

AN INVESTIGATION OF CORONA VIRUS PANDEMIC ON THE ONLINE EDUCATION: A STRUCTURAL MODELLING APPROACH

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ABSTRACT

This study aimed to find out the effect of Corona Virus Environment (CVE) with the Online Education-Study from Home (OESFH) and to know the mediating impact of Corona Virus Awareness (CVA) between Corona virus Environment and Online Education-Study from Home. The first hypothesis has been formulated as there is no significant effect of Corona Virus Environment on the Online Education-Study from Home whereas the second hypothesis formulated as Corona Virus Awareness does not significantly mediate the relationship between Corona Virus Environment and the Online Education-Study from Home. The mediating analysis has been done for the testing of hypotheses. The findings of this study conclude that there is an effect of Corona Virus Environment on the Online Education-Study from Home. The relationship between the Corona Virus Environment and the Online Education-Study from Home.

Keywords: Corona Virus Awareness (CVA); Corona Virus Environment (CVE); Online Education-Study from Home (OESFH)

1. Introduction

The full form of COVID-19 was explained as CO stands for Corona, VI stands for Virus and 19 stands for year 2019. WHO issued the various helpful guidelines to remove this Corona virus pandemic as early as possible. World Health Organization warned that more critical and adverse time is about to come. (World Health Organization, 2020) The avian infectious bronchitis virus, the first known Corona virus, was identified in 1937 and was responsible for catastrophic infections in chickens. Corona virus is a tragedy that is worse than a world war in every facet of life, regardless of who is affected. This Corona virus infection is a frightening warning of human mortality. Some sources indicated that the Corona virus was developed at the Wuhan Institute of Virology in China, while others claim that it was spread by bats, who can live with more than sixty different types of viruses, including the Corona virus. Bacteria and viruses, which cause numerous diseases in the human body, are two highly important components in the medical sector. The bacteria is a living system, whereas the virus is either non-living or somewhere in between. Zika virus, a flavivirus, was first identified in the America in March 2015, in Bahia, in the Northeast region of Brazil. Zika virus was first identified in the America in March 2015, in Bahia, in the Northeast region of Brazil. Brazil reported an association between Zika virus infection and Guillian-Barré syndrome in July 2015. Transmission of Zika virus from mother to fetus and sexual transmission have both been reported. (Carvalho et al., 2017). The emergence of Omicron, the fifth and latest variant of concern (VOC) of SARS CoV2, changed almost everything for India. The COVID-19 vaccination was getting accelerated and there was a glimmer of hope that by early 2022, life would return to normal. Nearly all states of India are showing an upward trend with a rise in test positivity rate (TPR). The active COVID-19 cases have reached a seven-month high, in spite of change in the case definition. India now is in the middle of the third wave of the COVID-19 wave and on 19 January 2022, India reported around 317,000 new cases. The active COVID-19 cases have reached a seven-month high, in spite of change in the case definition, where a confirmed COVID-19 case is taken off the list of the active cases after seven days, against the earlier approach of being considered an active case for 14 days. Regardless whether a country is emerging or developed, the Corona virus is spreading. One of the recommended strategies to protect oneself from the Corona virus is to welcome oneself in the Indian style of 'Namaste = Greeting Posture by folded hands.' Online education and online job industries are booming in this suffocating climate. Studying and working from home are two unique notions aimed at addressing the current scenario. The majority of people are considering studying or working from home. The researcher has proposed three constructs in this study: Corona Virus Environment, Corona Virus



Awareness, and Online Education-Study at Home. Corona virus Awareness displays accurate and relevant information about the virus and online education-study from home, whereas Corona Virus Environment influenced all part of life. The education sector must act quickly to develop online education patterns in the wake of the Corona pandemic.

