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Perception towards Online Classes during COVID-19 among Nursing Students of a Medical College of Kaski District, Nepal

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ABSTRACT

Introduction: Online learning is a virtual learning system that integrates internet connection with teaching and learning process. This system has become a solution for the continuity of teaching and learning process in Nepal during Covid-19 pandemic. Thus the main objective of this study was to assess the perception of nursing students towards online classes during Covid-19 pandemic.

Methods: A cross-sectional study was carried out among 133 nursing students studying at Gandaki Medical College of Nepal. Data were collected through online survey using a semi-structured questionnaire from 15 to 21, September, 2020 and were analyzed using Statistical Package for Social Science (SPSS) version 16 employing descriptive and inferential statistical method.

Results: The result showed that mobile was the most commonly (51.9%) used gadget for attending online class. One third of the students (35.3%) had no access to static internet and 4.5% of them did not have internet at their home. Majority of the students (91.7%) felt that online classes should be continued during this pandemic. Nearly two third of the respondents (63.2%) were satisfied from the online classes. Overall, 54.1% had negative perception towards online classes. There is statistically significant association of perception with residence ($p = 0.033$), type of nursing programme ($p = 0.027$), family income ($p = 0.022$), education level of father ($p = 0.029$) and mother ($p = 0.004$).

Conclusion: Online learning method is a solution taken by higher education in Nepal during the Covid-19 outbreak. Based on the survey result, almost half of the respondents had negative perception towards online learning. However, majority felt that online classes should be continued during this pandemic. Therefore, it is recommended to foster face to face interaction between students and teachers and to promote learning environment at home for online learning.

INTRODUCTION

The Coronavirus Disease 2019 (COVID-19) outbreak which was originated and restricted only in China until February 2020 had suddenly altered into a global pandemic disease from 11th March, 2020 [1,2]. This pandemic has affected not only on physical health but also the lifestyle, business, stock market and even the education system worldwide as a result of containment measures being taken for its prevention [3,4]. A large part of the world experienced a lock down that closed educational institutions affecting more than 70% of the world's student population. Physical classroom teaching was switched into virtual classes quite fast usually few days at university level [5].

Nepal is also not an exception to this disease. A single case was reported to have COVID-19 infection in Nepal till 23, March 2020 and a country-wide lockdown came into effect on 24 March which was continued until 21 July 2020 in Nepal [6,7]. As of 30 July 2020, Nepal Ministry of Health and Population had confirmed a total of 19,547 cases, 14,248 recoveries, and 52 deaths in the country [8]. With the beginning of the lockdown to control the COVID-19 outbreak, many educational institutions started switching from traditional classroom teaching to online teaching to cope with the adverse situation in Nepal. Tribhuvan University (TU), the largest and oldest university in Nepal, also officially endorsed the virtual class model along with a guideline and circulated a notice among its institutions. Similarly, the Ministry of Education, Science and Technology appealed to stakeholders to start classes through alternative systems. Various news media and relevant stakeholders argued for the need for promoting such classes [9].

Online learning is a virtual learning system which integrates internet connection with teaching and learning process [10]. The interaction of teaching and learning activities can be carried out from the distance with the help of internet and online media [11]. However, this method can be difficult for those teachers who are specialized in conventional teaching and are uncomfortable to use electronic gadgets. Also, students may not feel serious in online teaching as teachers have little control in online teaching [12]. Online learning has become a solution for the continuity of teaching and learning process in Nepal during Covid-19 pandemic. Although online learning have various positive impacts, the shift to online education in nursing where student nurses require practical knowledge creates new challenges for nurse educators [13,14].

Various studies have been conducted across different countries to determine medical student's perception on E-learning. A study was done in Pakistani medical and dental students in which students did not prefer e-teaching over face-to-face teaching during the lock down situation. 77% students had negative perceptions towards e-learning [15]. Further, a study done in Indonesia among medical students found some supportive but also inhibitory factors to distance learning. The most agreed supportive factor was location flexibility (87.9%) and the most common inhibitory factor was signal dependent (80.2%) [16]. A study was conducted to assess the impact of E-learning among nursing students and teachers of Kathmandu during COVID-19 [17].

