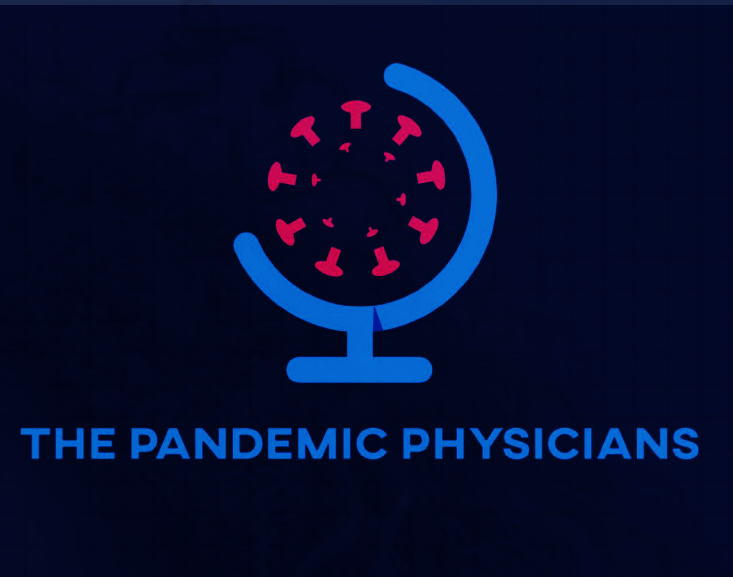


Impact of COVID-19 Pandemic on Medical Students' Clinical Training, Their Learning Behaviours, Perceived Stress and Performance as Future Medical Professionals

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1. INTRODUCTION

The COVID-19 pandemic led to a global lockdown of all levels and types of educational institutions, prompting the implementation of online education worldwide. Undoubtedly, the traditional delivery of medical education was directly affected by this development. Challenges created compromised the proper delivery of clinical training as face-to-face teaching was restricted due to social distancing measures. Inevitably, this sudden change affected the learning behaviours and stress levels of medical students in their penultimate years, as well as the standard of their clinical training and their perception of their performance as future medical professionals.

2. OBJECTIVE

- To determine the impact of COVID-19 on year 4 and year 5 medical students' clinical training and compare the perception of year 4 and year 5 medical students' views.
- To investigate and compare the impact of COVID-19 on year 4 and 5 students' overall learning behaviours.
- To explore the difference in views displayed by male and female students within both year groups, with respect to the effect of COVID-19 on confidence as a future clinician.
- To ascertain how COVID-19 impacted students' perception of their future careers.

3. METHODOLOGY

Study Design: Cross sectional Web Survey

Study Population: Year 4 and Year 5 UWI St. Augustine MBBS Students

Study Sample & Size: Purposive sampling targeting all clinical year students.

Data Collection: Questionnaire consisting of 4 sections (learning behaviours, perceived stress, clinical training and future career)

Methods of Data Analysis: Version 27 of SPSS software. Tests used included chi-square, mean calculation, estimations of standard deviation and thematic approach.

4. RESULTS

Table 1.0 showing the Cronbach's Alpha value for each section.

Section	Cronbach Alpha Value
Impact on Learning Behaviour	0.687
Perceived stress	0.882
Impact on Clinical Training	0.655
Impact on Future Career	0.772

- A total of 145 responses were collected, 93 (64.1%) were female and 52 (35.9%) were male. The overall mean age was 24.37 with a standard deviation of 2.205.
- 72.4% of respondents indicated that they noticed a deterioration in their study/work performance.
- A majority (two-thirds) of respondents (67.6%) fell into the moderate stress level category.
- 93.8% of respondents agreed that COVID-19 has affected the overall quality of their clinical training.
- 62.1% indicated that they did not feel prepared to work as a future medical professional at the end of their training.

Fig 1.0 Correlation between online learning behaviors, concentration and engagement

