

The Impact of Covid-19 on Acute Adult Inpatient wards in Doncaster

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BACKGROUND/AIMS:

Covid 19 and the lockdown following it, led to many changes within the healthcare system.

This project aimed to compare the numbers of admissions to the acute adult mental health inpatient wards in Doncaster during the first 3 months of COVID-19 lockdown in 2020 with the same time period the year before (2019) to see if there were any differences in:

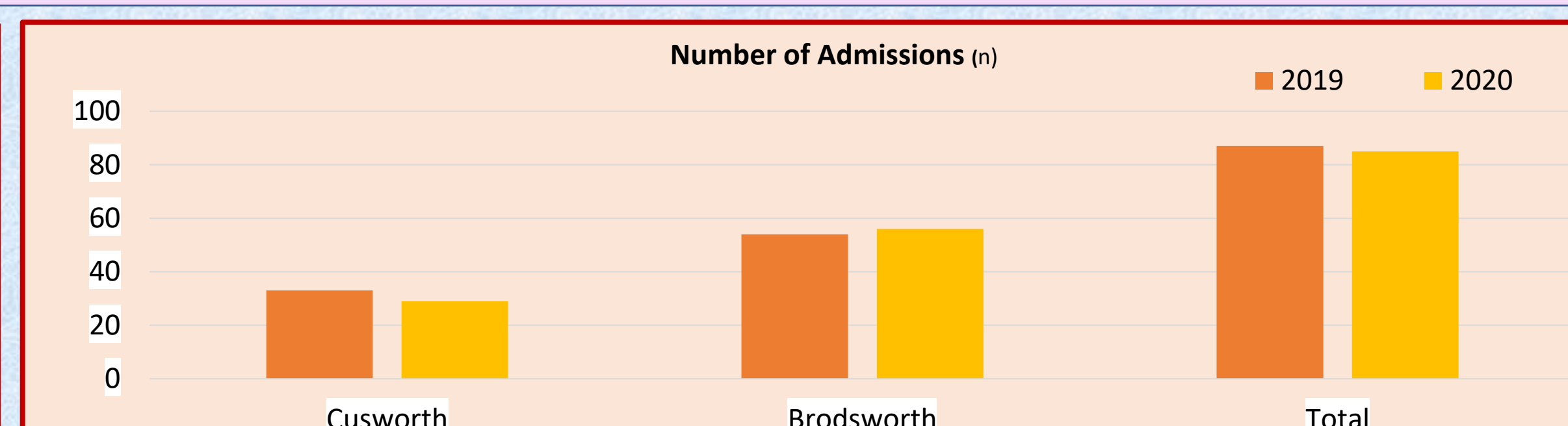
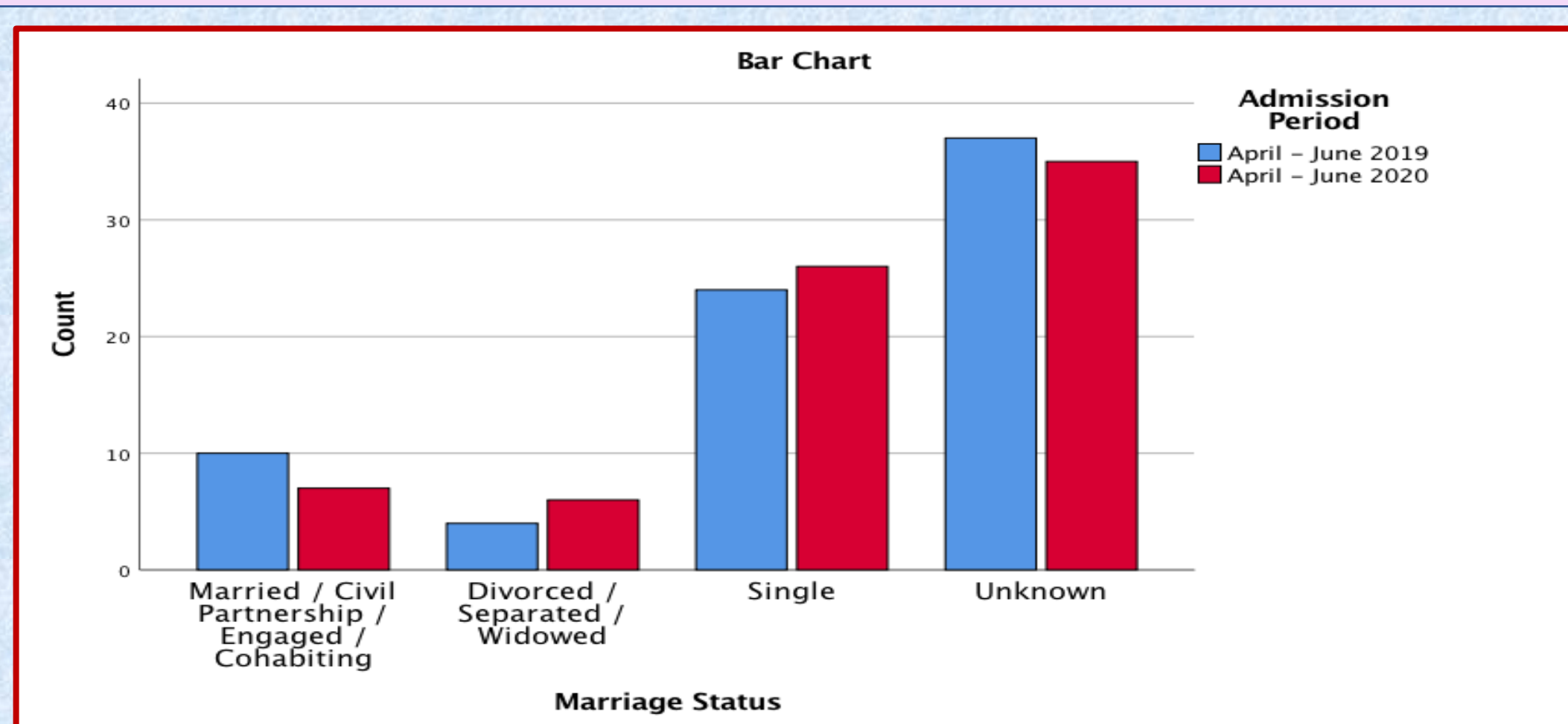
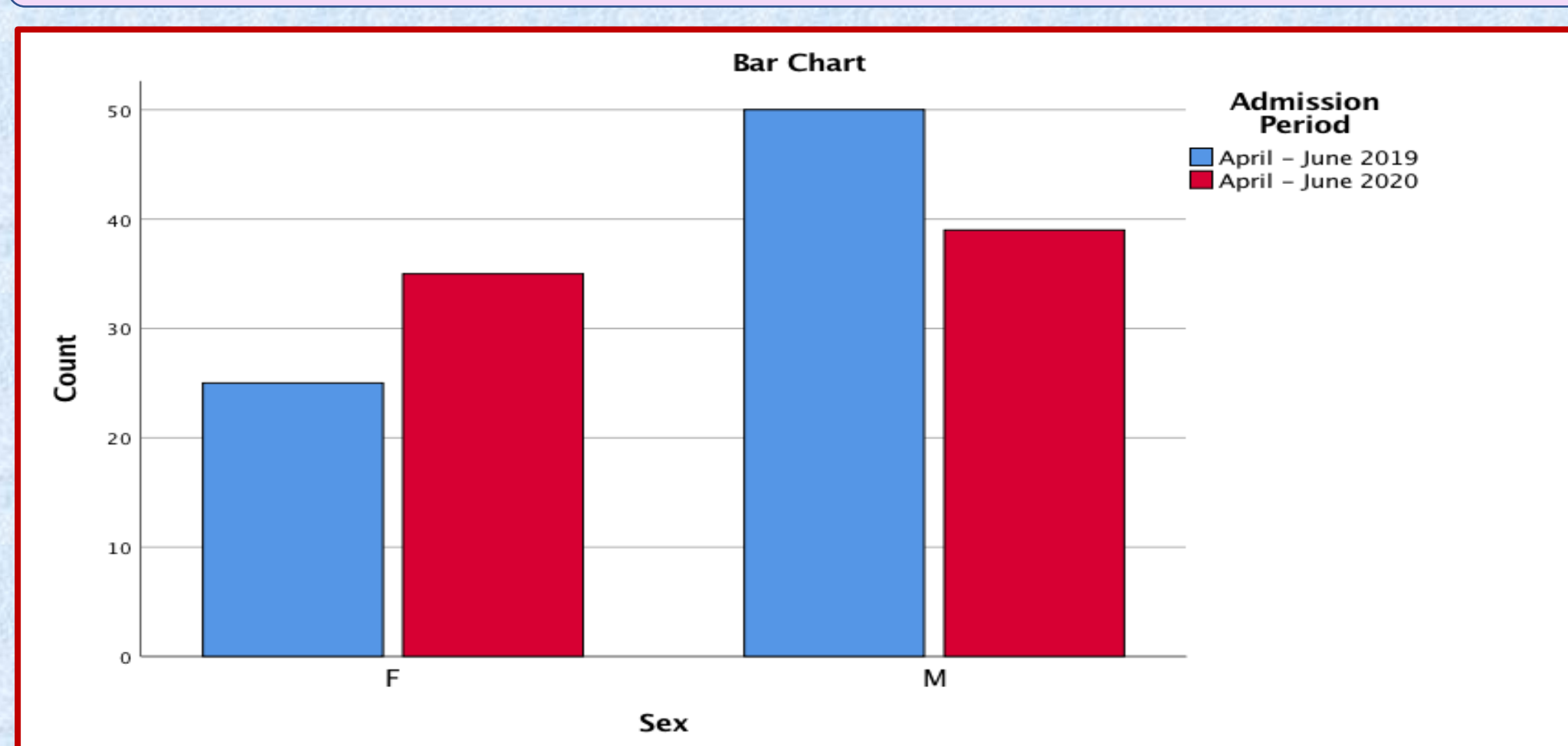
- **the number of admissions
- **patient demographics
- **Diagnoses
- **Length of services involvement/stay and
- **the use of the mental health act.