The study of effectiveness of online classes has become essential component in the education system in Nepal. Very little information exists about the experiences of students regarding online classes in Nepal. Therefore, the researcher assessed the perception of nursing students' towards online learning implemented during Covid-19 pandemic in Nepal. This knowledge is necessary to identify student's requirement during online learning to make this learning system beneficial for the students.

METHODS

A descriptive, cross-sectional research design was used to conduct the study among nursing students studying at Gandaki Medical College (GMC) which is located in Kaski district of Nepal. GMC is one of the constituent colleges of Tribhuvan university, Institute of medicine established in 2010 A.D. It has been providing education facilities to a number of students with different faculties i.e. MBBS, BDS, BNS, Bsc nursing, BPH, B Pharmacy, BMLT, BMIT. An online teaching in nursing program was started in this institute from 11 April 2020 which were conducted every day using ZOOM application. So, this setting was selected purposively for the study purpose. The targeted population for the study were all nursing students of Gandaki medical college whose total number was 135. All nursing students studying at this college were included in the study using census method. Those students who were sick and unable to respond and were unwilling to participate were excluded from the study.

A self-administered semi-structured questionnaire developed through extensive review of related literature and after consultation with experts was used for data collection. The questionnaire was organized into 2 parts:

Part I: consisted of questions related to socio-demographic and online class related information.

Part II: consisted of Likert scale for the measurement of perception. It included twenty four statements using 5 point Likert scale (1= Strongly disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly agree). The total score range from 24 to 120. The level of perception was computed by using median score and was categorized as: score above the median= Positive perception and score equal to or below the median score= Negative perception.

Validity of the instrument was maintained by extensive review of literature and consultation with research experts. Pretesting of the instrument was done among 10% of the sample size and necessary modification was done as required. Reliability in terms of consistency of the tool was tested by calculating Cronbach's alpha value which was 0.785.

The study was carried out after obtaining ethical clearance of the research proposal from the Institutional Review Board (IRB) of Gandaki Medical College (Ref no: 94/077/078). Informed verbal and written consent were taken from the respondents after giving information about the nature of the study and use of the data. Researchers collected the data from 15 September to 21 September, 2020 by giving instruction to self-administer the questionnaire sent through email. For those students who had problem communicating online, data was collected using telephone interview. Respondents' dignity was maintained by giving right to reject or discontinue their participation from the study at any time without any penalty. Confidentiality and

anonymity was maintained by not disclosing the name and other information of the respondent except its use in the study. Before receiving the filled form from respondent, the filled instrument was rechecked for completeness and consistency. After data collection, data were coded and entered in IBM SPSS, version 16. Data were analyzed by employing descriptive statistical method which includes frequency, mean, standard deviation and inferential statistical method such as chi-square test. Statistical significance was considered at $p < 0.05$.

RESULTS

Out of 135 nursing students, 133 completed the online survey (98.5% response rate). The mean age of the respondents was 22.3 years (SD ± 2.9). Majority of the students (88.7%) were residing in urban area and 87.2% were unmarried. Almost four fifth (79.7%) had nuclear family. More than half of the students (57.9%) had monthly family income of 36000-111000 (Table 1).

Table 1: Demographic and job-related characteristics of respondents (n = 133).

Characteristics	Number	Percentage
Age in years		
< 25	117	88
≥ 25	16	12
Mean age ± SD in years = 22.3 ± 2.9; Min.= 18, Max.= 40		
Type of residence		
Urban	118	88.7
Rural	15	11.3
Marital Status		
Unmarried	116	87.2
Married	16	12
Divorced	1	0.8
Type of family		
Nuclear	106	79.7
Joint	27	20.3
Academic Year		
BSc nursing 1st year	11	8.3
BSc Nursing 2nd Year	30	22.6
BSc Nursing 3rd Year	26	19.5
Bsc Nursing 4th Year	12	9
BNS 1st Year	8	6
BNS 2nd Year	22	16.5
BNS 3rd Year	24	18
Father's education		
Illiterate	4	3
Basic education (up to 8 class)	19	14.3
Secondary level (9 -12 class)	56	42.1
Bachelor level	39	29.3
Masters and above	15	11.3
Mother's education		
Illiterate	9	6.8
Basic education (up to 8 class)	37	27.8
Secondary level (9 -12 class)	66	49.6
Bachelor level	18	13.5
Masters and above	3	2.3
Family Income (per month)		
Low income (<10000)	2	1.5
Medium income (10000 - 36000)	49	36.8
Upper medium income (36000 -111000)	77	57.9
High income (above 111000)	5	3.8