2. Literature review

To investigate the Corona Virus Environment on the online education, various offline and online platforms were used. Previous researches have been studied on the aforesaid topic. This information helped in the exploratory research. In the exploratory research, the null and alternative hypotheses have been formulated to get the desired objectives of this research. The previous researches have been underlined as follows: In the current situation of Corona virus Environment, the school administration implementing the government guidelines and maintaining the social distancing in all their academic and administrative activities(Uscher-Pines et al., 2018). Twenty-eight bioactive imidazole compounds with the pharmaceutical application were docked against the Corona virus. Every country is trying to get the vaccine as early as possible to give a healthy life to every individual(Abdallah, 2019). The government invested a huge amount of money to overcome the adverse effect of the virus pandemic. The government used the technology to track the actual effect of virus pandemic and then designed various systems to complete the eradication of the disease(Serpa, n.d.). The effect of Corona virus in Nepal was very deadly because the total economy is based on imports and other countries. The education and every aspect of life in Nepal faced an adverse effect. The developed countries as well as the Indian economy helped the Nepalese economy in this critical condition(Koirala & Acharya, 2020). Research revealed that the general population is experiencing a relatively intensive psychological impact manifested as a sense of depression, anxiety, dread, and varieties of somatization symptoms. This pandemic affects the life of every human being. This Corona virus created fear in the personal and professional lives of every individual. The symptoms of cough and cold have also been treated as Corona virus(Liu et al., 2020). The actual condition of China's economy was in huge profit. Corona virus is used to boost the Chinese economy. The whole world was facing the problem of business as well as their life, but the Chinese government solved this problem very effectively. Though the birth of Corona virus was China, it was trying to pretend that its economy wasn't in danger(Bouey, 2020). The Corona virus affected the business world as well as academic environment in the entire globe. This virus has given the opportunity to every-one, how to work and how to study in this critical situation of Corona pandemic. The whole world is learning new system, new platform to work and study without any interruption. The work from home and study from home concept helped in this time to solve this Corona pandemic(OECD, 2020). The whole world is moving in the direction of online mode. Online education and online work are the need of the hour. The teaching and work were a challenge in this Corona virus environment. An online platform like Zoom, Google meet the technological system helped in handling the adverse situation of the Corona virus("Moving online now: How to keep teaching during corona virus," 2020). The Chinese government implemented various laws and strict rules for the complete removal of this Corona virus from the country. China is a country where the whole economy is based on the manufacturing sector. The Chinese government earned huge amount of profit by exporting medical surgical items to the whole world. Every country was in fear, hence imported various medical and surgical items from China. This scarcity of medical products converted in the huge profit for the China(Hua & Shaw, 2020). The education world, teachers, school administration, school staff have faced this Corona pandemic. Many teachers, leaders, and learners are experiencing an unprecedented situation in their schools. There is an urgent need for an online schooling system to solve this problem. The children, students, teachers were adopting the new way of teaching and learning. The schools were closed but not the teaching and education in this Corona virus pandemic(The International Baccalaureate Organization, 2020). It was predicted that this virus will be removed in the coming future, but every aspects of life was facing question mark whether it is business or education. The whole world is searching the solution with the resources available in the country. The developing countries were facing more in comparison to the developing economy(Jia, Li, Jiang, Guo, & Zhao, 2020). The future economy will be faced on the online mode. The internet and internet speed will play a vital role to boost the economy. The informed and educated people will handle this Corona virus situation very efficiently. Education and financial sector needs the use of new learning methodology(Anand et al., 2020). Online methods of teaching support and facilitate learning-teaching activities, but there is a dire need to weigh the pros and cons of technology and harness its potentials. Disasters and pandemic such as Covid-19 can create a lot of chaos and tensions. There is an important need to study the technology deeply and with due diligence(Dhawan, 2020). The study establishes that the Coronavirus pandemic has adverse effects on education. COVID-19 has major effects on school characteristics, including research, academic programmes, professional development and jobs in the academic sector. The study emphasizes the need for adoption of technology as a way to curb the effects of future pandemics in education(Onyema et al., 2020). India has already planned to teach the numbers of students at home owing to its very vast 4G network. In India, almost everywhere 4G connectivity is available at a very low cost. Online teaching offers flexibility in teaching and learning and it also offers more tools and techniques for making the class motivating(Protiva Kundu, 2020).



