Research Study   **Medical research**

Perceived Challenges and Experiences on Remote Teaching among Faculty in a Higher Education Institution of Health Sciences in UAE during COVID 19 Pandemic.

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ABSTRACT

Background: Education is considered as the foundation to build a society capable of keeping pace with progress. The ongoing new corona virus disease (COVID-19) pandemic, which arose at the end of 2019, poses a severe challenge to world public health systems. Online nursing education programs have grown exponentially over the time. As online education continues to grow due to the present pandemic situation, teaching faculties are forced to continue teaching online, and it is important to understand their perceptions and challenges of online teaching. Hence, the *aim* of the study is to explore the faculty's perceived challenges and experiences on remote teaching during COVID pandemic among faculties in higher educational institution.

Methods: Cross sectional descriptive survey study design adopted. Using Total population sampling design, 27 samples selected for this study from one of the higher educational institution of health sciences in UAE. The data collected by using structured self-administered questionnaire. The collected data were analyzed by using descriptive statistics.

Results: The study explored faculties perceptions in the following six areas: Technical proficiency, Institutional support, Relationship and communication with students, Transition to remote teaching, Lifestyle changes and job satisfaction related to remote teaching method. The study revealed, large proportion of (81%) the faculties not used with online teaching. The majority of the teaching faculty (70%) was comfortable in using the (LMS) learning management system. Regarding Communication and relationship with students and colleagues, more than half (55%)of the faculties appreciated the student involvement and participation, only few (33%)of them felt difficulty in face to face communication with students due to cultural barrier.

Impact of transition to Remote teaching revealed that maximum number (70.37%) of faculty felt that online exam integrity was lowered. More than half (70.37%) of the faculty members stated that their life style changed significantly, such as exercise and sleeping were affected to the great extend (59.26%) and (55.56%) respectively.

With regard to Physical and psychological impact, more than half of the faculties expressed eye strain (55.56%), neck and back pain (40.74%) and difficulty to fall in sleep(37.04%) to the great extent due to long time computer use. When compared remote teaching with traditional teaching method 40.74% of the faculty members reported that no change in the job satisfaction level.

Conclusion: Online education has become a major teaching strategy during the COVID pandemic situation which helped the educational institutions to continue the teaching. The study explored that the majority of the teaching faculty were comfortable in using the educational technology. There are some notable physical and psychological experiences reported by most of the faculties. Though the remote teaching had some disadvantages, it is a boon for carrying out the teaching and learning during this COVID pandemic situation, which we are hopeful to overcome and fight together.

Keywords: Remote teaching, pandemic, higher education, online teaching, Faculty perceptions, Faculty experience, Learning Management System.

INTRODUCTION

Education is considered as the foundation to build a society capable of keeping pace with progress. Over the past decades, the interest of the leadership in United Arab Emirates (UAE) focused on building an educational system comparable to those in developed countries, investing all resources to achieve its goals. This has been highlighted even during the times of pandemic, when everybody has witnessed an unexpected change in the normal schedule and lifestyle process. The ongoing new corona virus disease (COVID-19) pandemic, which arose at the end of 2019, poses a severe challenge to world public health systems. Everywhere government has taken rapid and decisive actions to reduce the risk of community transmission and campus cluster infection. All schools nationwide have complied with the Ministry of Education order to postpone the opening of the fall semester in response to the rapid evolution of the COVID-19 pandemic. Campus epidemic prevention measures were implemented through student counseling networks, and flexible teaching strategies, including online teaching and distance teaching, were implemented to protect the learning rights of students. Nowadays, much of nursing education is moving online, and faculty must learn to deliver content and communicate differently with the students for the effective teaching learning process (Beth Mastel-Smith,2015).

Technological advances in the fields of communication, social media, and education generally have afforded new ways of connecting and working with students has changed the face of higher education. As a result, online learning helps to equip students with career skills, because the rapid growth of technology in clinical care means that the nurse of the future must be a health technology expert who provides safe, high quality, technology-infused patient care and is capable of accessing accurate, current information at the point of care. Online teaching is "A course where most or all of the content is delivered Online, typically have no face-to-face meetings" (E. Allen and J. Seaman(2013). As online learning continues to grow significantly, various efforts have been explored and implemented in order to improve the learning experiences of students (Frazer et al., 2017).