Almost half of respondents (51.9%) used mobile for attending online class. Two third of them (66.2%) are using cellular data and Wifi for attending the class. One third of the students (35.3%) had no access to static internet and 4.5% of them do not have internet at their home. Majority of the students (91.7%) felt that online classes should be continued during this pandemic. Nearly two third of the respondents (63.2%) are satisfied from the online classes using ZOOM application (Table 2).

Table 3 shows the perception of students towards online classes. More than half of the students (52.6%) disagreed to "no specific preparation is needed for online classes." Almost two third (63.2%) strongly agreed to "self-discipline is necessary during online studies." More than one third of students (48.1%) disagreed that online learning is better than traditional learning.

Table 4 reveals the statistics of overall scoring of perception towards online classes. It shows that the possible score was 24 to 120 which could be obtained by the respondents. Out of the full score, the mean score obtained by the respondents was 77.33 i.e. 64.4% and standard deviation was 6.1 i.e. 5.08%. The median score was 78 i.e. 65% with minimum perception score of 60 i.e. 50% and maximum score of 94 i.e. 78.3%.

Table 5 reveals the overall level of perception of students towards online classes. More than half of the students (54.1%) had negative perception towards online classes.

Table 6 shows that there is statistically significant association of perception with residence ($p = 0.033$), type of nursing programme ($p = 0.027$), education level of father ($p = 0.029$) and mother ($p = 0.004$) and family income ($p = 0.022$).

DISCUSSION

The present study assessed the perception of nursing students towards online classes during the period of COVID-19 pandemic. The study found that more than half of the students (54.1%) had negative perception towards online classes. This finding is supported by a study conducted among Pakistani medical students which showed 77.4% students had negative perception about e-learning [15]. In this study, more than one third of students (48.1%) disagreed that online learning is better than traditional learning. About two third of the students agreed that face to face contact with teacher is necessary to learn (67.6%) and learning environment is better in college than at home (63.9%). These data suggest that nursing students prefer

Table 2: Online class related characteristics of respondents (n = 133).		
Variables	**Number**	**Percentage**
Ever received online class before COVID 19		
No	133	100
Type of Gadget used for attending online class		
Mobile	69	51.9
Laptop/Computer	32	24.1
Mobile/ Laptop /Computer	32	24.1
Type of internet connection		
WIFI	42	31.6
Cellular data	3	2.3
Combination of cellular data and Wifi	88	66.2
Access to sound/static internet		
Yes	86	64.7
No	47	35.3
Access to internet facility at own home		
Yes	127	95.5
No	6	4.5
Should online learning be continued during this pandemic?		
Yes	122	91.7
No	11	8.3
Student's Perceived Level of Satisfaction from Online Classes using ZOOM		
Strongly satisfied	8	6
Satisfied	84	63.2
Less satisfied	41	30.8

Table 3: Perception of students towards online classes (*n* = 133).

