descriptive Statistics of Demographic Characteristics of Participants**

| **Demographics Variables** | ***M(SD)*** | ***f (%)*** |
|---|---|---|
| **Gender** | | |
| Male | | 51(21.3) |
| Female | | 189(78.8) |
| **Age** | 20.11(3.86) | |
| **Birth order** | | |
| First | | 155(44.8) |
| Middle | | 46(19.2) |
| Last | | 45(18.8) |
| Only child | | 44(16.9) |
| **No of siblings** | 3.1(1.67) | |
| **Education** | | |
| Undergraduate | | 116(48.3) |
| Postgraduate | | 122(50.8) |
| **Current CGPA** | 3.62(4.82) | |
| **Area of residence** | | |
| Rural | | 89(36.2) |
| Urban | | 151(62.9) |
| **Family system** | | |
| Nuclear | | 172(71.7) |
| Joint | | 68(28.3) |
| **Monthly family Income** | | |
| Total numbers of people living in the household | 38.26(41.10) | |
| **Are you satisfied with current home environment** | | |
| Yes | | 153(63.8) |
| No | | 87(40.4) |
| **Are you doing any Job?** | | |
| Yes | | 70(29.2) |

| | |
|---|---|
| No | 170(70.8) |
| **Nature of the job** | |
| Full time | 64(26.7) |
| Part time | 125(52.1) |
| No job | 51(21.3) |

*Note. f=Frequency, %=Percentage N=240, SD=Standard Deviation, M=Mean*

Table 2 presents the psychometric properties mean, standard deviation, range, maximum minimum score ranges and Cronbach's alpha reliabilities of academic stress with subscales (Academic Expectations, Workload and Examinations, Students Self Perceptions) intolerance of uncertainty and psychological wellbeing.

**Table 2: Psychometric Properties of the Scales and Subscales of Academic Stress**

| **Variables** | ***K*** | ***M*** | ***SD*** | ***Range*** | **Cronbach's alpha** |
|---|---|---|---|---|---|
| Academic stress | 18 | 57.34 | 11.56 | 20-90 | .86 |
| AES | 4 | 12.9 | 3.43 | 4-20 | .71 |
| WES | 8 | 24.95 | 6.07 | 8-40 | .79 |
| SASP | 6 | 20.32 | 4.15 | 6-30 | .74 |
| Intolerance of Uncertainty | 12 | 35.90 | 10.27 | 12-60 | .91 |
| Psychological Wellbeing | 42 | 63.83 | 31.88 | 45.25 | .79 |

Note: k=number of items in scales=Mean, SD=Standard Deviation, Score, α=Reliability Co-efficient, AES= academic stress subscales academic expectations, WES=workload and examinations, SASP= student academic self-perception subscales

It is revealed in table 3 that academic stress and its subscales (academic expectations, workload and examinations and student academic self-perception) have significant positive relationship with each other (r=.75,.86,.68, n=240, p<0.01). On other hands non-significant correlation was found between academic stress & its subscales, Intolerance of uncertainty (r= -.03, n-240, p=0.01) and (r= -.15, n=240, p<0.05).

**Table 3: Inter Correlation among Academic Stress with subscales Intolerance of Uncertainty and Psychological Wellbeing**

| **Variables** | **1** | **i** | **ii** | **iii** | **2** | **3** |
|---|---|---|---|---|---|---|
| 1-Academic Stress | - | | | | | |
| i-Academic Expectations | .75** | - | | | | |
| ii-Workload and Examinations | .86** | .45** | - | | | |
| iii-Students' Academic self-perception | .68** | .39** | .30** | - | | |
| 2-Intolerance of Uncertainty | -.28** | -.29** | -.29** | .03 | - | |
| 3-Psychological Wellbeing | -.08 | -,04 | -.03 | -.14* | -.15* | - |

**p<0.01, *p<0.05

In table 4 liner regression was conducted to predict psychological wellbeing based on intolerance of uncertainty. Results indicate that intolerance of uncertainty ($\beta$= -.14, $p$< .05) influence significantly, negatively predicts psychological wellbeing among university students. The overall model explains 2% variance with $F$ (1, 239) = 4.94, $p$< .001.