Social isolation and the new circumstances created against the spread of COVID-19, including changes in education, have caused a number of concerns for children, parents, and teachers in Kosovo. The International Federation of Red Cross and Red Crescent Societies is concerned about the impact of COVID-19 on children, parents, and teachers in Kosovo(Duraku & Hoxha, 2020). A pandemic lockdown affected the academic performance of most participants with varying degrees. The main challenge online education faces in veterinary medical science is how to give practical lessons. Online education can be improved by making it more interactive, showing medical procedures in real situations and providing 3D virtual tools to mimic the real situation(Mahdy, 2020). Online education has been on the fringe for a long time in India. The COVID- 19 pandemic made it the mainstream. We conducted a survey to know the opinion of undergraduate students in a university in India on different aspects of online education during the COVID-19 pandemic(Arora, 2020). Elearning is a valuable method of teaching medical students. It is effective in increasing knowledge and is highly accepted. But it is important not to focus only on increasing knowledge, but also on clinical and social skills. Elearning should not only be based on the delivery of content, but students should be able to work with the materials and receive feedback(Agarwal & Kaushik, 2020). India's higher education system is the world's third largest in terms of students next to China and the United States. The COVID-19 pandemic has severely affected the economic and educational health of India. Online teaching poses technical difficulties that affects the efficacy of Teaching-Learning Process. Survey indicated that the online sessions of problematic subjects are difficult, but theoretical subjects are easy to understand. India's Higher Education sector has witnessed a tremendous increase in the number of Universities/University level Institutions & Colleges since independence(Lakshman Naik et al., 2021). For the educational environment it is extremely important to take measures aimed at protecting young students. This includes providing students with equal and nondiscriminatory education opportunities, equal training for all students and protection of students with various vulnerabilities. A priority of the reorganization of the education system is to identify responses to current emerging requirements(Butnaru et al., 2021). The COVID-19 epidemic affected the academic performance of different grades in various participants. Online learning helps students to continue with the opportunity for selfstudy. However, the crucial challenge of secondary school facing online education in Bangladesh's rural area is how to give practical lessons. Improvements can be made by making online learning more accessible (Ahmed Masud & Nesa Suborna, 2021). Due to the pandemic situation globally, all the colleges and universities were shifted to online mode by their respective governments. No one has the information that how long this pandemic will remain, and hence the teaching method was shifted to an online mode. Even though some of the educators were not tech-savvy, they updated themselves to battle the unexpected circumstance (Gopal et al., 2021). To slow the spread of COVID-19, one of the major steps is staying at home. These days technology is more useful in our daily life. This study proved that mostly Central Universities are providing online classes during the lockdown period. Apps like Zoom, WebEx, Google Meet have been helping the students to learn at home in this pandemic period. Online learning provides an opportunity to enhance skills and importance in self-development (Aslam et al., 2021). The COVID-19 study could provide a meaningful reference for online teachers and instructors to improve the effectiveness of online instruction. This study revealed the effect of educational levels, gender, and personality traits on online learning outcomes (Yu, 2021). The online learning was found to be advantageous as it provided flexibility and convenience for the learners. Most students also reported that online classes could be more challenging than traditional classroom because of the technological constraints, delayed feedback and inability of the instructor to handle the Information and Communication Technologies (Muthuprasad et al., 2021).

3. Research Gap

The rationale of the study was to know the mediation role of Corona Virus Awareness in the relationship between Corona Virus Environment with the Online Education-Study from Home. The mediation analysis was previously used in the analysis of the financial study and consumer behavior but for education, it has been used in this research paper. The previous authors have not studied the mediation role of Corona Virus Awareness concerning Corona Virus Environment with the Online Education-Study from Home; therefore, this research gap has been identified and taken up for the study.

4. Objectives

The specific objectives of this research are as follows:

- To study the effect of Corona Virus Environment on the Online Education-Study from Home.
- To study the intervening role of Corona Virus Awareness in the relationship between Corona Virus Environment with the Online Education-Study from Home.