According to Richter.et.al., 2019, there is a necessity to understand the faculty perceptions and experiences ofonline teaching at their institutions to ensure that policies, guidelines, and resources meet the needs of faculty. Research on the challenges and experiences on remote teaching among faculty in a higher education institution of health sciences in UAE during COVID 19 pandemic is lacking. Therefore, the main purpose of this study was to explore these challenges and experiences by assessing the technical proficiency, communication and relationship, impact of transition, and the level of job satisfaction of the faculties on remote teaching. Furthermore, we determined the extent of the institutional assistance to faculties on remote teaching and identified the lifestyle changes of faculties involved in remote teaching during COVID pandemic.

METHODS

Design and setting

The study was employed using a descriptive, cross-sectional survey design in one of the higher educational institute of health sciences in UAE.The study conducted in the month of June 2020 among faculties working in one of the higher educational institute of health sciences in UAE.

Sample

The target population for this study was faculties who are teaching online in one of the higher educational institute of health sciences in UAE.Total population sampling design adopted for this study. It is a type of purposive sampling technique that involves examining the entire population. So, only the faculties who are not willing to participate are excluded from this study, totally 27 samples were selected from one of the higher educational institute of health sciences in UAE.

Instrument

The structured self-administered questionnaire used to collect the data. The investigator developed the tool after reviewing the related literature and guidance from the experts in the field. The tool consists of seven parts, which includes demographic variables technical proficiency, institutional support, relationship, and communication with students, transition to remote teaching, lifestyle changes and job satisfaction related to remote teaching. A five point Likert scale was used to assess the above-mentioned categories. It was ranging between strongly agree to strongly disagree continuum. Content validity of the tool established by consultation with nursing experts. The tool modified according to the suggestions and recommendations of experts. The reliability of the instrument assessed by using Cronbach's alpha (0.86).

Data collection

The study conducted in the month of June 2020 among faculties working in one of the higher educational institute of health sciences in UAE. Using Total population sampling design, 27 samples selected for this study. The data collected by using structured self-administered questionnaire. The tool was created in Google forms and the link was send to all the samples via email. All participants informed about the study and requested to sign the informed consent form. A Participants Information Sheet attached to the questionnaire which explained the purpose of the study and what the participants have to do to take part in the study.

Data analysis

Data were collected from twenty-seven teaching faculty in a higher education institution of health sciences and measured opinions using five point Likert scale. The data thus obtained were analyzed by descriptive statistics such as frequency, percentage using tables and graphs.

Ethical approval

The data collected after obtaining the ethical approval from the Ethical committee of Institutional Review Board of the participating institute. Oral and written information were given to participants prior to the data collection procedure. It was assured that confidentiality of collected data will be maintained

RESULTS

Faculties from five campuses were participated in this study (Table 1). Participants were holding the position such as Assistant Professor, lecturer and lab specialist. Majority of teaching faculty (63%) were females while others were males. Most of the teaching faculty had >15 years of teaching experience. Regarding remote teaching experience, it was found to be new for majority of teaching faculty (81.5%). Only a few (18.5%) reported of having previous experience with remote teaching. (Table 1)

Table – 1: Frequency and percentage distribution of demographic variables of teaching faculty

	Frequency (f)	Percentage (%)
Name of campus		
Al Dhafra	6	29.6
Al Ain	7	18.5
Abu Dhabi	8	22.2
Ajman	5	25.9
Morocco	1	3.8
Job title		
Assistant professor	4	14.8
Senior instructor	7	25.9
Instructor	8	29.6
Lab specialist	8	29.6
Age (years)		
31-40	14	51.9
41-50	12	44.4
More than 50	1	3.7
Total years of experience (years)		
0-5	5	18.5
6-10	8	29.6
11-15	5	18.5
Gender		
Male	10	37
Female	17	63
Remote teaching experience is new to me		
Yes	22	81.5
No	5	18.5

Challenges and experiences regarding technical proficiency of the faculties on remote teaching.