**Table 4: Liner Regression results for Academic Stress, Intolerance of Uncertainty (IU) and psychological wellbeing**

| Predictors | *B* | 95% CI | | Psychological Wellbeing | | | |
|---|---|---|---|---|---|---|---|
| | | LL | UL | SE | *B* | $R^2$ | $\Delta R^2$ |
| Step 1 | | | | | | .02 | .01 |
| Constant | 167.3 | 158.03 | 176.7 | | | | |
| IU | -.28 | -.53 | -.03 | 24.69 | -.14* | | |

*Note. CI = confidence interval; LL = lower limit; UL = upper limit, SE=Standard Error, IU= intolerance of uncertainty*

The result indicates IUS as mediator between the AE, WE and SASP. in step 1, values of R2 .29 indicates that PWB explains 29 percent to AE with $F$ (1, 238) = 22.50, $p$ >.001. Findings indicate that AE significantly predicts PWB (t = 10.84, p > .01). Whereas Step 2, the value of R2 .14 indicates that PWB and IUS explains 14 percent variance in AE with $F$ (2, 237) = 2.46, $p$ >.001. Findings indicate that AE significantly predicts PWB ($t$ = .30, $p$ > .01) and Findings indicate that SCA significantly predicts PS ($t$ = .02, $p$ > .01). The ΔR2 = .14 reveals that the 02% change in the variance of model 1 and model 2 with $F$ (1, 238) =4.07 $p$ >.05. Which indicates the difference between model 1 and model 2 is not significant.

The result indicates IUS as mediator between the WE and PWB. In step 1, values of R2 .29 indicate that PWB explains 29 percent to WE with f (1, 238) = 22.50, p >.001. Findings indicate that WE significantly predict PWB (t = 9.17, p > .01). Whereas Step 2, the value of R2 .14 indicates that PWB and IUS explains 14 percent variance in WE with f (2, 237) = 2.46, p >.001. Findings indicate that WE significantly predict PWB (t = .02, p > .01) and Findings indicate that IUS significantly predicts PWB (t = .02, p > .01). The ΔR2 = .14 reveals that the 02% change in the variance of model 1 and model 2 with f (1, 238) =4.37 p > 05. Which indicates the difference between model 1 and model 2 is significant.

Result indicates IUS as mediator between the SASP and PWB. In step 1, values of R2 .03 indicate that PWB explains 03 percent to SASP with f (1, 238) = .34, p >.001. Findings indicate that SASP significantly predicts PWB (t = 12.15, p > .01). Whereas Step 2, the value of R2 .19 indicates that PWB and IUS explains 19 percent variance in SASP with f (2, 237) = 4.89, p >.001. Findings indicate that SASP significantly predicts PWB (t = .2.18, p > .01) and Findings indicate that IUS significantly predicts PWB (t = 2.18, p > .01). The ΔR2 = .19 reveals that the 03% change in the variance of model 1 and model 2 with f (1, 238) =4.37 p > 05. Which indicates the difference between model 1 and model 2 is significant.