5. Hypotheses

Based on the objectives, the following null hypotheses have been formulated. The first hypothesis is a direct path relationship whereas the second hypothesis is a mediating hypothesis.



H0₁: There is no significant effect of Corona Virus Environment on the Online Education-Study from Home. MedH0₂: Corona Virus Awareness does not significantly mediate the relationship between Corona Virus Environment and the Online Education-Study from Home.

6. Material and Methods

The pilot study has been conducted with a sample of 43 respondents which is 10% of the total sample size (430) under this research. Primary data have been collected from a group of 430 respondents using the web-based structured questionnaire. The snowball sampling technique was used for the identification and collection of the respondent's opinions. Primary data was collected using Google Forms. The structured questionnaire was designed on the online Google platform for a fast and easy collection of responses. The primary data were collected from December 2020 to February 2021. This research was conducted in Uttar Pradesh, Delhi and NCR, India. Most of the respondents were between 21 to 30 years of age and graduates. 67.44 % of respondents were male whereas 30.23% female. The nominal scale has been used for demographics variables whereas the Likert 5point scale has been used for three constructs as Corona virus Environment, Corona virus Awareness, and Online Education-Study from Home. The scale of 1 strongly disagrees whereas 5 is considered as strongly agree. The statistical techniques used were a reliability test and factor analysis (Principal Component Analysis). The Cronbach's Alpha, Corrected Item Total Correlation (CITC), Kaiser-Meyer-Olkin (KMO) Test, and Factor Analysis have been used for the finalization of the questionnaire. The convergent validity through Average Variance Extracted (AVE)was established on each construct. The Average Variance Extracted (AVE) is a measure of the amount of variance captured by a construct from each scale. The AVE has a recommended value of 0.50 or higher to provide evidence for convergent validity. Lastly, the discriminant validity was also established as AVE values came out to be greater than Squared Multiple Correlation (SMC) values. For the confirmatory factor analysis, a measurement model has been used. Structural Equation Modeling (SEM) has been used for the final analysis and interpretation of the formulated hypothesis. (Verma et al., 2020) The SEM model is a combination of factor analysis and regression analysis. This SEM technique is very useful in the direct path analysis, mediating analysis, and moderator (group) analysis. In this research, only direct path analysis and mediating analysis have been used. The basic results have been designed using SPSS 23.0 version whereas complex analysis has been done through the AMOS 23.0 version.

7. Measurement of variables

7.1 Exploratory Factor Analysis (EFA)

Since Cronbach's Alpha is 0.950 for the Corona virus Environment, 0.858 for Corona virus Awareness, and 0.941 for the Online Education-Study from the Home construct, hence all the constructs have passed the limit of 0.70. The min 0.60 KMO value is preferable for better results. The higher the value of KMO, the better it is. The KMO value of 0.848 is very good. As the KMO value is 0.894 for the Corona virus Environment construct, 0.750 for the Corona virus Awareness construct, and 0.846 for the Online Education-Study from the Home construct, hence the selected constructs have also passed the sampling adequacy test. KMO is a sample adequacy test. As the AVE is above 0.50, hence proved the evidence for convergent validity. Lastly, the discriminant validity was also established as AVE values came out to be greater than Squared Multiple Correlation (SMC) values. The composite reliability values (CR) are also above 0.70. Based on the above results, seven items have been finalized for the Corona virus Environment construct(such as CVE5.6 Self-awareness and discipline, CVE5.7 Realization of social responsibility, CVE 5.8 Development of habit of living with limited resources, CVE5.9 Rise in habit of making savings, CVE5.10 Realisation of feeling not to waste the resources, CVE5.11 Rise in hygiene, and CVE5.12 Work from home, six items have been finalized for the Corona Virus Awareness construct (such as CVA3.1 I know the seriousness of Corona virus, CVA3.2 Warm weather stops the outbreak Corona virus, CVA3.3 Corona virus transmits person to person, CVA3.4 Origin of Corona virus is in Wuhan, China, CVA3.5 Corona is more dangerous than world war, CVA3.6. There are four stages in Corona virus infection, and five items have been finalized for the Online Education- Study from Home construct (such as OESFH4.1; Online line education is the best way to study in Corona environment, OESFH4.2; Online education are more preferable in corona environment, OESFH4.3; Online education helps to teach students globally, OESFH4.4; Online line education is cost effective, OESFH4.5; Online education provides flexibility in learning). All the seven items explained 77.068% of the variance for Corona virus Environment construct, All the six items explained 59.937% of the variance for Corona virus Awareness construct, and five items explained 81.355% of the variance for the Online Education-Study from the Home construct, therefore all the selected construct (latent variable) and their items (observed variable) are reliable and can be used in the SEM model. (See Table 1)



