Knowledge towards COVID-19, its Effects and Challenges on International Student's Education and Mental Health of the Students Pursuing Higher Studies in Kerala and Tamil Nadu State.

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Abstract

Background: The Covid-19 pandemic has been hectic and challenging for college students especially, international students studying away from their home country. This study aims to assess the knowledge towards Covid-19, the prevalence of mental health, and examine the international students' education and life challenges in Kerala and Tamil Nadu.

Data & Methods: A cross-sectional survey study used an online survey questionnaire through google form among 123 students pursuing their studies in Kerala and Tamil Nadu state. Univariate, bivariate analyses and chi-square tests were used.

Results: The study participants were 123, where half 65 (52.8%) resides in Kerala and 47.2% in Tamil Nadu. More students were in the 20-29 age group, and the mean age was 27 age with an SD± of 2.3. The overall knowledge score towards Covid-19 was good 76%, and the prevalence rates for mental health symptoms were; stressed (52.7%), excessive fear and worries (18.8%), feeling sad and down (15.5%), and social isolation (13%). The overall score of challenges that were commonly affecting socially and academically the students in both Kerala and Tamil Nadu was taking a long-time to complete the module (56%), local language use in teaching (67.9%), not following timetable set by the department/university (52.1%). Another challenge mentioned was not being informed about lockdown (54.5) and curfew time (21.7%), racial abuse while seeking medical attention at the hospital (23.3%),

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being suspect of covid-19 carriers (37.2%), and Transport issues (56.8%). Studying in Kerala was statistically significant, with four academic challenges and three social challenges. In contrast, studying in Tamil Nadu was statistically significant, with seven academic challenges and eight social challenges.

Conclusion

All colleges and universities should implement the proper channel for linking up or sharing necessary information and considering English as a teaching language as they are all in the English medium education system. Furthermore, people with racial abuse should take a lesson from Covid-19 as it does not discriminate.

Keywords: Covid-19, Challenges, Mental health, Social isolation, Lockdown and Curfew.

Introduction

On 31 December 2019, a cluster of cases of pneumonia of unknown cause in the city of Wuhan, Hubei province in China, was reported to the World Health Organization. In January 2020, a previously unknown new virus was identified, subsequently named the 2019 novel coronavirus. However, Kerala state recorded the first Covid-19 case on 30 January, which was the first case registered in India (NHP India, 2019), while Tamil Nadu state first case of Covid- 19 was reported on 07 March 2020 (The economic time, 2020).

The Covid-19 pandemic has been hectic and challenging for college students, especially international students studying away from their home country. India, like other countries, implemented emergency protocols for fighting and controlling the spread of the pandemic with some restrictions such as unnecessary public movement (Saha et al. 2020). The transition from physical classes to online class learning systems was rapidly adopted in education institutions (Kapasia et al. 2020). Online learning causing difficulties for both teachers and their student especially at home where they

meet with different ambiguities such as lack of devices, home distractions, family disruption when teaching or learning were the major problems occurred. Furthermore, the other issues were a lack of technical support and insufficient knowledge of technology (Mukesh Rawal, 2021).

UNESCO revealed that 1.2 billion students worldwide were affected by the school and University closure due to the Covid - 19 pandemic. It's also revealed that 87 percent of the World population of the students and over 1.5 billion from 195 countries are affected by the school's closure due to the Covid-19 pandemic (UNESCO, 2020). Due to the pandemic, the Indian government, like the other worldwide government, announced the lockdown and all educational institutions were closed for the sake of communities social distancing. This was hard for the student as a big part of Indian education is dominated by physical classroom learning, which was very difficult for the student and teachers from the villages because of lack of internet range, gadgets, and lack of knowledge towards the newly implemented online learning system, (Mukesh Rawal,2021). Education is considered as one of the pillars of every country's development and growth. The education system has been affected by different challenges resulting in the change of school and university curriculum and closure of schools due to the spread of the pandemic (Tadesse, S. and Muluye, W. 2020).

The Covid-19 pandemic affected higher education and universities. It forced them to close their doors where the IT takeover and physical classroom switched to online learning to keep students in school and help them attend online learning. Online teaching platform was the only solution for continuing the teaching and learning activities. However, teachers and students had a significant challenge to switch to online learning despite insufficient infrastructure because of inadequate system knowledge (Radu, M-C, et al. 2020). Covid-19 pandemic disrupted people's lives regardless of nationalities, education level, and economic classes, but the disruption was not the same because the vulnerable were strongly exposed to others. However, the pandemic has shown a gap existed in the education system and between rich and poor students, where wealthy students could continue

their studies online. In contrast, students from low-income families whose schools remained closed (OECD, 2020). Thus poor students were poorly hit by the pandemic due to the lack of laptops or smartphones at their homes which enable them to attend the online classes, and this showed the gap between rich and poor, rural and urban students (Jena P. K, 2020).