The technical proficiency of the faculties on remote teaching demonstrated thatthe majority {19(70.37%)} of the teaching staff agreed that they are comfortable to use the technology and the current technology is instructor friendly. Eighteen of them (66.67%) agreed that the present learning management system (Black Board) is useful to get course evaluation and course analysis (Figure 1).
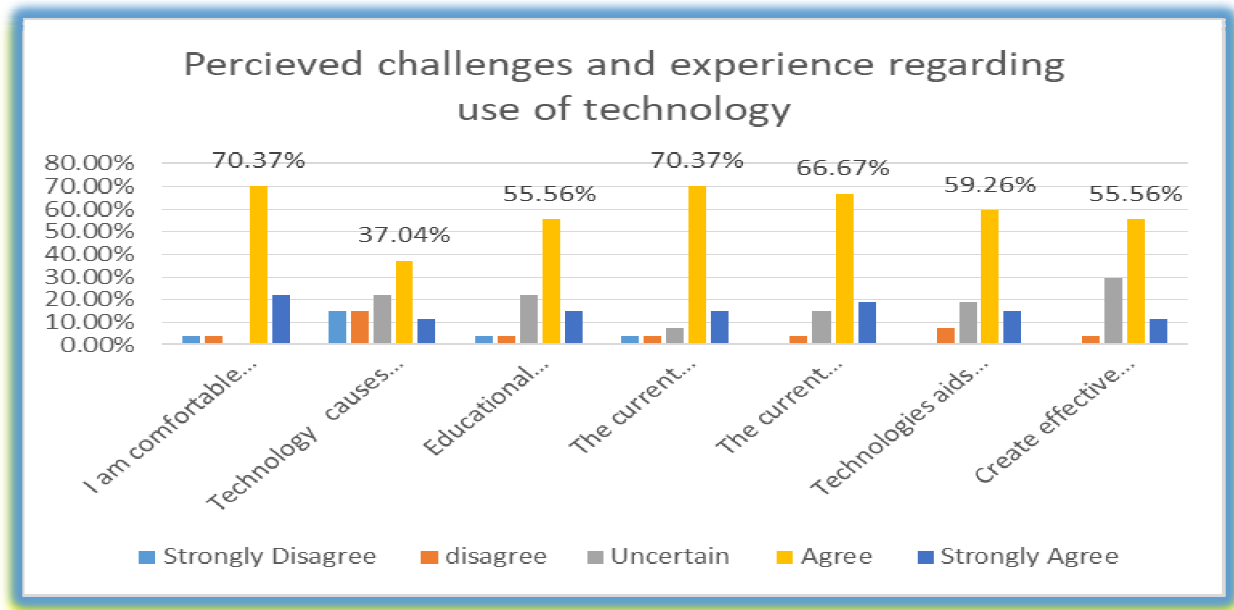
Figure (1) Perceived challenges and experiences regarding use of technology.

Determining the extent of the institutional assistance to faculties on remote teaching

It is evident that half of the faculties {14 (51.85%)} agreed that the LMS administrators are approachable and available to assist the faculties and administrator supports the faculty with adequate equipment and device {12(44.44%)}.Less than half {11(40.74%)} of the faculties are agreed that they got hands on training and support as necessary (Figure 2).
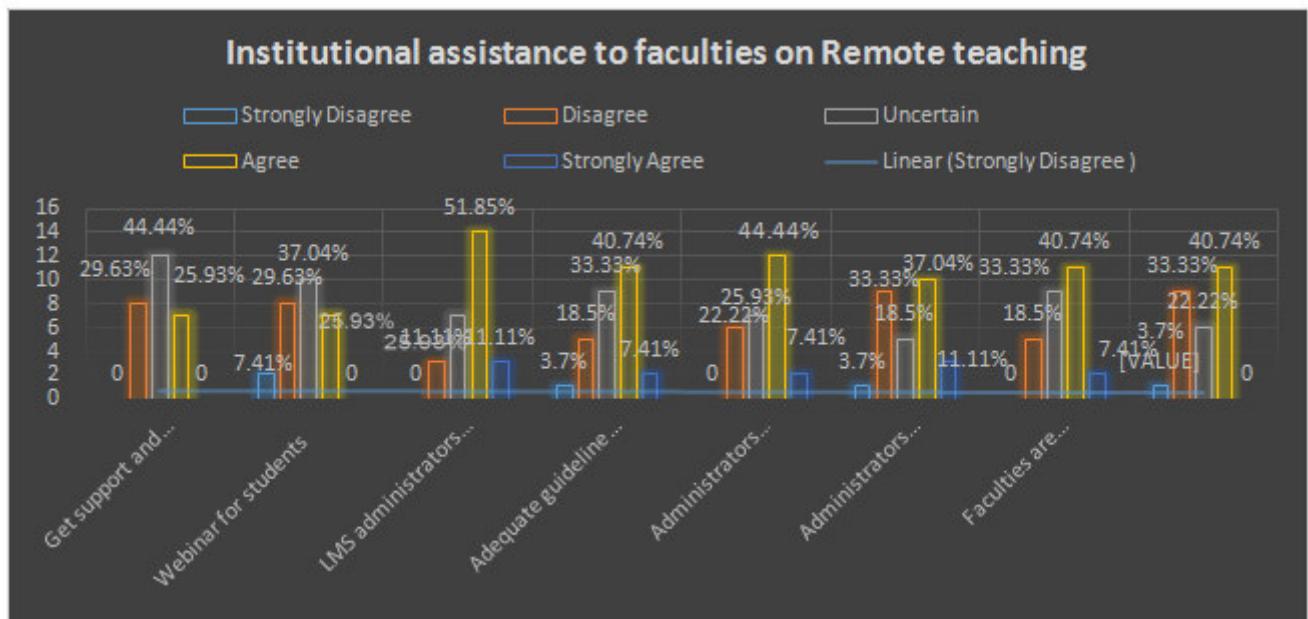
Figure (2) Extent of Institutional assistance to faculties on Remote teaching

