

EXPLORING THE EFFECTS OF THE COVID-19 PANDEMIC ON OBSTETRICS AND GYNECOLOGY POSTGRADUATE TRAINEE'S TRAINING IN LADY READING HOSPITAL, PESHAWAR

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ABSTRACT

OBJECTIVES

To assess the effects of the COVID-19 pandemic on Obstetrics and Gynecology (OB/GYN) postgraduate trainees' training experiences at Lady Reading Hospital, Peshawar

METHODOLOGY

A cross-sectional study was conducted among 103 OB/GYN trainees infected with COVID-19 during the pandemic. Data were collected through a binary-response questionnaire. Demographic details and the impact of COVID-19 were analysed. Statistical analysis was performed by SPSS 24 while various trends were identified using Chi-square tests with significance set at $p < 0.05$.

RESULTS

The majority of the trainees reported negative impacts on clinical/surgical skills (96.1%), mental health impact was reported by 89.3% of trainees, fear of infecting family members by 93.2%, impact on research by 52.4% while 77.7% of trainees found online learning to be beneficial. Married trainees experienced notably higher mental health impact ($p = 0.03$) but reported more benefit from online training ($p = 0.02$). 37.9% of trainees reported to be engaged with telemedicine.

CONCLUSION

Trainees faced significant setbacks in terms of gaining clinical skills, sustaining mental health, achieving research goals, and adapting to new modes of education

KEYWORDS: COVID-19, Pandemic, Residents, Peshawar

INTRODUCTION

COVID-19 represents a highly contagious viral condition caused by SARS-CoV-2 as its primary etiological agent. The worldwide impact of COVID-19 has become catastrophic because it has caused deaths exceeding 6 million globally. The Hubei Province in China identified its first cases of the mainly respiratory viral illness SARS-CoV-2 in late December 2019 at Wuhan. The virus then began spreading globally fast. COVID-19 triggered the World Health Organization (WHO) to recognise its status as a global pandemic on March 11, 2020.¹ The disease has affected Pakistan, and since February 26 2020, the number of confirmed cases of COVID-19 has been rising here. Communities were experiencing this infection surge, which was putting massive pressure on healthcare workers.² In COVID-19, postgraduate trainees (PGTs) had a key role in containing the virus, and their limited resources were working hard around the clock during the pandemic. Healthcare professionals, with special mention for PGTs, showed the global response to the unprecedented health issue faced via their continuous dedication and consciousness.^{3,4,5} There has been a considerable effect of the COVID-19 pandemic on

different sectors, one of the most affected being medical education. In March 2020, the World Health Organization (WHO) declared the pandemic, and since then, Obstetrics & Gynaecology PGTs have faced many challenges. The COVID-19 pandemic induced unprecedented changes. Thus, new daily challenges for PGTs were reported. The Obstetrics & Gynaecology department has recorded a decrease in outpatient visits and patient admittances since the pandemic began. Furthermore, there had been a paucity of elective surgeries and gynaecological procedures that would otherwise have helped to introduce postgraduate trainees to clinical and surgical skills.^{6,7,8,9} Only a limited number of international Obstetrics & Gynaecology departments shared their responses to COVID-19, which differed in objectives and outcomes.¹⁰ However, data outlining the experiences of the PGT and decreased training opportunities during the COVID-19 pandemic is limited.¹¹ This study aims to investigate the impact of the COVID-19 pandemic on the training of obstetrics and gynaecology (OB/GYN) postgraduate trainees in the largest tertiary care hospital in Khyber Pakhtunkhwa, Pakistan. Unfortunately, medical education worldwide was significantly shaken by the pandemic with changes in clinical training, less

contact with patients and limitations on in-person teaching. This study analyses how the pandemic impacted the mental well-being, skills and education of obstetrics & gynaecology residents to identify gaps during the training and recommend adopting medical education in post-pandemic scenarios. This will be very useful in providing insights into improving medical training frameworks and addressing the problems the future Gynae PGs may encounter.