Statements	Strongly Disagree No (%)	Disagree No (%)	Neutral No (%)	Agree No (%)	Strongly Agree No (%)
Online learning system is easy to use.	-	24 (18)	46 (34.6)	59 (44.4)	4 (3)
It is easy to manage study time effectively.	-	21 (15.8)	44 (33.1)	62 (46.6)	6 (4.5)
No specific preparation is needed.	16 (12)	70 (52.6)	27 (20.3)	18 (13.5)	2 (1.5)
Learning is the same in class and at home on the Internet.	50 (37.6)	61 (45.9)	16 (12)	5 (3.8)	1(0.8)
Learning on the internet outside of class is more motivating than a regular course.	30 (22.6)	58 (43.6)	24 (18)	19 (14.3)	2 (1.5)
There is easy sharing ideas with colleagues in online learning.	24 (18)	41 (30.8)	45 (33.8)	21 (15.8)	2 (1.5)
Learners population does not affect learning in online classes.	14 (10.5)	36 (27.1)	30 (22.6)	37 (27.8)	16 (12)
Self-discipline is necessary during online studies.	1 (0.8)	2 (1.5)	5 (3.8)	41 (30.8)	84 (63.2)
I can ask my teacher questions and receive a quick response during online class.	1 (0.8)	21 (15.8)	24 (18)	61 (45.9)	26 (19.5)
Online learning improves technical skill in using electronic gadget.	2 (1.5)	6 (4.5)	18 (13.5)	63 (47.4)	44 (33.1)
Face-to-face contact with teacher is necessary to learn.	1 (0.8)	14 (10.5)	24 (18)	49 (36.8)	45 (33.8)
It is comfortable communicating electronically during online classes.	7 (5.3)	39 (29.3)	41 (30.8)	41 (30.8)	5 (3.8)
Online learning is better than traditional learning	9 (6.8)	64 (48.1)	38 (28.6)	21 (15.8)	1 (0.8)
There is low participation of students in online learning.	4 (3)	19 (14.3)	38 (28.6)	52 (39.1)	20 (15)
There is lack of interaction during online classes.	3 (2.3)	18 (13.5)	29 (21.8)	50 (37.6)	33 (24.8)
Lack of feedback from the instructor.	3 (2.3)	32 (24.1)	51 (38.3)	40 (30.1)	7 (5.3)
Single students dominate during online classes.	20 (15)	53 (39.8)	28 (21.1)	24 (18)	8 (6)
Lack of technical know-how (unable to get practical knowledge)	7 (5.3)	14 (10.5)	18 (13.5)	45 (33.8)	49 (36.8)
Online class cost low	19 (14.3)	45 (33.8)	37 (27.8)	27 (20.3)	5(3.8)
There is lack of understanding	8 (6)	45 (33.8)	44 (33.1)	30 (22.6)	6 (4.5)
Lack of concentration	10 (7.5)	21 (15.8)	45 (33.8)	45 (33.8)	12(9)
Ownership (self-control) of laptop/android or other Phones	1 (0.8)	16 (12)	23 (17.3)	80 (60.2)	13 (9.8)
Recorded online class can be useful for future	5 (3.8)	5 (3.8)	20 (15)	61 (45.9)	42 (31.6)
Learning environment is better in college than at home.	15 (11.3)	15 (11.3)	18 (13.5)	38 (28.6)	47 (35.3)

Table 4: Statistics of overall scoring on perception of students regarding online classes (*n* = 133).

Variable	Possible Score	Mean (S.D.)	Median	Minimum	Maximum
Overall Perception score	24 - 120	77.33 (6.1)	78	60.00	94.00
Percentage of scoring of perception	25 - 100%	64.4% (5.08)	65%	50%	100%

Table 5: Overall level of perception of students towards online classes (*n* = 133).

Level of Perception	Number	Percentage
Positive	61	45.9
Negative	72	54.1

traditional in-class methods to online learning. Various studies also support this finding. A study conducted among Saudi pharmacy students showed that 72% preferred traditional in-class lectures over the online interactive lectures [18]. Similarly, a study also showed that majority (85%) of the student's preferred face to face teaching over e-teaching [15].

This study also reveals that half of the respondents (51.9%) used mobile gadget for their e-learning. Only 24.1% of the respondents used laptop/computer for their online class. A study among Pakistani medical students showed that 76% of them used mobile gadgets for their e-learning [15]. Mobile has been a most popular devices among students for e-learning as compared to laptops and tablets

Table 6: Association between Perception and Selected Variables (*n* = 133).