Communicationand relationship with students and colleagues during remote teaching

Regarding Communication and relationship with students and colleagues during remote teaching, among 27 faculties, majority {15(55.56%)} appreciated the student involvement and participation. Most of the faculties {11(40.74%)} were able to maintain an effective relationship with their colleagues. Some of them {9 (33.33%)} felt difficult in face to face communication with students due to cultural barrier (Figure 3).
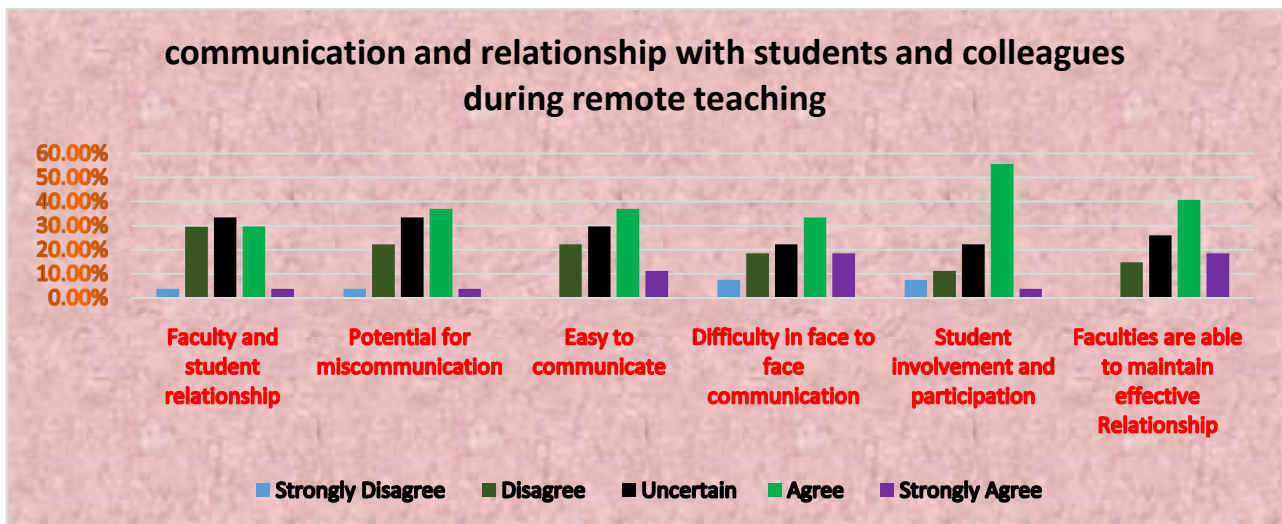
Figure (3) Faculties communication and relationship with students and colleagues during remote teaching

The impact of transition on remote teaching

From the obtaineddata maximum number {19(70.37%)} of faculties felt that online exam integrity was lowered and nearly half {12(44.44%)} of them felt difficult to monitor the students during the class hours. Majority {15(55.56%)} of them dropped some assignments and exams and most {13(48.15%)} of them agreed that they have done some changes in assignments / exams (Figure 4).
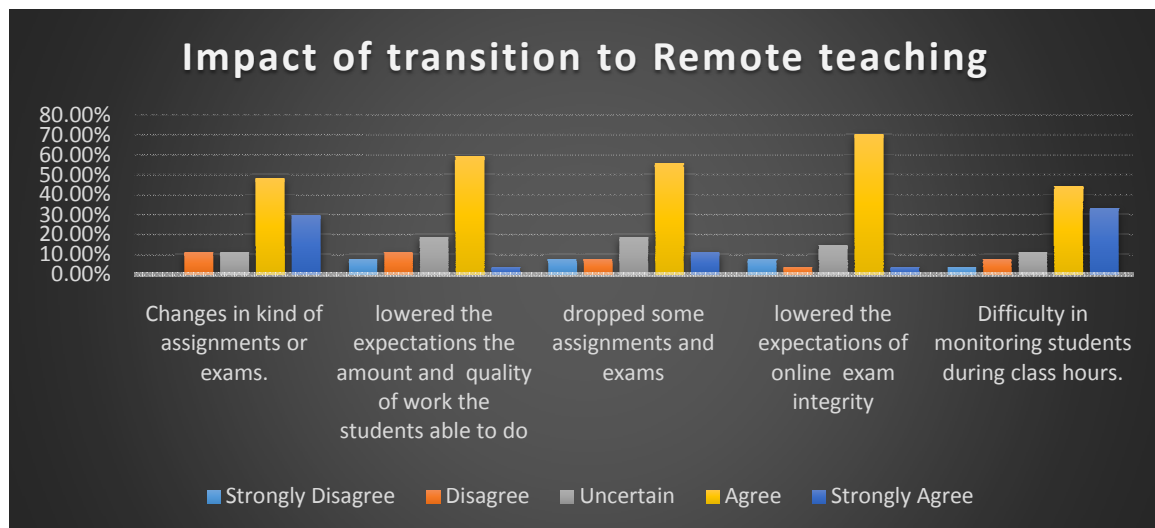
Figure (4) Impact of transition to Remote teaching.