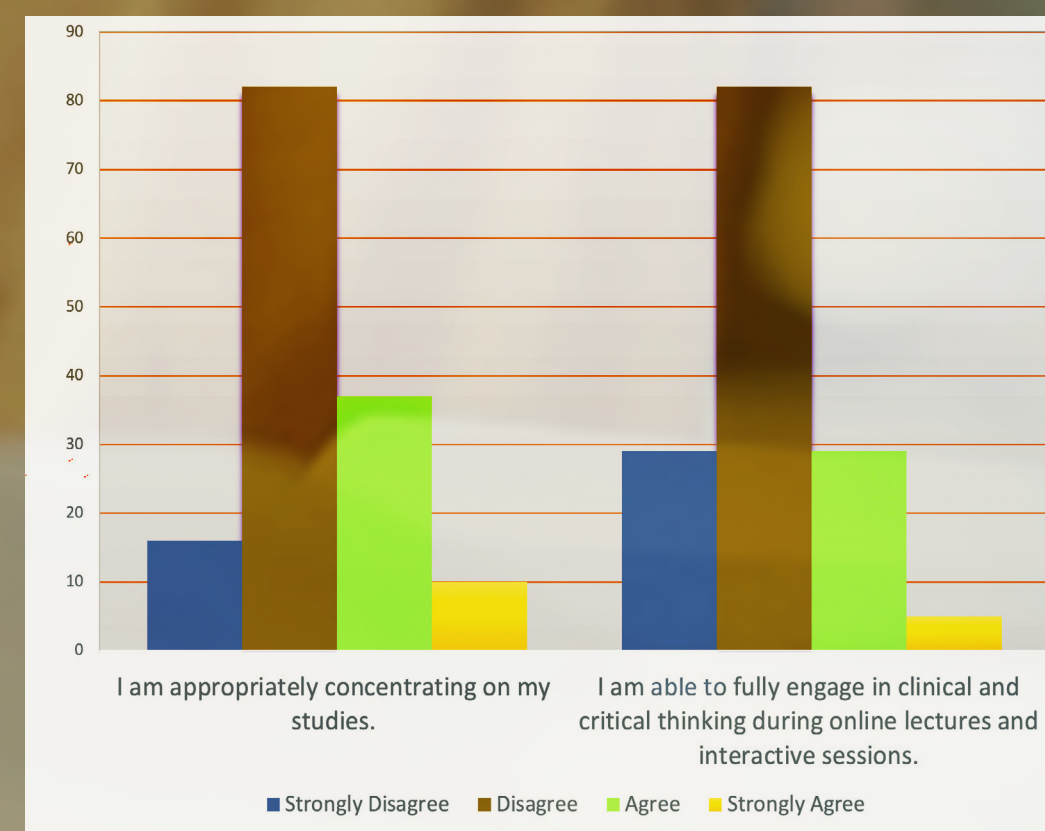


Fig 2.0: Correlation between online clinical training, efficacy and quality

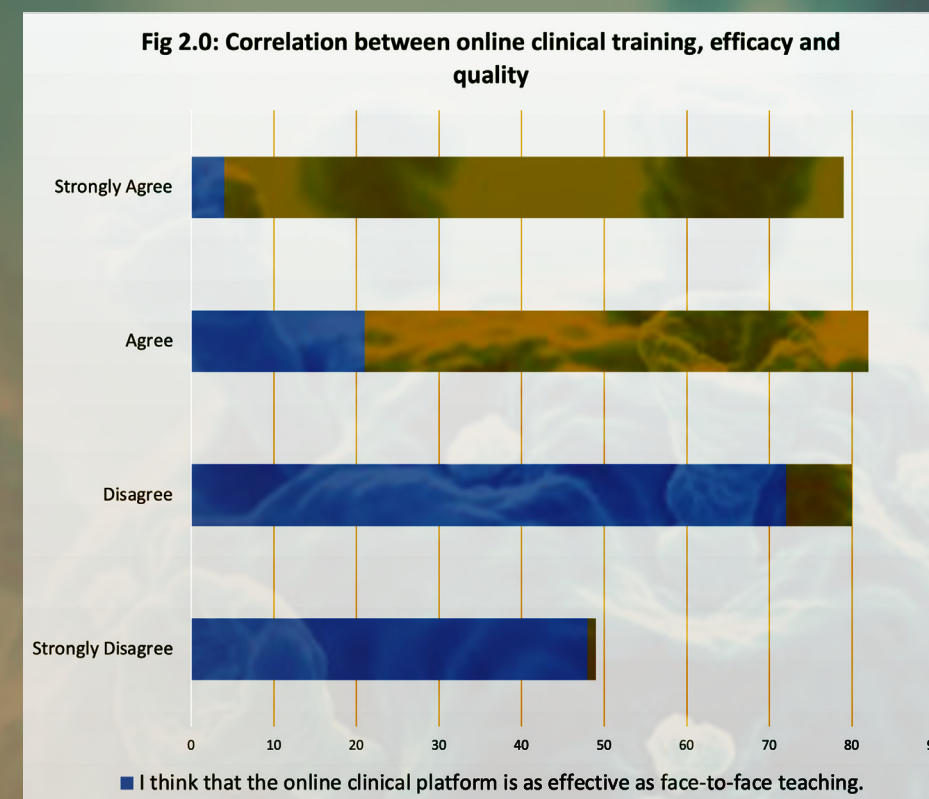
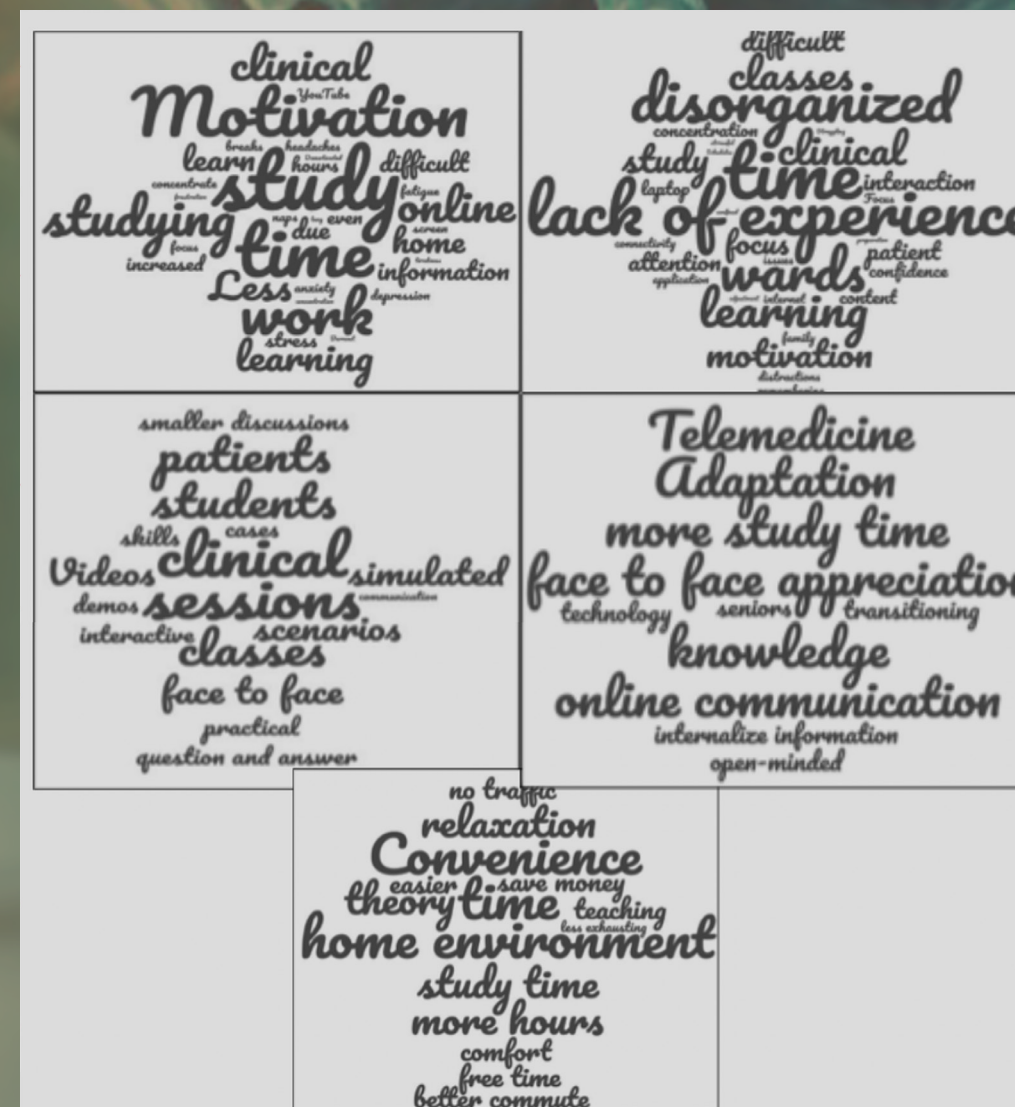


