

Challenges to Online Pharmacy Classes during COVID 19 Pandemic: cross sectional study in Jordan

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Abstract

Background: Covid 19 pandemic has had a strong influence on all aspects of life . One of these influence is education. The academic authorities in Jordan as in elsewhere across the world have shifted their method of teaching to online class. After four semester of online teaching it's important for both teaching staff and students of pharmacy faculties to assess the trends and the preference of students to different methods of online teaching. The purpose of this study was to assess the influence of the COVID19 pandemic on online education for pharmacy students in Jordan's faculties of pharmacy.

Methods: We emailed a survey to the majority of students in Jordan's pharmacy faculties during january and february 2022.

Results: We received 230 responses, with 87.2 percent of respondents being female and the majority of the students being pharmacy students. Among the 230 respondents, 75% said they liked combining online and face-to-face training, while 13% said they preferred face-to-face instruction and only 12% said they favored online learning. The major challenges in online teaching during the pandemic are issues with in-person communication (87 percent), student assessment (65 percent) and use of technology tools (35 percent).

Conclusion: Due to the fact that the survey was conducted during the fourth semester with the COVID 19 pandemic, and most students have gained confidence in using online technology and the university IT support, one can conclude that pharmacy students have a high level of confidence in the effectiveness of online pharmacy education.

Keywords

COVID 19, online learning, communications and pandemic

Introduction

Schools and universities in many countries have been shifting their methods of teaching from traditional face-to-face teaching methods to online teaching method or to blending method (which is a combination of both methods) in response to COVID19 crisis (Alotaibi 2021). Most developed and developing counties authorities closes all the universities on March 2019

as WHO declared that COVID 19 virus outbreak is pandemic disease. The ministry of higher education and research in Jordan closes all the universities and colleges including medical faculties and issued directives to the universities to shift their methods of teaching from traditional way to online teaching methods or blending methods (Adebisi et al. 2020). Certainly, like many other aspect of life corona has had a major influences on students, staff members and the administration. Major

changes and challenges was induced by COVID 19 and its impact on students specially the medical students need to be examine carefully (Bhosale et al. 2013) . One of these challenges which definitely influence the carrier of the students is the sudden change in the method of teaching from the traditional to online teaching method. However there is a debate among the teaching staffs, students and the administrations about the impact of E-Learning on medical education. Some authors suggesting that there is appositive impact of COVID19 pandemic on online medical education and that could lead to wide acceptance of online technology (Kale et al. 2021). On the other hand, other scientific studies suggesting an adverse impact due to several factors like time management, use of technology tools, students assessment, communication with students, personal interaction and some other factors. The present study aimed to evaluate the impact of COVID19 pandemic of online teaching methods on pharmacy students in Jordan (Ulenaers et al. 2021).

Materials and methods

Study design and sample size

This is a cross-sectional institutional study that took place in the faculties of Pharmacy in Jordan from january 28, 2022 to february 5, 2022. RaoSoft, an online sample size calculator, was used to calculate the sample size. The minimum required sample size was 230 participants with a confidence level of 95 percent and a 5 percent margin of error, based on an expected population of 450 students and an anticipated response of 50 percent (Villani et al. 2021).

Instrument for survey

Following a comprehensive literature search, a pre-validated questionnaire was modified based on the most recent accessible information available. The first draft was forwarded to a group of specialists who were chosen based on their experience and competence in related fields to evaluate the questions for relevancy, simplicity, and importance. The survey was then sent through email using a Google form. The questionnaire was completed after a group discussion, following a group discussion, the questionnaire was completed (Kale et al. 2021).

Analytical statistics

The Statistical Package for Social Science, version 21.0 (SPSS 20.0, Chicago, IL) was used to analyze the data from the completed questionnaires. For all analyses, the significance level was fixed at $p < 0.05$. All of the data received through the questionnaire was initially coded into variables. The Cronbach's alpha coefficient test was employed to determine internal consistency in the pilot study (Campbell et al. 2004).

Results

A total of 230 students responded to the survey: 78.2% was female and 21.8 was male , Of the respondents 91% of a bachelor degree students and 9% of a master degree students, the characteristics of the study listed in Table 1.

Among the 230 student, 173 preferred the Combining online with face-to-face instruction , and 30 students preferred the Face-to-face instruction and only 27 students preferred the online learning , the preferences of students shown in Table 2.

During the COVID-19 pandemic, this institution's reported challenges to online education included issues with in-person communication (87 percent), student assessment (65 percent), use of technology tools (35 percent), experience in online education (93 percent), pandemic-related anxiety and stress (8 percent), learning curve (33 percent), time management (48 percent), and students (7 percent). Fig. 1 shows the challenges of online schooling during the COVID-19 epidemic.

The majority of respondents (83%) planned to incorporate online knowledge learned during the COVID-19 epidemic into their teaching/learning techniques. Table 3 shows opinions on whether or not online expertise gained during the COVID-19 epidemic should be used in practice.

Table 1. Characteristics of the study respondents (N = 230).

Characteristics	N (%)
Gender	
Female	180 (78.2%)
Male	50 (21.8%)
Government	
Amman	200 (87%)
Other government	30 (13%)
Degree of education	
Bachelor	210 (91%)
Master	20 (9%)

Table 2. Teaching/learning preferences before the COVID-19 pandemic (N=230).