| Table I: Reliabl | inity, vandity, and Ex | ploratory Factor An | alysis (EFA) (| Principal Col | nponent Analy | /\$1\$) |
|------------------|------------------------|---------------------|----------------|---------------|---------------|-----------|
| Construct | | | | Average | Composite | |
| | | Kaiser-Meyer- | | Variance | Reliability | |
| | Cronbach's | Olkin (KMO) | % of | Extracted | (CR) | Number of |
| | Alpha | Test | Variance | (AVE) | | Items |
| (CVE | .950 | .894 | 77.068 | 0.770 | 0.959 | 7 |
| CVA | .858 | .750 | 59.937 | 0.599 | 0.896 | 6 |
| OESFH | .941 | .846 | 81.355 | 0.813 | 0.956 | 5 |

D 11 1 114 **x** 7

Source: SPSS 23.0 output

Note: Corona Virus Environment (CVE), Corona Virus Awareness (CVA), and Online Education: Study from Home (OESFH

7.2 Validation and development of model: Confirmatory Factor Analysis (CFA)

The minimum CMIN/DF was achieved for each construct under the measurement and the structural model.



Figure 1: CFA - Corona Virus Environment

The figure depicts that the Corona Virus Environment having seven items represented by the rectangular shape also known as observed variables and the latent variable. Corona virus Environment is represented by oval shape. The model fit indices show that the CFA model is a good fit model.

| CI | ΛIN | DF | I | D | CMIN/DF |
|------|--------|------|------|------|---------|
| | 76.965 | 11 | .0 | 00 | 6.997 |
| GFI | AGFI | TLI | CFI | NFI | RMSEA |
| .957 | . 890 | .958 | .978 | .975 | .118 |

Source: AMOS 23.0 output



7.2.2 CFA - Corona Virus Awareness Source: AMOS 23.0 output

7.2.3 CFA - Online Education-Study from Home



Source: AMOS 23.0 output

8. Findings

8.1 Correlation Matrix

The correlation matrix explains the correlation between the construct. The results of the correlation matrix as correlation coefficient and p values define that whether the correlation is significant or not.

Table 2: Correlation Matrix



| | | | Estimate | p-value |
|-----|----|-------|----------|---------|
| CVE | <> | CVA | .644 | 0.000 |
| CVA | <> | OESFH | .720 | 0.000 |
| CVE | <> | OESFH | .495 | 0.000 |

Source: AMOS 23.0 output

8.2 Measurement Model

The measurement model helps in the study of covariance and correlation amongst the various construct. The measurement model shows the results of correlation coefficient and standardized regression estimates of every item associated with each construct. In the given measurement model, three constructs were uses as Corona Virus Environment, Corona Virus Awareness, and Online Education Study from Home. The Corona Virus Environment construct having seven items, The Corona Virus Awareness construct having six items, and Online Education Study from Home construct having five items. The correlation matrix and standardized regression weights results validate the measurement model for the next level of analysis known as structural equation modeling.



Figure 4: Measurement Model Source: AMOS 23.0 output

The figure depicts that the measurement model having three constructs named Corona Virus Environment, Corona Virus Awareness, and Online Education-Study from Home. The Corona Virus Environment having seven items, Corona Virus Awareness having six items, and the Online Education-Study from Home having five items. The eighteen-error variables (e1 to e18) were used in this measurement model. The error variables are unexplained portions associated with those particular items. To get the better model fit indices, the error variables e17-e18 were correlated.