Identifying the lifestyle changes of faculties involved in remote teaching during COVID pandemic.

Regarding life style changes, more than half {19(70.37%)} of the faculty members stated that their life style changed significantly and {8(29.63%)} of them stated that it is changed a little (Figure 5).
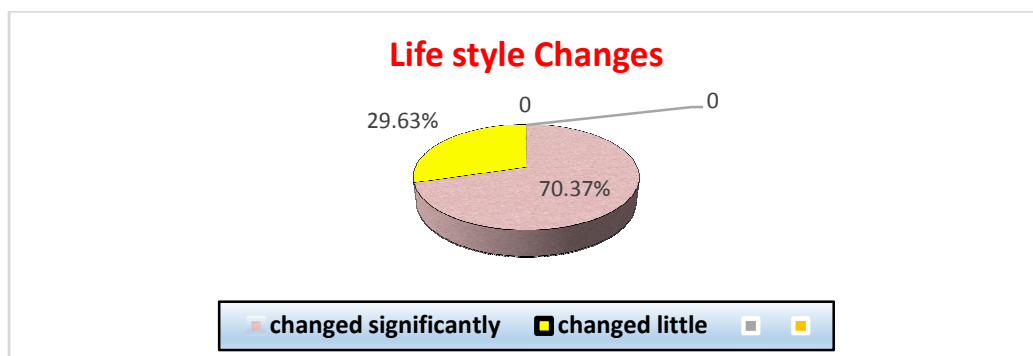

Figure (5). Percentage distribution of daily lifestyle changes of faculties involved in remote teaching during COVID pandemic.

Faculty's opinion on life style changes happened when moving to remote classes.

Regarding Faculty's opinion on life style changes, more than three quarter of the faculties {21(77.78%)} expressed that it took time for everyone to be adjusted with the new daily routine at home. Majority {17(62.96%)} of them stated that there were changes in the house chores during the remote classes. At the same time an equal percentage {10(37.04%)} of faculties agreed and strongly agreed that their spending time with the family is altered due to spending more time on remote teaching (Figure 6).
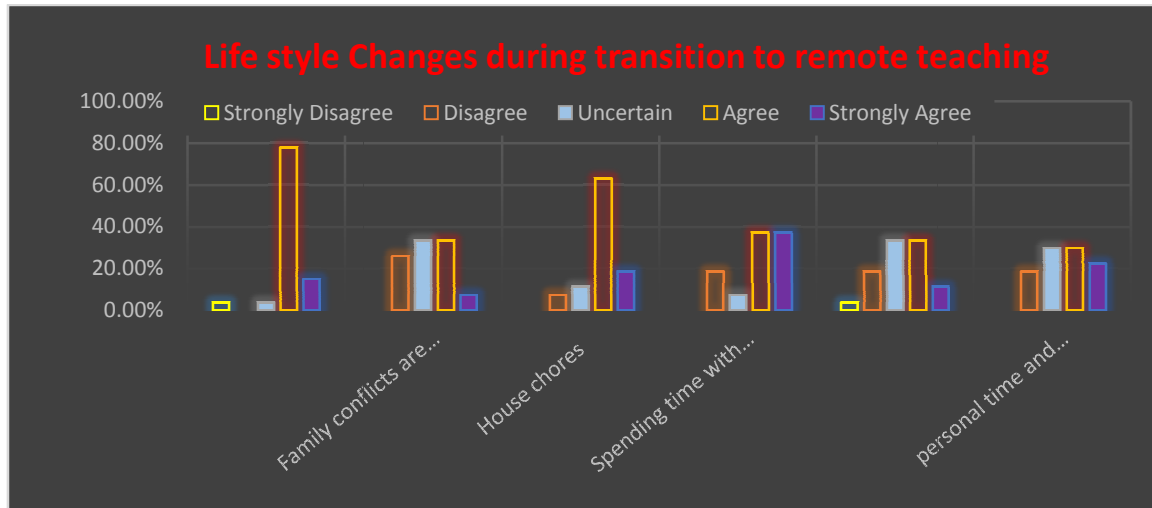