Method: This is an observational study conducted by Reviewing the electronic case records of all admissions to the acute inpatient wards in Doncaster. The information was put in 2 separate data gathering tools for 2019 and 2020 period. Both cohorts were later compared to reach the results.

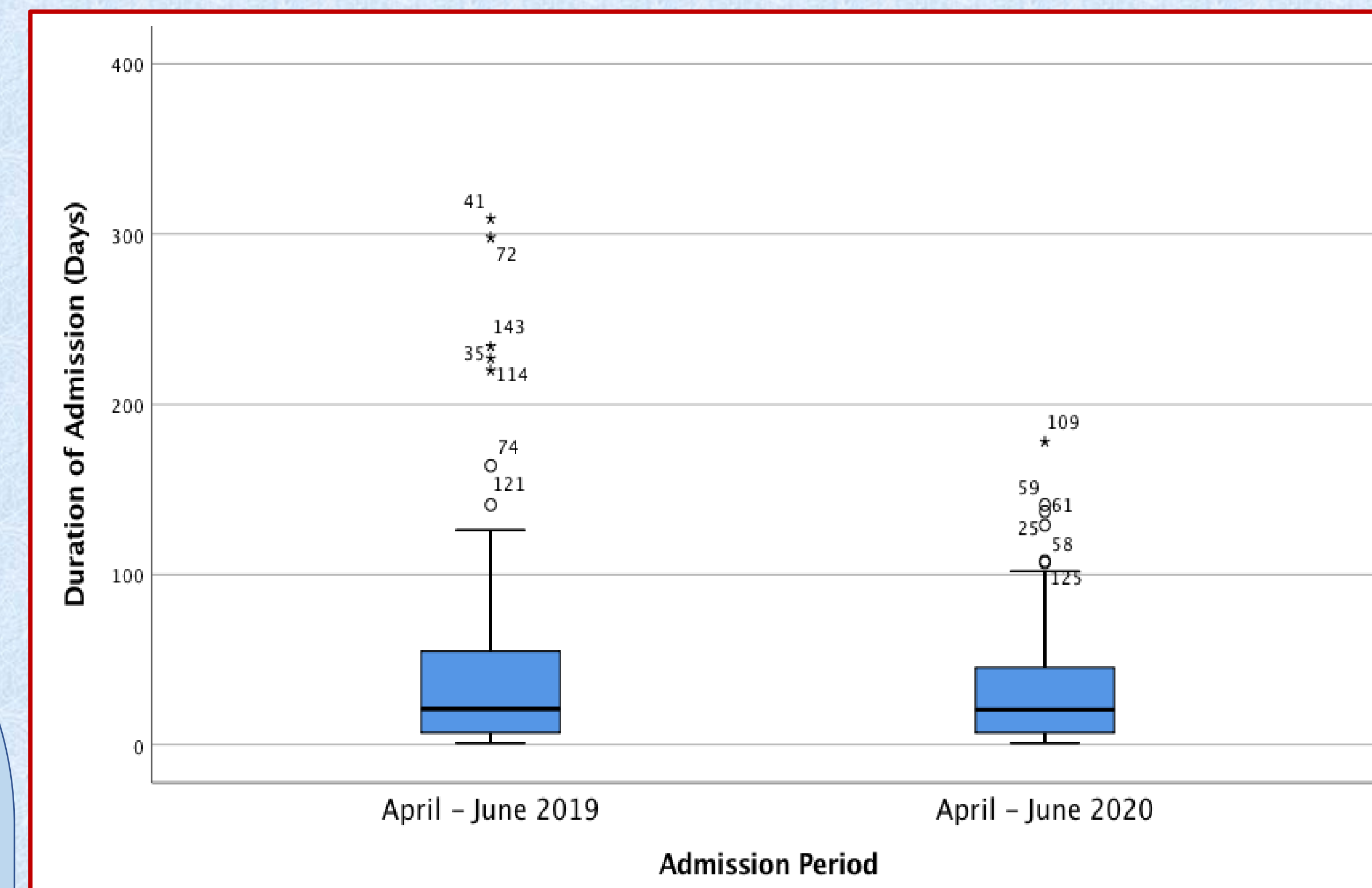
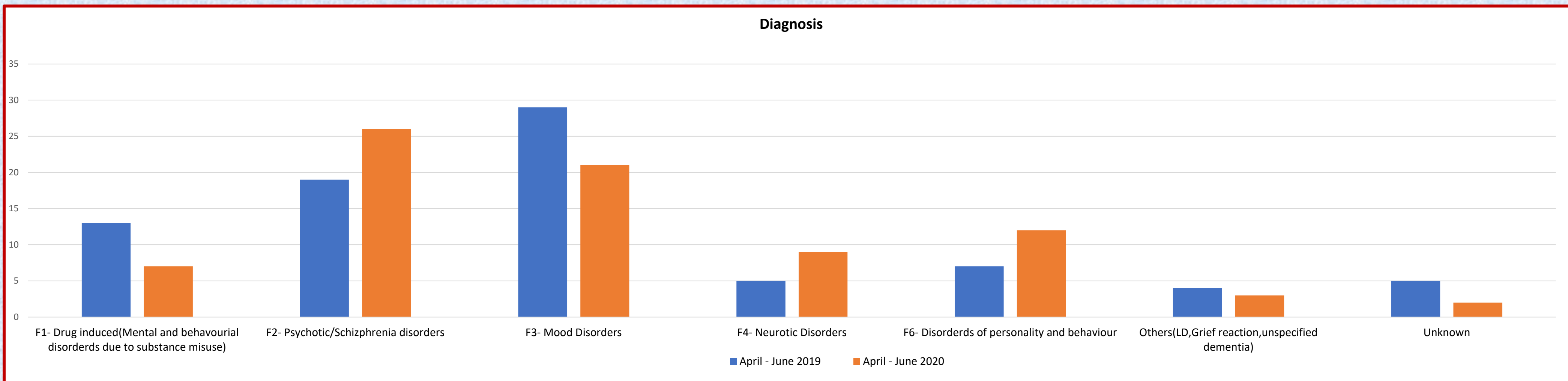
Comparing patient demographics

Where the same patient was admitted twice ($n = 11$) or three times ($n = 1$) in the same period, only one of their observations was included in each of the following analyses. Where a patient's age had changed ($n = 2$) between admissions in the same period, the second observation was retained, as the patient would have been within three months of that age at the first observation. None of these patients changed age group (Under 65, Over 65) between admissions. From the total number of admissions, Five of the patients were admitted in both the 2020 and 2019 period and were thus excluded from the comparisons, so as not to violate the statistical assumption of independent observations.