METHODOLOGY

The study was conducted in the Obstetrics & Gynecology Department of Lady Reading Hospital Peshawar after obtaining approval from the Institutional Review Board (Ref: No.1060/LRH/MTI). We adopted a cross-sectional design for this study. We selected residents of the OBGYN department who were infected with COVID-19 during the pandemic and were willing to fill in the online survey form. The form was shared with the participants using Google Docs. The URL links were shared among the participants via social media platforms and multimedia instant messaging services. The survey form was designed as a binary response questionnaire, and each question had to be answered with a Yes or No, along with demographic details encompassing age, marital status, and residency year. The reason for adopting the binary format was for the clarity in statistical analysis. Our questionnaire consisted of seven questions based on mental well-being, education and skills. The data acquired from the survey forms were converted into SPSS 24, where the themed-based questions were coded as Yes and No. Data was analysed in SPSS 24 using mean and standard deviation for age and frequencies and percentages for the categorical variables. The chi-square test was utilised for finding various trends in the acquired data while the significance level was kept at $P < 0.05$.

RESULTS

We interviewed 130 trainees, and only 103 responded; their age range was 26 to 33 years, and their mean age was 29.77 ± 2.25 years. Marital status showed 59 trainees (57.3%) were married while 44 (42.7%) were unmarried. Thirty (29.1%) trainees were in their first year, twenty-eight (27.2%) in their second year, twenty-one (20.4%) in their third year, and 24 (23.3%) in their fourth year of training.

Table 1: Impact Factors of COVID

Impact of COVID		N	%
Negative impact on Clinical/Surgical Skills	Yes	99	96.1%
	No	04	3.9%
Negative Impact on Patient Interaction/Communication	Yes	88	85.4%
	No	15	14.6%
Negative Impact on Research/Dissertation	Yes	54	52.4%
	No	49	47.6%
Negative impact on mental health	Yes	92	89.3%
	No	11	10.7%
Fear of transmitting the infection to a family member	Yes	96	93.2%
	No	07	6.8%
Experience of Online Learning/Workshops was beneficial	Yes	80	77.7%
	No	23	22.3%
Learnt about Telemedicine	Yes	39	37.9%
	No	64	62.1%
Negatively affected the training experience	Yes	84	81.6%
	No	19	18.4%

Table 2: Association of Impact Factors of COVID with Marital Status

Impact factors of COVID		Marital status				P-Value
		Married		Unmarried		
		N	%	N	%	
Negative impact on Clinical/Surgical Skills	Yes	56	56.6%	43	43.4%	0.46
	No	03	75.0%	01	25.0%	
Negative Impact on Patient Interaction/Communication	Yes	49	55.7%	39	44.3%	0.42
	No	10	66.7%	05	33.3%	
Negative Impact on Research/Dissertation	Yes	33	61.1%	21	38.9%	0.40
	No	26	53.1%	23	46.9%	
Negative impact on mental health	Yes	56	60.9%	36	39.1%	0.03
	No	03	27.3%	08	72.7%	
Fear of transmitting the infection to a family member	Yes	56	58.3%	40	41.7%	0.42
	No	03	42.9%	04	57.1%	
Experience of Online Learning/Workshop was beneficial	Yes	41	51.2%	39	48.8%	0.02
	No	18	78.3%	05	21.7%	
Learnt about Telemedicine	Yes	26	66.7%	13	33.3%	0.13
	No	33	51.6%	31	48.4%	
Negatively affected the training experience	Yes	49	58.3%	35	41.7%	0.65
	No	10	52.6%	09	47.4%	