Figure (6) Lifestyle Changes during the transition to remote teaching

Social Interaction Affected with Remote Teaching

Among twenty-seven participants, nearly half {13(48.15%)} of the faculties reported that social interaction during the remote teaching has been highly affected. A few {4(14.81%)} of them reported it affected to a very low extent (Figure 7).
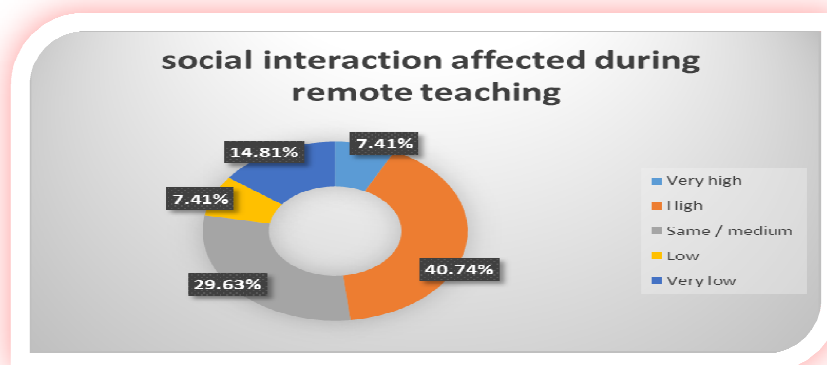

Figure (7) social interaction affected during remote teaching

Activities affected during COVID

The faculties expressed, to what extend the normal daily living activities were affected due to remote teaching during COVID. More than half of the faculties reported that exercise and sleeping were affected to the great extend {16(59.26%)} and {15(55.56%)} respectively. A high number of the faculties felt that spending time with the family, house chores and other activities are affected moderate to great extent {16(59.26%),8(29.63%)} and {7(25.93%)} respectively (Figure 8).
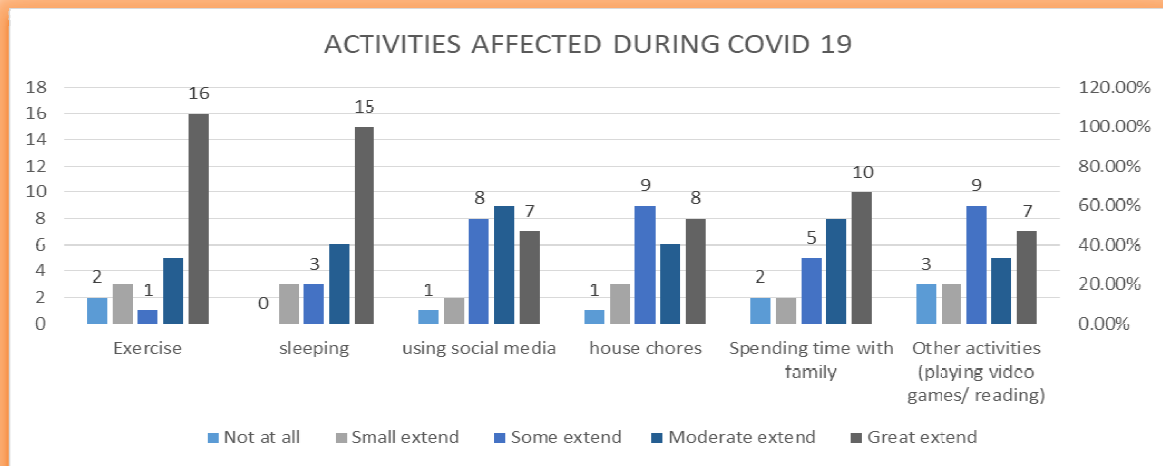
Figure (8): Percentage and frequency distribution of activities affected during the COVID-19