Results



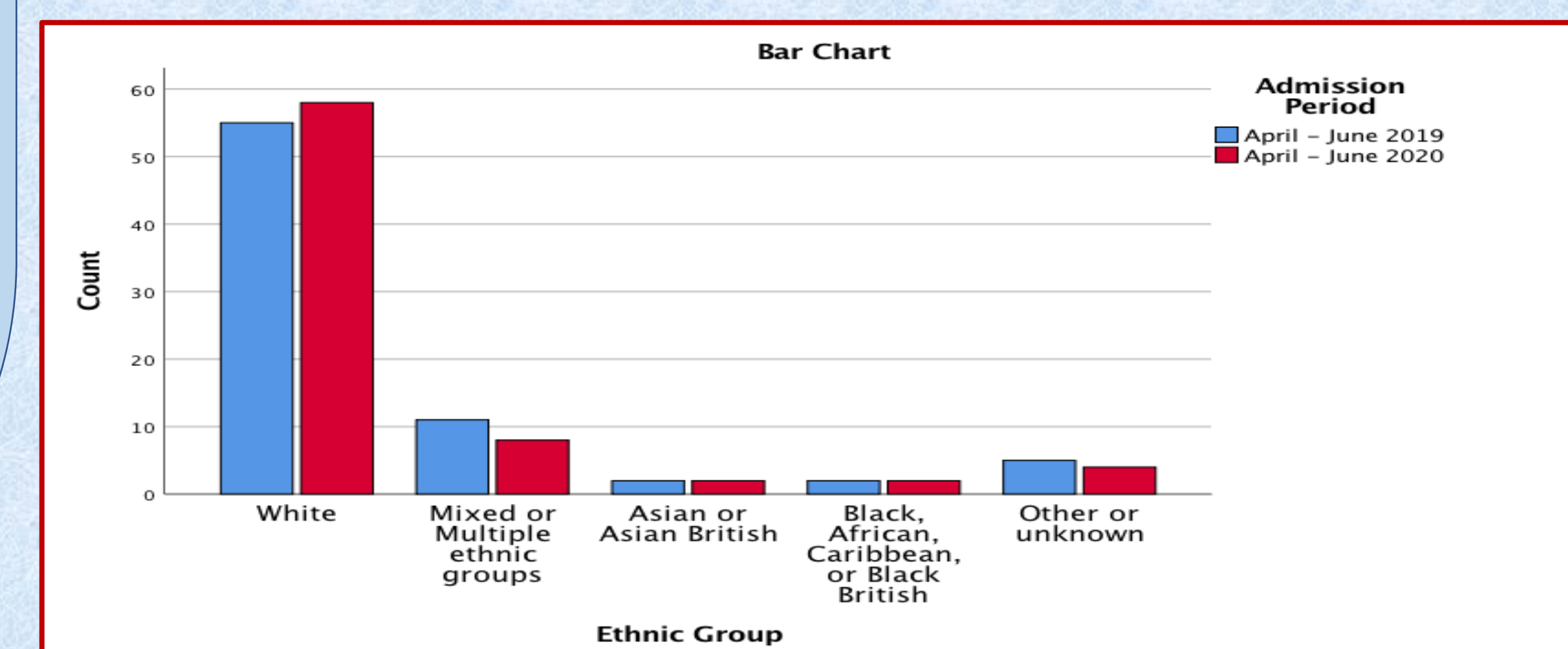
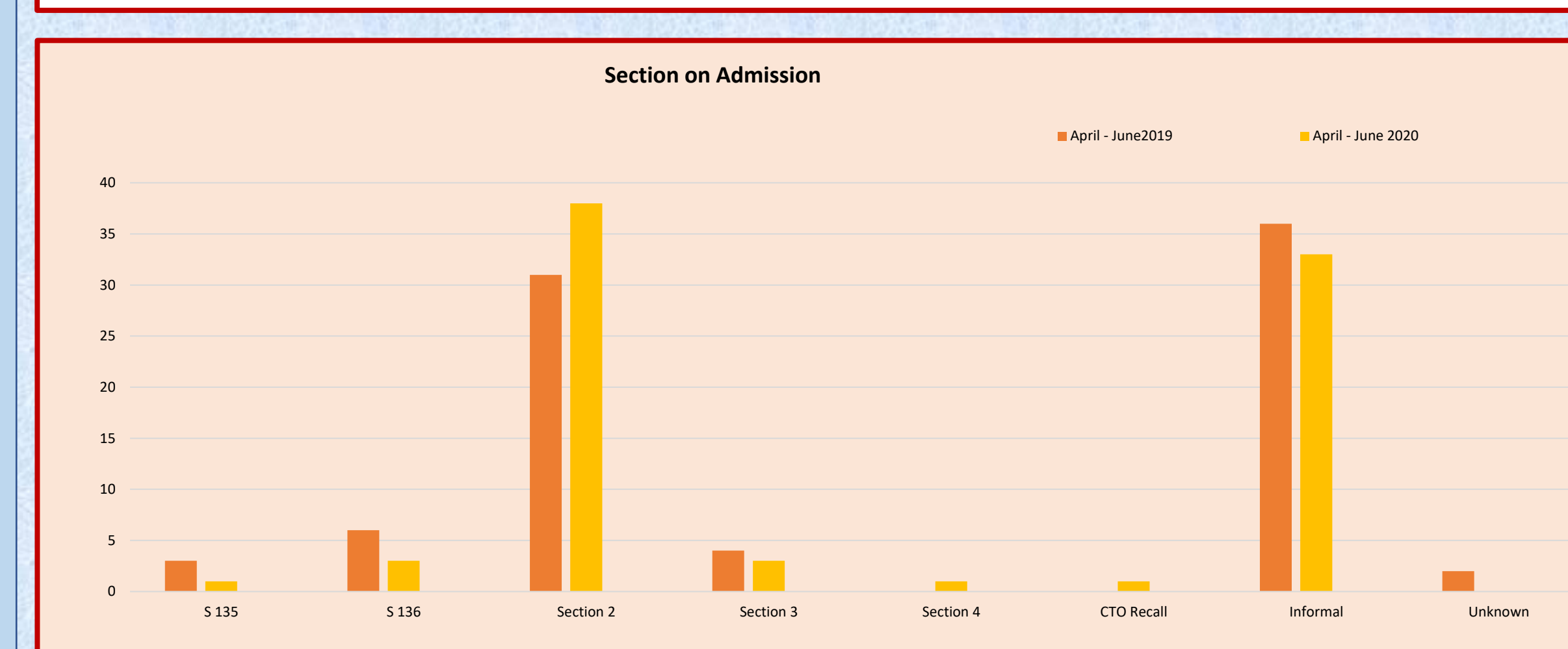
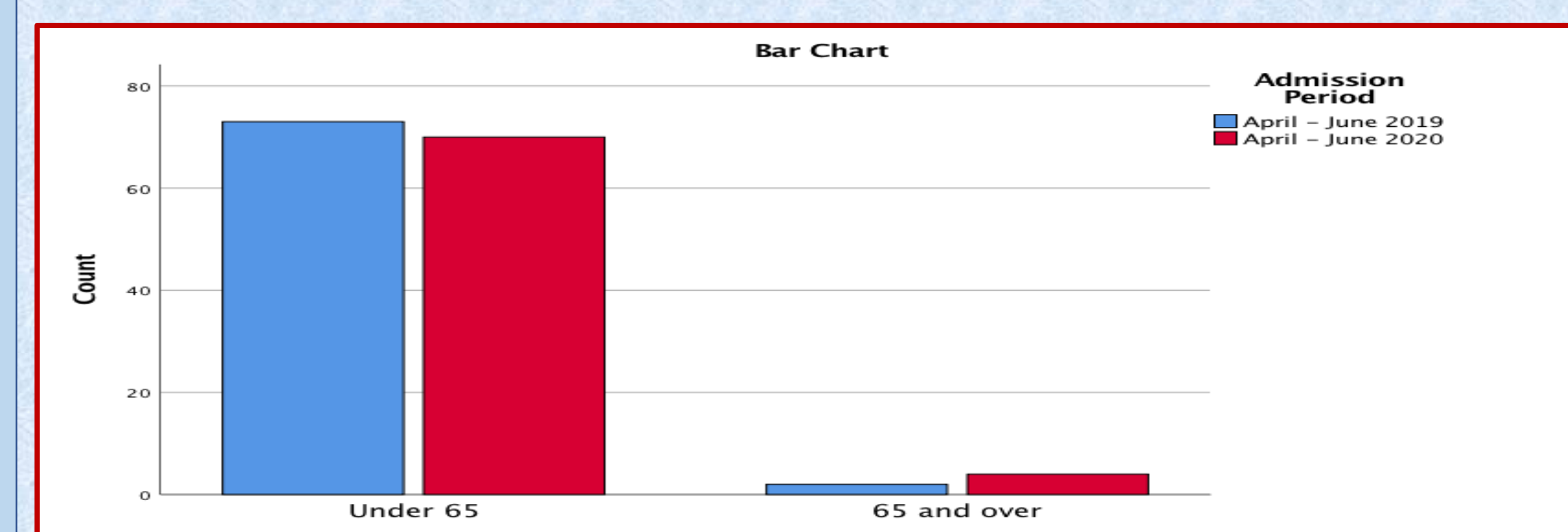
Admission Period (Number of Observations)	Mean (Standard Deviation) Duration in Days	Median (Inter-Quartile Range) Duration in Days
2019 (n = 82)	46.48 (65.48)	21 (7 – 55.25)
2020 (n = 80)	34.29 (37.77)	20.5 (7 – 46.25)