The worldwide spread of the Covid-19 pandemic has differently affecting higher education and universities closed their doors and countries closed their borders and imposing the lockdown. This has interrupted the learning, course material deliveries, including safety and the legal status of the international students in the host country. The international student was strongly affected by the countries' lockdown and the closure of education. The students were left confused whether to remain in their host countries or return to their home countries (Schleicher A, 2020). The Covid-19 pandemic has significantly affected the Indian higher education students, researchers, away from their home countries to where Covid-19 pandemic hated the most. They had no other choice but to leave the country, which would decline the number of Indian students studying abroad (Jena P. K, 2020).

The pandemic disrupted the adolescent and children's mental health problems as demonstrated by (Fegert et al., 2020), revealed that mental health was find impaired for socio-economically vulnerable groups and those families strongly affected by economic crisis pressure. It's also shown that anxiety caused by the Covid-19 pandemic and the financial crisis causes unemployment apart from worries. However, this also brought more pressure to the children and adolescent's families, which resulted in causing stress, mental health and violence. Mental health problems considered the primary influence on every academic success. Any disruption that leads to mental illness will affect students' critical factors for higher education success, such as motivation, focus, and social interaction. Furthermore, the Collegiate Mental Health centre reported anxiety as the common problem being diagnosed among the students, with 62.7% of the students seeking counselling at the university counselling centre (Son et al., 2020).

The best way to prevent the widespread of the Covid-19 pandemic is to empower the local citizens by providing authentic information and following the Indian government regulations advised by the Ministry of Health and Family Welfare. The evidence shows that public awareness is essential for tackling the Covid-19 pandemic (Tomaret al., 2021). Moreover, knowledge, attitude, and practice towards preventing the Covid-19 pandemic and detecting new cases should be considered as primary prevention from the community. (Haftom et al, 2020). Hence, the quick information towards knowledge, attitude, and practice gathered through the online platform will help speed up the planning, development, and implantation of the behaviour change (Reuben et al., 2020).

By considering the evolution of the international epidemiological situation caused by the widespread of Covid-19 pandemic together with the declaration of the "deadly coronavirus pandemic" by the World Health Organization (WHO) on 24 March 2020, the Indian Prime Minister declared complete lockdown with immediate effect. The Ministry of Education and Indian Education Administrative Council decided to suspend teaching and tutorial activities from 25 March till 03 May 2020. With the establishment of the emergency state, the University's AC decided to extend the suspension period until 29 March 2020 and do the teaching activities online. Thus, this study aims to assess the knowledge towards Covid-19 and identifying the factors influencing the education and life challenges faced by the international students pursuing their higher studies in Kerala and Tamil Nadu state. The result of this study is significant and needful for the prospects focusing on foreign readiness to comply with the measures of controlling the Covid-19 pandemic.

Data and Methods

A set questionnaire was developed, which included various questions assessing knowledge towards the spread of Covid-19, mental health, and factors that may influence the student's education and the challenge faced by the foreign student. The respondents were readily allowed to enter free

texts. The survey was administered by using the Online Google Forms platform, which requires the student to log in with an e-mail account to participate in the survey. However, the student was restricted from multiple entries from an individual personal account. The distribution of the questionnaire was conducted through the outreach of social media platforms. The clear instructions with the google form were given to ensure that the respondent must be a student.

Study Design & Sample selection

A cross-sectional web-based survey was carried out among 123 international students pursuing their higher studies in Kerala and Tamil Nadu state through Google online platforms. The study participants were purposively selected in Kerala state universities (65 participants) and Tamil Nadu state universities (58 participants).

Statistical Analysis

The study consists of two types of data, which is continuous and categorical data. Categorical were presented in frequencies and percentages, while continuous data were presented as mean and standard deviation (±SD). Pearson Chi-square test was used to determine the factors influencing student's education and life challenges. 95% of confident level and P-value of < 0.05 was considered as statistically significant, while SPSS was used for statistical analysis.

Ethical clearance

This survey was adequately done by informing the participant's set-up and consent (international students). The participants were explained the need and the objective of the study. The link was sent to the students who were willing to participate in the survey.