DISCUSSION

The COVID-19 pandemic deeply impacted medical education and medical fraternity worldwide. OBGYN was among the medical specialities that had direct contact with the COVID-19-infected patients in our setup. Our study revealed some important patterns of the effect and impact of COVID on our PGs, who

performed their duties with utmost sincerity and selfless loyalty towards their responsibilities throughout the pandemic. Around 96.1% of trainees reported a negative impact on their clinical and surgical skills during the pandemic. This finding collaborates with the literature, which shows that the COVID pandemic has negatively impacted trainees' surgical and clinical skills. Mallick et al. and Gothwal et al. found that the cancellation of elective surgeries and the reduction in patient visits notably reduced opportunities for surgical training.^{8,12} Similar trends were observed in a study conducted by a study conducted among PG trainees of ophthalmology they reported 95.5% of the participants had their surgical training affected by the duties performed in COVID ward.¹³ Our results exhibited that 52.4% of trainees reported a negative impact of COVID-19 on their research-related activities. These disruptions occurred due to the lower frequency of the visits to our gynae OPD, which had affected their data collection procedures. Similar findings were observed by Gothwal et al., where 74.3% of students reported not achieving their goals related to research writing.⁸ Nearly 90% of the trainees reported a negative impact on their mental health. As a medical professional, mental health is an essential benchmark for exhibiting proper surgical and medical skills. Sultana et al. reported depression in 66.8% of residents, anxiety in 71.6%, and higher stress levels in 56% of residents.¹⁴ Mallick et al., in their study, reported similar trends regarding depression, stress, and anxiety.¹² With the mental stress, our study found that 93.2% of the trainees feared transmitting the infection to their family members. Afridi et al. reported that 86.7% of trainees admitted the fear of disease transmission to their family members.¹⁵ Ganesh et al. reported that 96.1% of residents confirmed to have anxiety due to virus transmission fear. The fear of disease transmission added extra layers of psychological distress to the trainees.¹⁶ In our study, 77.7% of trainees found online learning and workshops beneficial. Hanif et al. reported a similar trend in their ophthalmology residents, and they reported that 80.9% of the respondents were satisfied with online classes for theoretical academic activities.¹³ We observed that 37.9% of trainees reported learning about telemedicine. This trend was introduced during the pandemic when the doctor interacted with their patient via teleconferencing. The respondents learning about this technology is due to the residential and educational status of the patients attending OBGYN OPD; most of the Patmos of the patients Mallick et al. suggested that telemedicine can be an alternative training method in specific clinical situations, but it cannot replace the need for person-to-person experience.¹² Our study revealed some significant trends when we stratified the negative

impact of COVID-19 on the residents' marital status. According to our observation, married trainees were more likely to impact their health than unmarried trainees negatively. This phenomenon could be attributed to various factors, such as married trainees having the extra burden of managing their family responsibilities and COVID-19 duties.^{17,18} The infected trainees could have easily infected their spouses and children. Another phenomenon observed in our study was that most married trainees benefit from the online workshops. Online classes or workshops provided a flexible environment for the trainees to manage their academic activities and family matters comfortably at their residences. We consider these trends the strength of our study.

LIMITATIONS

We consider the lower rate of respondents the weakness of our study. Such cross-sectional surveys should be conducted on the multicenter level to analyse new trends further and equip our trainees for future pandemics.

CONCLUSIONS

In conclusion, trainees faced significant setbacks in gaining clinical skills, sustaining mental health, achieving research goals, and adapting to new modes of education. While online learning may have provided some benefits, it cannot be considered a substitute for the hands-on training and clinical/surgical practice vital to medical education. For such future pandemics, it is crucial to explore ways to mitigate such disruptions' impacts. This could involve utilising virtual platforms for theoretical knowledge and training the residents about telemedicine via experts. In the end, we recommend a dedicated team of psychologists available in person or virtually to assess the mental health status of the trainees.

CONFLICT OF INTEREST: None

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CONTRIBUTORS

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2. **Syeda Sitwat Fatima**- Data Analysis/Interpretation; Drafting Manuscript; Critical Revision



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