

Mental health presentations to ambulance services and the characteristics of patients in rural and urban settings pre- and during COVID-19 pandemic – cross-sectional study

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BACKGROUND

- 16% of the adult population experience a mental health condition at any one time in the UK (Sahakian, Malloch & Kennard, 2010).
- 11% of all ambulance calls relate to mental health in some way (Duncan et al., 2019).
- There were increased number of callouts for mental anxieties during the pandemic (Scott et. al, 2021).
- Men, people from minority ethnic groups, and younger people are less likely to report experiencing a mental health condition (Moore et. al, 2021).
- There are gaps in clinicians' knowledge, (Jelinek, Weiland, Mackinlay, Gerdtz, & Hill, 2013) and no solution to mental health crisis during COVID-19 pandemic.

AIMS

- The frequency of ambulance call outs concerning mental health.
- The characteristics of those patients in urban and rural areas of the East Midlands region, pre- and during the COVID-19 pandemic.

METHODS

- Cross-sectional study.
- Used an existing anonymised dataset from EMAS.
- Data pre-processing.
- Descriptive statistics and multiple logistic regression.

RESULTS

Before COVID-19		During COVID-19	
Mental Health N (%)	No Mental Health N (%)	Mental Health N (%)	No Mental Health N (%)
96,542 (7.6)	1,170,929 (92.4)	90,391 (8.6)	960,895 (91.4)
1,267,471 (100.0)		1,051,286 (100.0)	

Table 1 - Mental health presentations to ambulance services before and during the COVID-19 pandemic

During COVID-19	
Increased	Decreased
Acute Behavioural Disturbance, Anxiety* , Depression, Transport Under Mental Health Act.	Attempted Suicide, Dementia, Intentional Drug Overdose* , Other Mental Health Problem.

Table 2 – Types of mental health and how they were affected by COVID-19. * p<0.05

Before COVID-19		During COVID-19	
Significantly more likely to present with mental health	Significantly less likely to present with mental health	Significantly more likely to present with mental health	Significantly less likely to present with mental health
Transgender, 20 – 60.	Men, 60 - >70, Black, Asian, SEAsian, less deprived areas, rural areas.	Transgender, 20 – 50.	Men, 50 - >70, Black, Asian, SEAsian, less deprived areas, rural areas.

Table 3 – The outcomes of two multiple logistic regression models, which determine the demographics of patients presenting to ambulance services before and during the COVID-19 pandemic in the East Midlands.

Those...
aged 20 to 30 years,
females,
of White ethnicity,
from highly deprived areas,
from urban areas,
and females
...were most likely to present with a mental health condition.

DISCUSSION

Finding	Explanation
Increase in mental health presentations.	Populations' natural response to a threat and the unknown (WHO, 2022).
Increase in anxiety	Financial and emotional strain (Office for National Statistics, 2020).
Decrease in intentional drug overdose	Decreased access to recreational drugs (Mason et. al, 2022).
Over 65 years	Retirement (Talbot, 2022).
Female	Larger proportion in region (NOMIS, 2021), differing brain anatomy (Turnbridge, 2022).
White ethnic group	Larger proportion in region (NOMIS, 2021).
High deprivation	Crime, barriers to housing and services and unemployment (Remes, 2015).
Urban areas	Crime, violence, homelessness and insufficient mental health services (Okkels, Kristiansen, Munk-Jørgensen, & Sartorius, 2018) .

CONCLUSIONS

- Mental health presentations to ambulance services in the East Midlands were most common in those aged 20 to 30 years, females, the White ethnic group, those from highly deprived areas, and those from urban areas.
- Research is limited to the East Midlands and ambulance services, with issues with the nature of study and data.
- Implement tailored support in urban and highly deprived areas.
- Increase the access to primary and community mental health services.
- Results from this study may have implications in other regions in the UK and this needs to be investigated.

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