**Table 5: Mediation analysis between Academic Stress and Psychological Wellbeing**

| *Variable* | *T* | *s.e* | *95%CI* | | *P* | $R^2$ | $\Delta R^2$ | *F* |
|---|---|---|---|---|---|---|---|---|
| **Step 1** | | | | | | | | |
| **Constant** | 10.84 | 2.33 | 20.67 | 29.85 | .00 | .29 | .08 | 22.50*** |
| **AE** | 4.74 | .18 | .51 | 1.24 | .00 | | | |
| **Step 2** | | | | | | | | |
| **Constant** | 28.58 | 5.58 | 155.75 | 178.81 | .00 | .14 | .02 | 2.46*** |
| **AE** | .02 | .39 | -.77 | .79 | .97 | | | |
| **IUS** | -2.12 | .13 | -.54 | -.02 | .03 | | | |
| **WE as Independent Variable** | | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Step 1** | | | | | | | | |
| **Constant** | 9.17 | 2.60 | 18.72 | 28.97 | .00 | .29 | .08 | 22.50*** |
| **WE** | 4.77 | .10 | .30 | .72 | .00 | | | |
| **Step 2** | | | | | | | | |
| **Constant** | 26.84 | 6.22 | 154.74 | 179.25 | .00 | .14 | .02 | 2.46*** |
| **WE** | .09 | .23 | -.43 | .48 | .92 | | | |
| **IUS** | -2.14 | .13 | -.54 | -0.2 | .03 | | | |
| **SASP as Independent Variable** | | | | | | | | |
| **Step 1** | | | | | | | | |
| **Constant** | 12.15 | 2.82 | 28.73 | 39.84 | .00 | .03 | .00 | .34 |
| **SASP** | .58 | .17 | -.23 | .44 | .55 | | | |
| **Step 2** | | | | | | | | |
| **Constant** | 25.56 | 6.98 | 164.90 | 192.44 | .00 | .19 | .03 | 4.89*** |
| **SASP** | -2.18 | .33 | 7.39 | -.07 | .02 | | | |
| **IUS** | -2.15 | .12 | -.52 | -0.2 | .03 | | | |

*Note =AE = WE, SASP= IUS, =PWB, =s.e = standard error, 95% cl= 95 percent confidence interval, P=Significance value, $\Delta R^2$ = R square change. F = value of difference among the variable.*

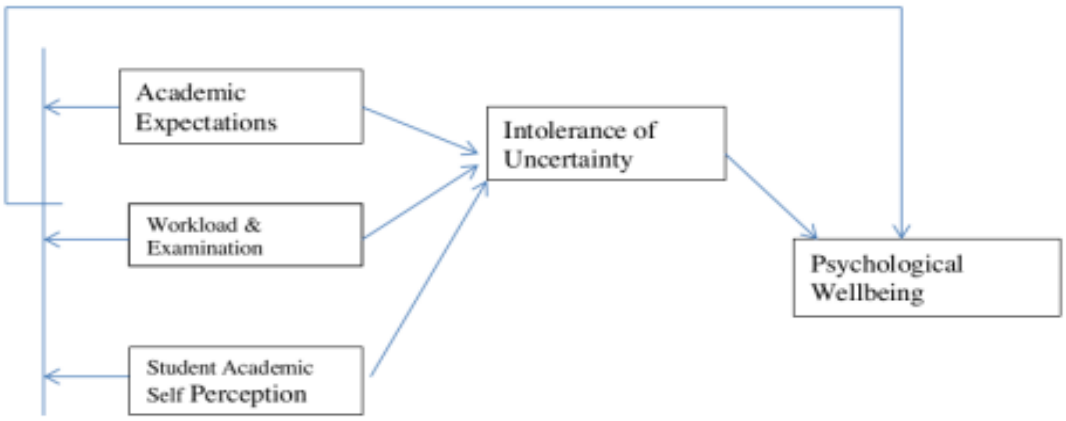
$^{***}p$ = .001, $^{**}p$ = .01, $^{*}p$ = .005

In 6 indirect effect showed that intolerance of uncertainty found to be significant mediator (p>.000) Academic stress subscales (Academic expectations, workload and examinations, student academic self-perception) and psychological wellbeing.