According to the correlation matrix Table 2 and measurement model Figure 4, it is clear that correlation among three constructs as Corona Virus Environment, Corona Virus Awareness, and Online Education Study from Home. The correlation coefficient is 0.644 which is more than moderate, between Corona Virus Awareness and the Online Education-Study from Home, the correlation coefficient is 0.720 which is high, and between Corona Virus Environment and the Online Education-Study from Home, the correlation coefficient is 0.495 which is moderate.

Table 3: Standardized Estimate

|--|



| | | | Estimate |
|----------|---|-------|----------|
| CVE5.12 | < | CVE | .816 |
| CVE5.11 | < | CVE | .908 |
| CVE5.10 | < | CVE | .933 |
| CVE5.9 | < | CVE | .800 |
| CVE5.8 | < | CVE | .849 |
| CVE5.7 | < | CVE | .902 |
| CVE5.6 | < | CVE | .777 |
| CVA3.6 | < | CVA | .657 |
| CVA3.5 | < | CVA | .639 |
| CVA3.4 | < | CVA | .980 |
| CVA3.3 | < | CVA | .937 |
| CVA3.2 | < | CVA | .335 |
| CVA3.1 | < | CVA | .688 |
| OESFH4.5 | < | OESFH | .871 |
| OESFH4.4 | < | OESFH | .795 |
| OESFH4.3 | < | OESFH | .983 |
| OESFH4.2 | < | OESFH | .867 |
| OESFH4.1 | < | OESFH | .826 |

Source: AMOS 23.0 output

Table 3, shows seven items of Corona Virus Environment, six items of Corona Virus Awareness, and five items of the Online Education- Study from Home construct. All estimates are above the acceptable limit of 0.300. 8.3 Direct and Mediating Analysis

MedH0₂: Corona Virus Awareness does not significantly mediate the relationship between Corona Virus Environment and the Online Education-Study from Home





Figure 5: Effect of CVE on CVA Source: AMOS 23.0 output The figure depicts the effect of the Corona Virus Environment on Corona Virus Awareness.

Table 4: Path Estimate: Effect of CVE on CVA

| Path | Estimate | Standard | Critical | p- |
|---------|----------|----------|----------|-------|
| | | Error | Ratio | value |
| CVE>CVA | 0.634 | 0.039 | 11.304 | 0.000 |
| | | | | |

Source: AMOS 23.0 output

According to the Table 4, it is clear that the sig value (p value=0.000) is less than 0.05, hence there is an effect of Corona Virus Environment on Corona Virus Awareness. The standardized regression weight is 0.634; hence, if there is one standard deviation increase in the Corona Virus Environment then there is a 0.634 standard deviation increase in Corona Virus Awareness. Since the standard error (S.E.) is low (0.039), hence the sample size is sufficiently large, and it truly belongs to the selected population. Since the critical ratio (C.R.=11.304) is > 1.96 for a regression weight of 0.634, hence the path between corona Virus environment and corona Virus awareness is significant at the 5% significance level. [Z Score 1.645, 1.96, 2.76 represents 90%, 95%, 99% confidence Interval respectively].





Figure 6: Effect of CVE on OESFH Source: AMOS 23.0 output The figure depicts the effect of the Corona Virus Environment on the Online Education-Study from Home.

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| Path | Estimate | Standard Error | Critical Ratio | p- value | Results |
|-----------|----------|-------------------|-------------------|-------------|-------------|
| CVE>OESFH | 0.500 | 0.058 | 10.090 | 0.000 | Significant |
| | | | | | |

Source: AMOS 23.0 output

From Table 5, it is clear that the sig value (p value=0.000) is less than 0.05, hence it is safe to reject null hypothesis H0₁, therefore it can be concluded that there is a significant effect of Corona Virus Environment on the Online Education-Study from Home. The standardized regression weight is 0.500; hence, if there is one standard deviation increase in the Corona Virus Environment then there is a 0.634 standard deviation increase in the Online Education-Study from Home. As the standard error (S.E.) is low (0.058), hence the sample size is sufficiently large, and it truly belongs to the selected population. Since the critical ratio (C.R.=10.090) is > 1.96 for a regression weight of 0.500, hence the path between Corona Virus Environment and the Online Education-Study from Home is significant at 5% significance level.