Results

1.   Socio and Demographic Characteristics (n=123)

Characteristics		n & %
Age	20-29	89 (72.4)
	30-39	34 (27.6)
Gender	Male	69 (56.1)
	Female	54 (43.9)
Pursuing Studies	UG	24 (19.5)
	PG	85 (69.1)
	PhD	14 (11.3)
State of residence	Kerala	65 (52.8)
	Tamil Nadu	58 (47.2)

Table1 highlights the socio and demographic characteristics of the study participants. Nearly 90 percent of the respondents were between the 20-29 age group with a mean age of 27 and a standard deviation of ±2.3. For the gender regards male participants were more represented with 69 percent, while 85 percent are pursuing their higher studies (postgraduate); however, more students, 65 percent, reside in Kerala state and 58 percent from Tamil Nadu state.

2.   Knowledge towards the spread of Covid19

Spread of Covid-19	N & %	Prevention of Covid-19	N & %
When a person with covid-19 Cough, Sneeze, Sing, Talk, or breath closer to others	90(73.1)	Wearing mask properly in public places	108(87.8)
Having direct contact with a person with Covid-19	103(83.7)	Washing hand with soap/ sanitiser frequently	122(99.1)
Touching somewhere or something (Objects) touched by a person with Covid-19	86(69.9)	Avoiding crowded/confined indoor/outside places	112(91.0)
Sharing room, clothes and food with a Covid-19 positive person	45(36.5)	Stay in isolation when testing covid-19 positive	105(85.3)
Being physically near (within 6 feet) to the person with Covid-19	55(44.7)	Wearing hand gloves	35(28.4)
		Stay away from others at least 6 feet (social distancing/Physical distancing)	89(72.3)

Table 2 possess two different characteristics that present the knowledge towards the spread and prevention of Covid-19. Starting with the knowledge towards the spread of Covid-19, the result shows that the most known way of spread was having direct contact with the person with Covid-19, followed by coughing, sneezing, singing, talking or breathing closer to others with 73.1 percent. Furthermore, the prevention of Covid 19 regards we have found out that almost all the students knew washing hands with soap/hand sanitiser frequently known by 99.1 percent. Avoiding crowded, confined, indoor and outside places 91 percent and staying isolated while testing positive with 85.3 percent. However, least known was wearing hand gloves with 28.4 percent.

3.   **Knowledge towards Symptoms of Covid - 19**

Symptoms of Covid-19	n & %
Fever or Chills	89 (72.3)
Cough	123 (100)
Shortness of breath or difficulty breathing	99 (80.4)
Fatigue	56 (45.5)
Muscle or body aches	32 (26.0)
Headache	109 (88.6)
Loss of taste or smell	87 (70.7)
Sore throat	29 (23.7)
Nausea or vomiting	31 (25.2)
Diarrhoea	15 (12.1)
Congestion or runny nose	23 (24.6)

Table 3 delineates the knowledge towards the symptoms of Covid-19 possessed by the students, and the results show that students know 100 percent cough as Covid-19 symptom; second known symptoms are headache 88.6 percent, followed by fever. However, there was least known among the listed symptoms is diarrhoea with 12.1 percent.

4.   Prevalence of Symptoms which leads to Mental Health

Mental Health	Frequency	Percentage
Feeling sad or down	19	15.5
Excessive fear or worries	23	18.8
Stressed	65	52.7
Social isolated	16	13.0
Total	123	100.0

Table 4 above delineate the prevalence of mental health symptoms of the foreign student caused by the pandemic. The results show that more students were stressed 65(52.7 percent), others had excessive fear and worries 23 (18.8 percent), feeling sad or down 19 (15.5 percent) and 16(13 percent) felt socially isolated.

5.   State of Residence/Pursuing Studies as the factor influencing Academic

Academic challenges	Kerala n=65		Tamil Nadu n=58	
	N, %	p value	N, %	p value
Taking long time to complete the modules	15 (23.0)	0.13	34 (52.0)	0.03
Use of local language while taking online classes	12 (18.4)	0.11	52 (80.0)	0.004
Not following timetable set by the department/University	18 (27.6)	0.19	31 (47.6)	0.05
Lack access to online resources from university library	52 (80.0)	0.004	56 (86.1)	0.000
Reduced motivation or procrastination	48 (73.8)	0.002	38 (58.4)	0.012
lack of communication between students and their mentor	32 (49.2)	0.04	34 (52.3)	0.032
Scoring low-grades	5 (7.6)	0.16	16 (24.6)	0.21
Lack of interaction with teachers	54 (83.0)	0.000	45 (69.2)	0.002

