

**Effect of COVID-19 Pandemic on the Quality of Surgical Training**Saboor Z<sup>1</sup>, Ahmad S<sup>2\*</sup>, Shah N<sup>3</sup> and Ali H<sup>3</sup><sup>1</sup>Department of General Surgery Hayatabad Medical Complex Peshawar, Pakistan<sup>2</sup>Associate Professor Department of General Surgery Hayatabad Medical Complex, Peshawar Pakistan<sup>3</sup>Specialist Registrar Department of General Surgery Hayatabad Medical Complex Peshawar Pakistan**\*Corresponding author:**

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**1. Abstract****1.1. Introduction**

Covid-19 has globally affected the surgical training not only in terms of assessment and progression but in terms of induction as well [1, 2]. This has significantly added to the stress of the surgical trainees who were already stressed by the fear of their loved ones contracting the virus as well as themselves [3]. Although the COVID-19 pandemic didn't hit the Pakistani population as hard as the developed countries [4] yet the health system had to bear the pressure of the COVID-19 pandemic and, therefore, the surgical training got affected as well. The aim of this survey was to identify the effects of this pandemic on the surgical training and the role of the training modulators in assessing this effect.

**1.2. Methodology**

A survey consisting of 10 questions was designed on the Monkey Survey and then circulated to the surgical trainees of the three government sector teaching hospitals of Peshawar; Lady Reading Hospital, Khyber Teaching Hospital and Hayatabad Medical Complex. A total of 71 trainees responded to the survey. The data was analyzed using SPSS version 16.

**1.3. Results****1.3.1. Redeployment during Covid**

67.60% of the respondents said that they were redeployed during the pandemic. 76.67% of the 1st year trainees said that they were redeployed, followed by 72.73% of the 4th year, 57.89% of the 2nd year, 54.55% of the 3rd year trainees.

38% of the respondents said that less than 3 months' time of their last 12 months was outside their speciality, 32.4% said that they

spent 3-6 months of their last 12 months outside their speciality while 14.5% and 14.1% of the trainees said that they spent 6-9 months and more than 9 months outside their speciality respectively. 52.63% of the 2nd year trainees spent less than 3 months outside their speciality, 43.33% of the 1st year trainee, 36.36% 4th year, 0% of 4th year.

**1.3.2. Mandatory Theatre time loss and course postponed**

Of the 71 respondents, 8.5% said that <30% of their theatre time was lost as a result of covid. 22.5% said that between 30-50% of their mandatory theatre time was lost. Most of the respondents, 69% thought that more than 50% of their mandatory time was lost. 80.3% of the trainees said that they suffered a delay in their exams and mandatory courses. The most affected seemed to be the middle grade trainees as 18 of the 19 2nd year trainees and all of the 11 3rd year trainees said that their mandatory courses and exams were delayed.

**1.3.3. Role of the supervisors**

Only 26.8% of the respondents said that they had a meeting with their supervisors to assess learning needs while 73.2% didn't have any such meetings. 60.6% of the trainees thought that their supervisors sensed the deficiency in their training while 38% said that their supervisors didn't sense any deficiency in their training during the COVID-19.

When asked if they considered themselves appropriately trained to be promoted to the next year of training, 57.7% thought that they should be promoted to the next year despite the negative impact of the COVID-19 on their training while 42.3% thought that they shouldn't be promoted.

### 1.3.4. Role of the training and examining bodies

When asked about the role of their parent departments, deanery and the college, 70.4% thought that none of the above sensed any effect of the covid on the training while 15% thought that all of them sensed the deficiency in the training.

### 1.3.5. Role of the trainees in perceiving deficiencies

47.9% of the respondents said that they tried to discuss the needs of extra training with their supervisors while 50.7% didn't try to do so.

## 2. Discussion

The COVID-19 pandemic has drastically impacted the training of the surgical trainees worldwide [5]. The pandemic has affected not only the operative exposure, but assessment and evaluation and induction as well as added to the stress of the trainees as well [3, 5, 6]. COVID-19 had greatly impacted the operating lists and the operating lists were reduced to only emergency and urgent surgeries and resultantly the operative exposure was reduced significantly [6]. This has been assessed by the training monitoring bodies and adjustments made accordingly where possible [1].

A large survey in the United States involving 1102 surgical residents reported a significant decline in the number of procedures performed but this time was utilized in educational didactics for which the residents didn't have time before the pandemic [7]. Reducing the number of doctors in the hospital in order to minimize the risk of exposure to the virus resulted in a lower number of doctors in the ward round negatively affected the bedside teaching and learning [8, 9]. Surgical trainees have also reported inadequate supervision in procedures which can be a concern for safe practice [9].

In our survey, 69% of the trainees thought that their more than 50 per cent of their mandatory theatre time in the last 12 months seemed to have been lost because of the pandemic, this would account to more than half a year of training lost. More than 80 per cent of the respondents thought that they suffered a delay in their exams and mandatory courses further adding disruption to their training. Despite these grossly perceived disruption to the trainings, less than 50% of the trainees tried to discuss their needs for training with their supervisors. With 69 per cent admitting the fact that they lost more than half of a training year, only 42 per cent thought that they shouldn't be promoted to the next year unless their requirements are completed. Around 57.7 per cent thought that they would meet the required competencies and didn't need an extension in the training year. The COVID Star study reported that only 9 per cent of the surgical trainees thought that they would be able to complete all the competencies [10]. A possible explanation to this can be that the COVID-19 waves in Pakistan were relatively shorter than in the west, however, it seems a bit difficult to explain this when more than 69 per cent of the respondents of our survey thought that they had lost more than half of their effective training

year because of the covid.

While 60.6 per cent of the trainees thought that their supervisors had sensed the negative effective of the COVID-19 pandemic on their training, only 26.8 per cent had a meeting with their supervisors to assess their changing needs in the light of the COVID-19 pandemic. This gross difference can be explained by the fact that 50.7 per cent of the respondents didn't try to discuss their needs of extra training with their supervisor. There seems to be a big gap in the academic relationship between the trainee and the supervisors and with the responses it seems more likely to be due to the trainee's attitude than the supervisor's.

## 3. Results

The COVID-19 has severely affected the surgical training but this disruption in the training needs to be anticipated appropriately and adjustments need to be made in time. There should be a more frequent assessment of the changing needs of the trainee and the training program. The trainees need to be more proactive in sensing these changes and needs and need to discuss it with their supervisors appropriately. The inducting and training bodies should make appropriate adjustments to ensure the quality of training.

## 4. Recommendations

- The trainees should be more proactive in assessing their changing needs and should discuss these with their supervisors accordingly. They should respond to the meetings from their supervisors.
- The training bodies and the College of Physicians and Surgeons of Pakistan should anticipate these difficult times and make necessary arrangements for the mandatory courses and teaching modalities.
- The training bodies should consider extending the training year if the trainees think that their effective training time is lost.

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