Impact of physical and psychological feeling

Regarding the impact of physical and psychological feeling, the faculties expressed that they are suffering with eyestrain {15(55.56%)}, neck and back pain {11(40.74%)} and difficulty to fall in sleep {10(37.04%)} to the great extent due to long time computer use. They also reported {13(48.15%)} other physical and psychological behaviors such as vocal fatigue, anger, stress, emotional exhaustion to the moderate extent (Figure 9).
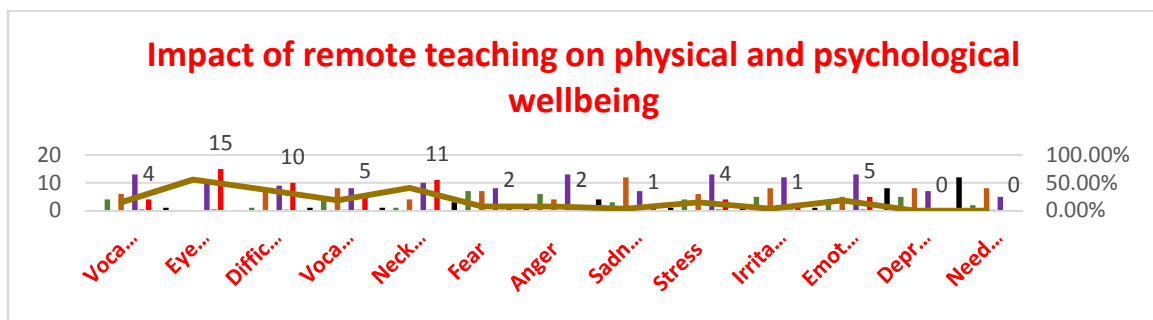

Figure (9) Physical and psychological impact on faculties due to remote teaching during pandemic.

Level of job satisfaction of faculties involved in remote teaching compared with traditional teaching method.

A high number {11(40.74%)} of the faculty members reported the same/medium level of job satisfaction, while rest of them felt low {6(22.22%)} and very low {2(7.41%)} job satisfaction. On contrary, few of them expressed high {5 (18.52%)} and very high {3(11.11%)} job satisfaction.
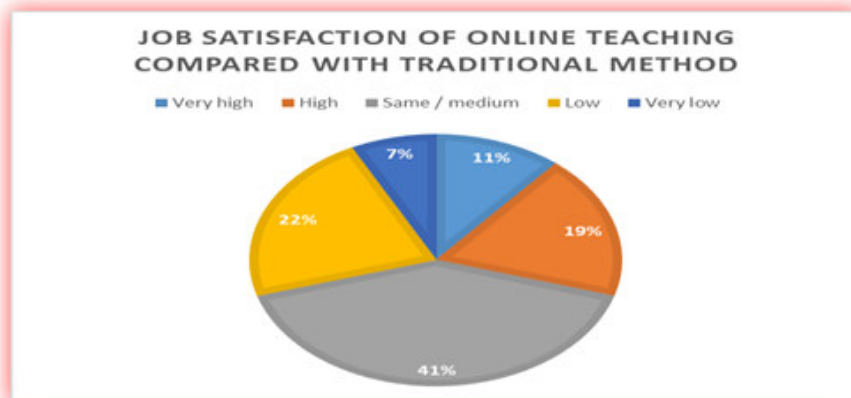

Figure (10) Percentage distribution of job satisfaction of online teaching compared with the traditional method.

DISCUSSION

Nursing education has adapted to present changes in the educational environment due to COVID pandemic by moving to online method of teaching and learning. Initial skepticism gave way to questioning the quality and effectiveness of this popular way of educating future nurses [Mastel-Smithe et al., 2015]. Learning Management System is considered as one of the "technological innovation" in education, which facilitates flexible teaching and learning environments. The present study explored faculties perception in the following six areas: technical proficiency, institutional support, relationship and communication with students, transition to remote teaching, lifestyle changes and job satisfaction related to remote teaching method.

The study was conducted among faculties working in one of the higher education institution; faculties from five campuses were participated in this study. Most of the teaching faculty had less than 15 years of teaching experience. Regarding remote teaching experience, it was found to be new for majority of teaching faculty (81.5%) and only a few (18.5%) reported of having previous experience with remote teaching. The present study findings were similar with the study done by Royce Kimmons et.al, in April 2020 on Twitter posts "to learn how students are adapting to the shift from in-person course delivery to remote teaching and learning". According to this survey most of the faculty members and administrators had engaged in some form of remote teaching and learning methods. More than half of the respondents stated that they had used teaching methods that were new to them. It also discovered that this transition from classroom teaching to online teaching has been stressful and requiring enormous efforts from faculty.

Faculty's perceptions related to the technical Proficiency revealed that majority (70.37%) of the teaching staff agreed that they are comfortable to use the technology and the current technology is instructor friendly. They also reported that the present learning management system (Black Board) is useful to get course evaluation and course analysis.