Table 5 above highlight the factors influencing academic challenges faced by the students studying in Kerala and Tamil Nadu universities. Kerala students had four factors that significantly influencing academic challenge. Those academic challenges are, lack of access to online resources from the university library (p=0.004). Reduced motivation or procrastination (p=0.002), lack of communication between students and their mentor (p=0.04) and lack of interaction with teachers (p=0.000). And for those studying in Tamil Nadu state had seven challenges which are statistically significant with state of student residence, and those challenges are taking a long time to complete the modules (p=0.003), use of local language while taking online classes (p=0.004), not following timetable set by the department/University (p=0.05), lack access to online resources from university library (p=0.000), reduced motivation or procrastination (p=0.012), lack of communication between students and their mentor (p=0.032), and lack of interaction with teachers (p=0.002)

6. State of Residence/Pursuing Studies as the Factor influencing Social life Challenge

Social life challenges	Kerala n=65		Tamil Nadu n=58	
	N, %	p value	N, %	p value
Restricted outdoor activities	63(96.9)	0.000	23 (35.3)	0.13
Lack of transport during lockdown	34(52.3)	0.04	39 (60.0)	0.002
Not being informed about restrictions	29(44.6)	0.12	33 (50.7)	0.04
Being racially abuse while seeking help or service	8(12.3)	0.09	36 (55.3)	0.002
Being seen or suspected as covid-19 carrier when seeking medical treatment at the hospital	12(18.4)	0.14	31 (47.6)	0.03
Being seen as covid-19 carrier in public transport services	7(10.7)	0.08	37 (56.9)	0.003
Can't go home due to the non-operation of International flight	46(70.7)	0.000	28 (43.0)	0.05
Can't go home due to the high cost of evacuation flight	43(66.1)	0.001	47 (72.3)	0.004
Hard to get food/ Groceries	25(38.4)	0.16	13 (20.0)	0.16
Financial problems	39(60.0)	0.002	28 (43.0)	0.04
Delay of stipend	23(35.3)	0.18	19 (29.2)	0.19

Table 6 highlight the factors influencing social challenge faced by the foreign students pursuing their higher studies in Kerala and Tamil Nadu state universities. The result shows that only three social and academic challenges are statistically significant with students' state of residence. Those challenges are restricted outdoor activities (p=0.000), lack of transport during lockdown (p=0.04), cannot go home due to the non-operation of International flight (p=0.000), cannot go home due to the high cost of evacuation flight (p=0.001), financial problems (p=0.002). In contrast, those studying in Tamil Nadu had eight statistically significant challenges with the state of resident (Tamil Nadu). Those challenges are lack of transport during lockdown (p=0.002). Not being informed about restrictions (p=0.04), being racially abused while seeking help or service (p=0.002). Being seen or suspected as Covid-19 carrier when seeking medical treatment at the hospital (p=0.03). Being seen as Covid-19 carrier in public transport services (p=0.003). Cannot go home due to the non-operation of International flight (p=0.05). Can't go home due to the high cost of evacuation flight (p=0.004), and Financial problems (p=0.04).

Discussion

The result stated that many international students pursuing their higher studies in Kerala and Tamil Nadu have basic knowledge of Covid-19. Still, some possess insufficient knowledge of Symptoms and how Covid-19 spreads. About student's mental health, half of the students experiencing stress. However, few student experiencing excessive fear and worries, which leads to anxiety, stress, and social isolation, leading to depression. The study found out that the students pursuing their higher studies in Tamil Nadu had more difficulties for education and social life challenges than those seeking their higher studies in Kerala State. The study revealed that apart from education and life challenges student have faced sensitive and harsh difficulties such as discrimination, racial abuse and being seen as the most potential Covid-19 carrier.

Implications for policy and practice

Professional training for unprepared teachers/students for online education-not all teachers/students are good at it, or at least not all of them were ready for this sudden transition from face to face learning to online learning. Most teachers are just conducting lectures on video platforms such as Zoom; Google meets etc., which may not be real online learning without any dedicated online learning platform. Focus on community acceptability of foreigners and behavioral change towards racial abuse and discrimination of foreigners on being suspected or seen as Covid-19 carrier, especially in Tamil Nadu State. English Medium Teaching standard sets by the UGC should be followed by the teachers for equal learning and comprehension of the students while taking classes. All colleges and universities should implement the proper channel for linking up or sharing necessary information to the international students studying in their institutions.

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