**Table 6: Indirect Table of Mediation**

| Variables | **Psychological Wellbeing** | | | |
|---|---|---|---|---|
| | | | **Boot 95%CI** | |
| | ***B*** | **SE** | ***Boot* CILL** | **Boot CIUL** |
| **AE** | -.04 | .03 | -.11 | .00 |
| **WE** | -.04 | .02 | -.11 | .00 |
| **SASP** | -.00 | .01 | -.03 | .01 |

**Figure 2:** Mediation Model



## Discussions

The present research was conducted to study the relationship between Academic stress, Intolerance of uncertainty and psychological wellbeing among university students. Most students in higher education who were interviewed expressed reservations about online/digital learning. Lack of internet connection, inadequate technology, and insufficient engagement and contact with students and teachers were among the key issues experienced by Pakistani higher education students. Students have had an entirely different learning experience because of the abrupt move from traditional classrooms and face-to-face study to online learning. Most students do not have access to high-speed or dependable internet services, making online learning difficult. Internet access is denied to students from undeveloped parts of former Fata, Baluchistan, Chitral, and Gilgit-Baltistan (Ahmad, 2020).

It was hypothesized that there will be a negative relationship between academic stress and intolerance of uncertainty with psychological wellbeing among university students. The correlation analysis revealed that intolerance of uncertainty and psychological wellbeing are significantly negatively correlated. Our first hypothesis is partially accepted. The results were consistent with the findings of previous research Geçgin and Sahranc (2017) investigated the Relationships between Uncertainty Intolerance and Psychological Well-Being. The findings suggested that students with a higher level of uncertainty intolerance had lower psychological well-being. These past studies corroborated the conclusions of the current investigation.

In our second hypothesis it was hypothesized that academic stress and intolerance of uncertainty will negatively predict the psychological wellbeing among students. As there was no correlation found between academic stress and psychological wellbeing, therefore, regression analysis could not be applied to academic stress. However, the intolerance of uncertainty significantly, negatively predicted psychological wellbeing among students. It can be supported by previous literature, in which it was seen that intolerance to uncertainty significantly predicts perception of health levels. Intolerance to uncertainty explains 2.3% of the change in the level of perception of health. According to the t-test results regarding the regression coefficients' significance, intolerance to uncertainty was a significant predictor of health perception. in this case health promotion, which is a predictor of intolerance to uncertainty, is essential. Appropriate strategies and tools for health promotion should be used (Kasapoðlu, 2020).

In our third hypothesis it was hypothesized that intolerance of uncertainty is likely to mediate the relationship between academic stress (academic expectations, workload and examination, and student academic self-perception) and psychological well-being among university students. Mediation Analysis was carried out between academic stress (subscales), intolerance of uncertainty and psychological wellbeing. This hypothesis was accepted and supported by literature review. The first research supporting our third hypothesis was Academic stress, Intolerance of uncertainty and mental health in Brasilia during the Covid-19 pandemic (Hong and Lee 2020). They considered intolerance to uncertainty as a mediator variable in the study and the sum, of results describe a scenario in which intolerance of uncertainty plays a mediating role between academic stress and mental health of participants in the early stages of the COVID-19 epidemic.

**Key Findings**

- A significant negative correlation was found between academic stress, intolerance of uncertainty and psychological wellbeing.

- Multiple Liner regression proved academic stress as a significant predictor of psychological wellbeing.

- Mediation analysis proved intolerance of uncertainty is a significant mediator between academic stress and psychological wellbeing.

**Limitations**

The following limitations were conducted in the current research.

- The sample size of present research was limited as only 240 participants were Recruited for the purpose of data collection.
- This study was only quantitative so insight to their qualitative understanding Could not be explored.
- Due to pandemic situation data was collected online so it was not under control of researcher to have equal participants from males and females (males 51 and females 189).