These results are consistent with a study conducted by Suad Alaofi (2016) Taibah University, Saudi Arabia regarding perception of teachers and students about utility of Black Board as Distance Learning Platform. The results of the above research revealed that Blackboard viewed as a positive influence on distance learning. The research discovered that teachers generally had a positive viewpoint about Blackboard, and believe it makes the teaching a lot easier.

Communication and relationship with students and colleagues during remote teaching, majority (55.56%) of the faculties appreciated the student involvement and participation. Most of the (40.74%) faculties were able to maintain an effective relationship with their colleagues. Some of them (33.33%) felt difficult in face-to-face communication with students due to cultural barrier.

Facilitating good relationships in the online environment was also noted in other studies as being essential and challenging (Ritcher, S. L.2019; Frazer et al., 2017; Mastel-Smith et al., 2015; Wingo et al., 2016). According to Ritcher, S. L. (2019) process of establishing Communication and relationships with students received both positive and negative comments from the participants. Participants reported a variety of methods to use to improve interaction with students in the online environment such as a well-developed course and quality faculty and student interaction. Regarding the impact of physical and psychological feeling, the faculties expressed that they are suffering with eyestrain (55.56%), neck and back pain 11(40.74%) and difficulty to fall in sleep (37.04%) to the great extent due to long time computer use. They also reported other physical and psychological behaviors such as vocal fatigue, anger, stress, emotional exhaustion to the moderate extent.

As per the study conducted in Spain by Leire Aperribai,et.al (2020) teachers have experienced higher levels of distress due to the workload generated during the lockdown**.** Teachers expressed Full-time online teaching is an activity that requires being in front of the computer for 10 hours a day.

CONCLUSION

Online education has become a major teaching strategy during the COVID pandemic, which helped the educational institutions to continue the teaching and learning process smoothly. Some of the studies carried out to explore the perceptions of the faculty while they have done transition from face to face teaching to online teaching showed that they had difficulties being engaged in the transition. The present study done to explore the challenges experienced by the faculty to implement the online teaching and their experiences with remote teaching in UAE context. The study revealed the perceptions of faculties in the following areas like technical proficiency, institutional support, relationship and communication with students, transition to remote teaching, lifestyle changes and job satisfaction related to remote teaching method. The study explored the majority of the teaching faculty were comfortable in using the educational technology and most of the faculties felt that the quality and expectation of the assessment items were reduced. There are some notable physical and psychological experiences are reported by most of the faculties such as vocal fatigue, head and neck pain, eyestrain, difficulty to fall asleep, emotional exhaustion etc.

The present study found out that the majority of the teaching faculty (70%) was comfortable in using the educational technology, which also helped them to guide the students to achieve the course learning outcomes. This could be due to extended support obtained from the LMS administrators who are approachable and available for all times as reported by the faculty (51%).

In regard to the assessments items used for the remote teaching, most of the faculties (70.37%) felt that online exam integrity was lowered and nearly half (44.44%) of them felt difficult to monitor the students during the class hours. Majority (55.56%) of them dropped some assignments and exams.

The most of faculties reported the impact of remote teaching on their physical and psychological wellbeing such as vocal fatigue due to work stress (55.5%) head and neck pain (40%) eyestrain, difficulty to fall asleep (37%) to the great extent due to long time computer use. Half of the faculties (48.15%) reported other physical and psychological behaviors such as vocal fatigue, anger, stress, emotional exhaustion to the moderate extent. Though the remote teaching had some disadvantages, it is a boon for carrying out the teaching and learning during this COVID pandemic

situation, which we are hopeful to overcome and fight together.

RECOMMENDATIONS

The results of this study provided insights on the following recommendations: Problem solving method identified as one of the teaching learning method to adopt during the Online-teachingflat form as it is expected to have better student engagement and learning outcomes. It is advisable to have the video on for the students to have eye contact during remote teaching, which will improve the student attentiveness and interaction. However, respecting the cultural practices, this may be adopted where ever applicable. Orientation and training must be provided to the faculties and students on the use of the learning management system(LMS) until they master it or use confidently as it is necessary to conductonline teaching effectively. The curriculum (face-to-faceteaching)of the program is recommended to undergo modification to fit the online teaching methodologies. In stressing the previous point on curriculum change, it is also recommended to reduce the amount of time dedicated to live sessions considering the attention span of students attending online sessions. To prevent health problems among faculties' in future similar situations, it would be important to motivate them to engage in any kind of recreational activities at home. Furthermore, faculty training in blended or online educational methods would be crucial for their successful work environment.

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