The figure depicts the effect of Corona Virus Awareness on the Online Education-Study from Home.



Table 6:Path Estimate

| Path | Estimate | Standard Error | Critical Ratio | p- value | Results |
|-----------|----------|-------------------|-------------------|-------------|-------------|
| CVA>OESFH | 0.715 | 0.096 | 12.526 | 0.000 | Significant |

Source: AMOS 23.0 output

From Table 6, it is clear that the sig value (p value=0.000) is less than 0.05, hence there is an effect of Corona Virus Awareness on the Online Education-Study from Home. The standardized regression weight is 0.715; hence, if there is one standard deviation increase in Corona Virus Awareness then there is a 0.715 standard deviation increase in the Online Education-Study from Home. As the standard error (S.E.) is low (0.096), hence the sample size is sufficiently large, and it truly belongs to the selected population. As the critical ratio (C.R. =12.526) is > 1.96 for a regression weight of 0.715, hence the path between Corona Virus Awareness and the Online Education-Study from Home is significant at 5% significance level.



Figure 8: Mediating Analysis Source: AMOS 23.0 output

The figure depicts the effect of the Corona Virus Environment on the Online Education-Study from Home with the mediation of Corona Virus Awareness.

Table 7: Path Estimate: Mediating Analysis

| Path | Estimate | Standard Error | Critical Ratio | p- value | Results |
|--------------------------|----------|-------------------|-------------------|-------------|---------------|
| CVE > CVA>OESFH | 0.054 | 0.056 | 1.123 | 0.262 | Insignificant |
| Source: AMOS 22.0 output | | | | | |

Source: AMOS 23.0 output

As p > 0.050 (p = 0.262), there exists full mediation by the mediating variable, hence it is safe to reject the null hypothesis MedH02. Therefore, Corona Virus Awareness significantly mediates the relationship between Corona Virus Environment and the Online Education-Study from Home, and standardized regression estimate values shrink from 0.475 to 0.054. Since the standard error (S.E.) is low (0.056), hence the sample size is sufficiently large, and it truly belongs to the selected population. Since the critical ratio (C.R. =1.123) is < 1.645 for a regression weight of 0.054, hence the path between Corona Virus Environment and the Online Education-Study from Home via Corona Virus Awareness is insignificant at the 10% significance level.

8.4 Total, Direct and Indirect Effect

In the total, direct and indirect effect analysis, there exist the full mediation by the introduction of Corona Virus Awareness in between Corona Virus Environment and the Online Education-Study from Home, therefore it can be concluded that the Corona Virus Awareness mediates between Corona Virus Environment and the Online Education-Study from Home. (See Table 8 to 14)



Table 8: Standardized Total Effects (Group number 1 - Default model)

| | CVE | CVA | OESFH |
|-------|------|------|-------|
| CVA | .644 | .000 | .000 |
| OESFH | .495 | .685 | .000 |

Source: AMOS 23.0 output

Table 9: Standardized Direct Effects (Group number 1 - Default model)

| | <u> </u> | / | |
|-------|----------|------|-------|
| | CVE | CVA | OESFH |
| CVA | .644 | .000 | .000 |
| OESFH | .054 | .685 | .000 |
| | | | |