**References**

1. Adlaf, E. M., Gliksman, L., Demers, A., & Newton-Taylor, B. (2001). The prevalence of elevated psychological distress among Canadian undergraduates: Findings from the 1998 Canadian Campus Survey. *Journal of American College Health*, *50*(2), 67-72.
2. Ahmed, M. Z., Ahmed, O., Aibao, Z., Hanbin, S., Siyu, L., & Ahmad, A. (2020). Epidemic of COVID-19 in China and associated psychological problems. *Asian journal of psychiatry*, *51*, 102092.
3. Attardi S, Rogers K. Design and implementation of an online systemic human anatomy course with laboratory. Anat Sci Educ. 2015;8:53–62.
4. Bedewy, D. and Gabriel, A. (2015), "Examining perceptions of academic stress and its sources among university students: the perception of academic stress scale", Health Psychology Open, Vol. 2 No. 2, 2055102915596714.
5. Caldera, D., Burrell, L., Rodriguez, K., Crowne, S. S., Rohde, C., & Duggan, A. (2007). Impact of a statewide home visiting program on parenting and on child health and development. *Child abuse & neglect*, *31*(8), 829-852.
6. Carleton, R. N., Mulvogue, M. K., Thibodeau, M. A., McCabe, R. E., Antony, M. M., Asmundson, G. J. (2012). Increasingly certain about uncertainty: intolerance of uncertainty across anxiety and depression. *Journal of Anxiety Disorders*, 26(3), 468–79.
7. Cooke, R.; Bewick, B.M.; Barkham, M.; Bradley, M.; Audin, K. Measuring, monitoring and managing the psychological well-being of first year university students. Br. J. Guid. Couns. 2006, 34, 505–517.
8. Coronavirus: universities are shifting classes online - but it's not as easy as it sounds. [Mar;2020 ];Sabarini P. http://theconversation.com/coronavirus-universities-are-shifting-classes-online-but-its-not-as-easy-as-it-sounds-133030 The Conversation. 2020
9. Fry, K. (2001). E-learning markets and providers: some issues and prospects. *Education+ Training*, *43*(4/5), 233-239.
10. Geçgin, F. M., & Sahranç, Ü. (2017). The relationships between intolerance of uncertainty and psychological well-being. *Sakarya University Journal of Education*, *7*(4), 739-756.
11. Gonzalez, T., De La Rubia, M. A., Hincz, K. P., Comas-Lopez, M., Subirats, L., Fort, S., & Sacha, G. M. (2020). Influence of COVID-19 confinement on students' performance in higher education. *PloS one*, *15*(10), e0239490.

12. Hong, K. H., Lee, S. W., Kim, T. S., Huh, H. J., Lee, J., Kim, S. Y., ... & Yoo, C. K. (2020). Guidelines for laboratory diagnosis of coronavirus disease 2019 (COVID-19) in Korea. *Annals of laboratory medicine*, *40*(5), 351-360.
13. Johnson S. Children's fear in the classroom setting. Sch Psychol Dig. 1979;8:382–396. Journal of Child and Adolescent Psychiatric Nursing, 25 (2012), pp. 119-123
14. Le Fur, I., Reinberg, A., Lopez, S., Morizot, F., Mechkouri, M., & Tschachler, E. (2001). Analysis of circadian and ultradian rhythms of skin surface properties of face and forearm of healthy women. *Journal of investigative dermatology*, *117*(3), 718-724.
15. Rosenberg M. E-Learning: Strategies for Delivering Knowledge in the Digital Age. New York: McGraw-Hill, 2001.
16. Ryff, C.D. Psychological Well-Being in Adult Life. Curr. Dir. Psychol. Sci. 1995, 4, 99–104.
17. Sandoval, S.; Dorner, A.; Véliz, A. Bienestar psicológico en estudiantes de carreras de la salud [Psychological well-being of students taking health degree courses]. Investig. en Educ. Médica 2017, 6, 260–266. [CrossRef]
18. Schweitzer, G. (1996). Mechatronics for the design of human-oriented machines. *IEEE/ASME Transactions on Mechatronics*, *1*(2), 120-126.
19. Stallman, H.M. Psychological distress in university students: A comparison with general population data. Aust. Psychol. 2010, 45, 249–257.
20. Tanveer M, Bhaumik A, Hassan S, Ul Haq I. Covid-19 pandemic, outbreak educational sector and students online learning in Saudi Arabia. J Entrepreneurship Educ. 2020;23(3).
21. Tapia, V.A., Guajardo, C., & Quintanilla, A.C. (2008). Estilos cognitivos en el bienestar y el estrés [número monográfico]. Revista Mexicana de Psicología, 388-389.