Variables	Perception		χ^2 value	*p* - value
	Positive Number (%)	**Negative** Number (%)		
Age (in years)				
< 25	66(56.4)	51 (43.6)	2.027	.155
≥ 25	6 (37.5)	10 (62.5)		
Residence				
Urban municipality	60 (50.8)	58 (49.2)	4.555	.033*
Rural municipality	12 (80)	3 (20)		
Type of Family				
Nuclear	57 (53.8)	49 (46.2)	.028	.868
Joint	15 (55.6)	12 (44.4)		
Programme				
Bsc Nursing	49 (62)	30 (38)	4.878	.027*
Bachelor of Nursing Sciences	23 (42.6)	31 (57.4)		
Father's education level (129)				
Basic education	12 (63.2)	7 (36.8)		
Secondary level	25 (44.6)	31 (55.4)	9.038	.029*
Bachelor	21 (53.8)	18 (46.2)		
Master	13 (86.7)	2 (13.3)		
Mother's education level (124)				
Basic education	15 (40.5)	22 (59.5)		
Secondary level	35 (53)	31 (47)	11.225	.004*
Bachelor and above	18 (85.7)	3 (14.3)		
Family Income				
< 36000	34 (66.7)	17 (33.3)	5.232	.022*
≥ 36000	38 (46.3)	44 (53.7)		
Type of gadget used				
Mobile	42 (60.9)	27 (39.1)		
Laptop/computer	15 46.9)	17 (53.1)	2.619	.270
Mobile and laptop both	15 46.9)	17 (53.1)		
Access to static internet				
Yes	46 (53.5)	40 (46.5)	.041	.839
No	26 (55.3)	21 (44.7)		

χ^2: Pearson's Chi square Test; *p value significant at <0.05 level

[19]. This study highlights that two third of the respondents (66.2%) are using both cellular data and Wifi for attending the class. One third of the students (35.3%) had no access to static internet and 4.5% of them do not have internet at their home. A study done in Nepal showed that 16.7% of students had no internet access at their home for online class [17]. Sound internet connectivity has been one of the most complained aspects and accessing online courses through mobile internet is expensive, which is unaffordable for many students in Nepal [9].

Approximately, half of the participants agreed that online learning system is easy to use (47.4%) and it is easy to manage study time effectively (51.1%). However, 62.6% disagreed to no specific preparation is needed to attend online classes. A study conducted among students of Indonesia also showed that 42.4% of students disagreed to no specific preparation is needed for long distance learning[16]. Online learning is suggested to be convenient and beneficial for both students and instructors [20].

Only 17.3% of the respondents agreed that there is easy sharing of ideas with colleagues in online learning. However, 65.4% agreed that they can ask teacher questions and receive a quick response during online studies. A study among nursing students in Nepal also showed that 64.4% of students could clarify their queries through question/answer session of online class [17].

Although one third of the respondents (34.6%) agreed that it is comfortable communicating electronically during online classes, 62.2% agreed that there is lack of interaction during online classes which is supported by a study of [16]. Collaboration and interaction in online class remain the major barriers [21].

The study also showed a statistically significant association of perception with residence (*p* = 0.033), type of nursing programme (*p* = 0.027), family income (*p* = 0.022), education level of father (*p* = 0.029) and mother (*p* = 0.004). Whereas, there is no statistically significant association between respondent's perception and their age, type of family, type of gadget used and access to static internet.

Our study has limitations. First, it is a cross sectional quantitative study. Second, perception was based on self-report tool. Third, the study was performed only among nursing students of selected college of Nepal which may

limit the generalizability of the findings. Also, our study could not show gender difference in perception as female only pursue nursing career in Nepal.

CONCLUSION

Online learning method is a solution taken by higher education in Nepal during the Covid-19 outbreak. Based on the survey result, almost half of the respondents had negative perception towards online learning. However, majority felt that online classes should be continued during this pandemic. Therefore, it is recommended to foster face to face interaction between students and teachers and to promote learning environment at home for online learning.

ACKNOWLEDGMENT

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