Source: AMOS 23.0 output

Table 10: Standardized Indirect Effects (Group number 1 - Default model)

| | CVE | CVA | OESFH |
|-------|------|------|-------|
| CVA | .000 | .000 | .000 |
| OESFH | .441 | .000 | .000 |

Source: AMOS 23.0 output

Table 11: Standardized Total Effects - Two-Tailed Significance (BC) (Group number 1 - Default model)

| | CVE | CVA | OESFH |
|-------|------|------|-------|
| CVA | .003 | | |
| OESFH | .002 | .007 | |

Table 12: Standardized Direct Effects - Two-Tailed Significance (BC) (Group number 1 - Default model)

| | CVE | CVA | OESFH |
|-------|------|------|-------|
| CVA | .003 | | |
| OESFH | .209 | .007 | |
| | | | |

Source: AMOS 23.0 output

Table 13: Standardized Indirect Effects - Two-Tailed Significance (BC) (Group number 1 - Default model)

| | CVE | CVA | OESFH |
|-------|------|-----|-------|
| CVA | | | |
| OESFH | .002 | | |

Source: AMOS 23.0 output

Table 14: Final Mediation Results

| | Standardised Estimation | P-Value | Results | Mediation Results On the introduction of CVA in between CVE and OESFH (Baron & Kenny's Method) |
|-----------------|------------------------------------|---------|---------------|---|
| Total Effect | 0.495 | 0.002 | Significant | Full Mediation |
| Direct Effect | 0.054 reduced from 0.495 to 0.054) | 0.209 | Insignificant | |
| Indirect Effect | .0.441 (0.495-0.054) | 0.002 | Significant | |

Source: AMOS 23.0 output

9. Conclusion

Based on the data analysis and findings, it can be concluded that the Corona Virus Environment, Corona Virus Awareness, and the Online Education-Study from Home have a close connection with each other. The Corona Virus Environment states that the lifestyle of the individuals in the environment of the corona pandemic, the Corona Virus Awareness states the correct and valuable information concerning to the Corona Virus and the Online Education-Study from Home is the virtual mode of traditional education system. There was a significant effect of Corona Virus Environment on the Online Education-Study from Home. Corona Virus Awareness significantly mediates the relationship between Corona Virus Environment and the Online Education-Study from Home. The standardized regression estimate shrink from 0.495 to 0.054 (p = 0.209, insignificant), hence the Awareness about the Corona Virus is playing a major role in the relationship between the Corona Virus Environment and the Online Education-Study from Home. Study from Home. The standardized regression estimate shrink from 0.495 to 0.054 (p = 0.209, insignificant), hence the Awareness about the Corona Virus is playing a major role in the relationship between the Corona Virus Environment and the Online Education-Study from Home. From the total, direct and indirect analysis, it is can



be concluded that there exists the full mediation of the introduction of Corona Virus Awareness in between Corona Virus Environment and the Online Education-Study from Home, therefore it can be finally concluded that the Online Education is growing in the Environment of Corona Virus where there is an awareness of the Corona Virus

10. Recommendations

The researcher suggested that the other constructs like symptoms of Corona Virus, the role of private medical professionals, the role of government professionals, protection, and control measures of corona Virus, online jobs work from home can also be considered in the next level of analysis. The research on the corona Virus is very limited, hence some more information is required for more accurate results in further research. The future researcher should collect more information on the linkage between the corona Virus and life-related variables.

11. Limitations

All three nominal variables age, gender, and educational qualifications were control variables and can be used in the next level of SEM analysis known as moderator analysis or group analysis. Is there any significant difference between males and females? Is there any significant difference among age groups? Is there any significant difference among educational qualifications in the context of the present study? This research was limited to only mediating analysis.

12. Scope for future study

Future researchers can use the moderator analysis or group analysis using AMOS SEM (Analysis of moment structure- structural equation modeling). The group can be gender, age, occupation, etc. Future researchers can check the significant difference between the groups concerning the effect of the corona Virus environment on the online education via the role of corona Virus awareness.

13. Social implications

The practical implication of this study will focus on the learning and adopting of a new pattern of Online Digital Education in the Corona Virus environment and awareness. The social implication of this study will help in creating awareness of the Corona Virus.

Ethics And Consent

As the study involved human respondents, therefore ethical consent was taken by stating the statement at the beginning of the questionnaire to each respondent, as "Any information filled in the questionnaire will not be used for any commercial purpose both during the research and after its publication". All the respondents have given their consent for the study.

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Disclaimer

The findings in this study are those of the authors and do not necessarily represent the official position.

Authors' Contributions

The author's read and approved the final manuscript.

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