Table 2.0: showing the perceived stress scale chi square test of equality

	Low	Moderate	High	Chi-square	P value
Total Stress Score	8 (5.5%)	98 (67.6%)	39 (26.9%)	86.497	.001

Figure 3.0: Word Cloud Generated from Qualitative Responses



5. DISCUSSION

Impact on learning behaviour

- Both male and female clinical year medical students experience a change in their learning behaviour. 72.4% of the students agreed to noticing a deterioration in their study/work performance.
- Students noted changes as a result of: lack of motivation, mental fatigue, headaches and eye-pain due to increased screen time. This created difficulties when concentrating and further hindered their engagement in clinical and critical thinking during online lectures and interactive sessions. This ultimately led to a modified study pattern which consisted of less studying and a lack of structure.

Impact on clinical training

- Both male and female students who participated in this study indicated that the online clinical platform (17.3%) is not as effective as face to face teaching (82.8%). This was also reflected in the thematic analysis where students declared that there was no substitute for face-to-face learning. Many acknowledged that the lack of patient and ward experience prevented them from achieving adequate real-life practice.
- Respondents in this study advocated for the implementation of audio-visual aids and increased clinical application. Among the advantages of online learning, students indicated that it has afforded them more time for relaxation and was more convenient due to the comfort of being in their home environment which allowed them to save on rent and transport fees.

Impact on future career

- 62.1% respondents indicated that they did not feel prepared to work in the future while 64.1% expressed a lack of confidence in career performance. Some students noted a decreased interest in the medical field altogether with many arguing that online training cannot be a substitute for hands-on guidance.
- On a positive note however, respondents articulated that online classes facilitated sessions with esteemed medical professionals whom they would not have come into contact with in real life. E-Learning also brought about the skill of adaptation, with students describing an increased ability to adjust to adverse and unexpected circumstances.

6. CONCLUSION

- It is evident that there is a significant negative impact on the learning behaviours of clinical year medical students coupled with a deterioration in their study/work performance irrespective of gender and years of study.
- The transition to online learning during the COVID-19 period has negatively affected the quality of their clinical training.
- Additionally, medical students perceive COVID-19 to be a factor that has negatively impacted their future career perception and confidence.

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