OUTCOME

- ❖ **Total Admissions:** We concluded that there were no increase in number of admissions in the acute inpatient wards during the 2020 covid lockdown period.
- ❖ **Gender:** An increasing trend was observed for male admissions in both time frames but more females in 2020 lockdown in comparison to 2019 cohort, however no significant association seen between admissions period and gender of the patients ($\chi^2(1) = 3.020, p = .096$)
- ❖ **Duration of Admission** was severely negatively skewed in both periods, with outliers at the upper end of the distribution (visible on the box plot above). Therefore, the median and inter-quartile range provide a more reliable measure of central tendency and spread than the mean and standard deviation. An independent t-test (equal variances not assumed) found no significant difference between the mean duration of admissions in the lockdown period and the same three months the previous year ($t(130.141) = 1.455, p = .148$).
- ❖ An increased trend was observed for admissions belonging to unemployed status in both time frames, however during the 2020 lockdown period more admissions belonged to employed and single status in comparison with 2019 cohort.
- ❖ A Pearson chi-square test indicated no significant association between admissions period and employment status ($\chi^2(3) = 3.188, p = .37$), Marital status ($\chi^2(4) = 0.658, p = .967$) or Ethnic Group ($\chi^2(4) = 0.658, p = .967$)
- ❖ **Dominant diagnosis** in 2020 period were from F2, F4 and F6 ICD codes, whereas F1 and F3 showed an increased trend in 2019 time frame, however no significant association found between admissions period and diagnosis on admission ($\chi^2(6) = 8.03, p = .24$).
- ❖ **AGE:** Trends showed majority of admissions belonging to under 65 age group in both time frames however no significant association between the admission period and the age group ($\chi^2(1) = 0.723, p = .44$) was found.
- ❖ **MHA:** Overall more admissions belonged to section 2 and Informal status however in 2020 lockdown cohort, there was an increase in trend towards section 2 admissions in comparison with the 2019 cohort. No association was found between the admission period and Section of the MHA Chi-Square: ($\chi^2(7) = 6.96, p = .44$), Fisher test: ($p = .48$).

STRESS and COVID-19 lockdown: In the 2020 cohort, out of the 85 cases, 8 patients on admission, expressed stress and anxiety related to Covid-19 pandemic either due to having lost a job, or lifestyle changes due to lockdown such as having to isolate and worries for friends and family. 1 person reported stress due to Brexit.



Discussion/Recommendation

- Reasons behind not noticing an increase in number of admissions in 2020 lockdown cohort can be the ceiling effect in Acute Inpatient wards where the total number of beds remained the same throughout the time frames with some wards converted into Covid wards limiting the admissions and few beds closed off.
- A month by month comparison would potentially be more useful in exploring the comparison between different variables in both time frames.
- 2020 lockdown period saw an increase trend of admissions from female gender, employed and single status which signifies the impact of lockdown through social isolation and increased stress.
- To get a more holistic idea about the impact of Covid-19 on the Doncaster MH services, it would be interesting to evaluate SPA referrals and other services such as the Home treatment team, crisis team as these are the first port of call for patients in crisis.