Preferences	N (%)
Combining online with face-to-face instruction	173 (75.2%)
Face-to-face instruction	30 (13%)
Online instruction	27 (11.8%)

Table 3. Willingness to integrate online expertise garnered during the COVID-19 pandemic into practice.

	N (%)
Agree	190 (83%)
Disagree	20 (8.7%)
No opinion	20 (8.7%)

Discussion

Most of the universities and institutes were suddenly faced with COVID19 pandemic which create a new environment to the authorities and induced a lot of change

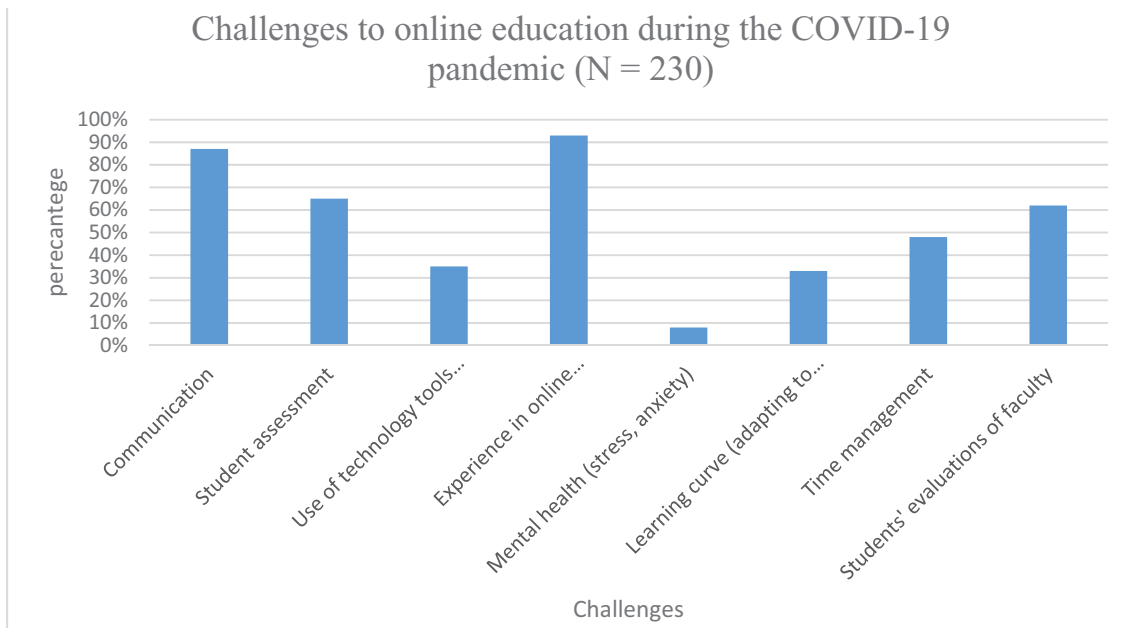


Figure 1. Challenges to online education during the COVID-19 pandemic (N = 230).

and challenges to them (9). Among these change online education has suddenly become an applicable methods of teaching. This rapid change in the way of education induced a distracting and frustrating to both students and teaching staff. A reasonable number of pharmacy students both M.Sc and B.Sc responded to our survey since most of the students are willing to be a part of the decision making process rating to issues that may play role on their education carrier. The present study revealed several facts concerning this issue (Dadaczynski et al. 2021).

Firstly, most of the students of pharmacy faculty preferred blending method instruction and . this might be due to the fact that most of pharmacy students are involved in practice type courses. Therefore face-to-face together with online education is necessary to improve their skill and carrier (Riad et al. 2021). This finding is in agreement with previous studies suggesting that combining online with face-to-face instruction is becoming more accepted among universities and institutes. However the success of this method of learning depend on many factors on top of these factor are staff training and the faculty support (Hasan et al. 2021).

Secondly, and as with previous reports it seems that the challenges reported in the present study are similar to that reported in many countries. However, these challenges are not acute as was reported in previous reports and in our opinion this might be due to the experience of both the staff and the students to deal with online technology and the improvement of IT programs (Alrasheedy et al. 2021). However, Technology phobia seems to be the least reported challenge. In the present study , this is in agreement with different studies and this could be related to the users practice and education.

Thirdly, a minority of the students showed anxiety or stress (8%) this probably due to un certainty of the outcomes of e learning exams and tests , others (master students) worried about their research projects. in addition, the

infection brought by virus considered an a public health crisis by World Health Organization (WHO) and pronounced a pandemic disease which induced psychological problem and among there problems in students are anxiety from acquiring the infection of Covid 19 (Alboghdadly et al. 2022).

Fourthly, surprisingly and despite the changes a significant number of the students have had no problem with education in online methods, this trending is even higher that reported elsewhere (Shrivastava et al. 2021).

Finally, our study provides more information on the preferences of different kind of teaching methods by pharmacy students during pandemic. Most students praised blended education since it suits well with the nature of pharmacy field (Soon et al. 2022).

Conclusions

The present study demonstrate that there has been a positive impact of the COVID 19 pandemic on online pharmacy education. Most of the challenges including communication, assessment, use of technology tools , online experience , anxiety or stress , time management and technophobia . despite these challenges one can conclude that a pharmacy students have had a high confidence in the effectiveness of online pharmacy education , due to the fact that the survey was conducted during the fourth semester with COVID 19 pandemic , and most students have gain a confidence in using online technology and the university IT department support.

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