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# Exploring the role of the environmental context in the spatial distribution of calls-for-service associated with emotionally disturbed persons

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## INTRODUCTION & BACKGROUND

Evidence suggests that a subset of emotionally disturbed persons (EDPs) is at risk for becoming connected with the criminal justice system (CJS). It has been well-established that the police act as “street corner psychiatrists” who are the gatekeepers to accessing the CJS and the mental health care system for many EDPs in the community.

An understanding of the underlying contextual factors that can lead to the initial contact with, and the type of police response to, EDPs, may better explain this intersection. The majority of research in this area thus far, has focused on how different environmental features lead to various mental health outcomes; however, research investigating how the environmental landscape influences *where* EDP calls-for-service are likely to take place, is noticeably lacking.

## STUDY AIMS

This study aims to provide a better understanding of the places in which calls-for-service for EDPs are taking place. It analyzes:

1. The locations of these police contacts to determine if they cluster in specific areas.
2. A series of environmental risk factors for EDPs (e.g., pharmacies, walk-in clinics and liquor stores, etc.) to determine their role in explaining this clustering.

## METHODS

All calls-for-service involving EDPs over a one year period ( $n = 2847$ ) for a large city in a western province were extracted from the PIRS archived database, which is housed in the ICURS secure research laboratory at Simon Fraser University. Methodologically, the two study aims were addressed through:

1. Kernel density estimation to determine whether ‘hot spots’ can be identified.
2. Geocoding and mapping the spatial locations of environmental risk factors that affect EDPs, to better understand those factors that may contribute to the clustering of these calls.

## RESULTS

The kernel density model estimates that there are several ‘hot spots’ where EDP calls-for-service cluster in space (see Figure 1). More specifically, all of the EDP police contacts during this one year period take place in only a 24.5 square kilometer vicinity, which is approximately 7.5% of the city’s total area.

Findings also indicate that many of the environmental risk factors specific to EDPs are contained within these hot spot areas (see Table 1). In total, 69% (i.e., 101 of 146) of these environmental risk factors are contained within the identified hot spot areas.

Figure 1. Kernel density model

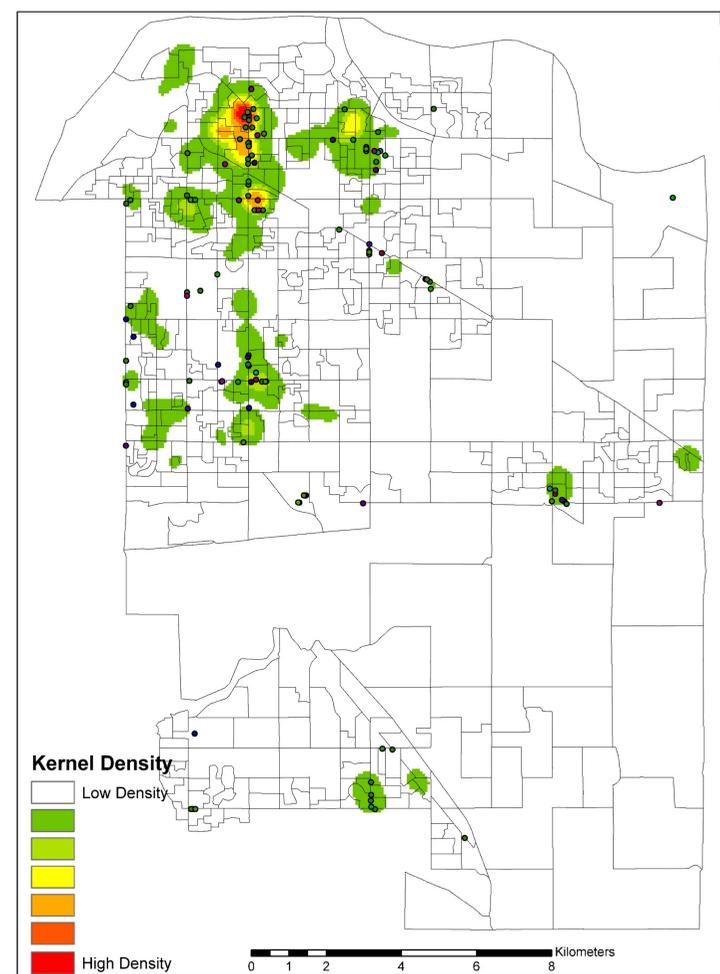


Table 1. Proportion of environmental risk factors found within the hot spot areas.

Alcohol/Addiction Services	6/9	Pubs & Liquor Stores	18/25
BC Corrections	2/4	Pharmacies	42/57
City Hall & Court Services	1/2	Police Stations	4/6
Drug Addiction Centres	2/3	Public Health Units	4/5
FHA Addiction Centres	3/3	Hospitals	1/1
Housing Projects	2/7	Walk-in Clinics	17/24

## DISCUSSION & CONCLUSION

To our knowledge, this study is the first of its kind within the mental health and policing literature. Similar to previous research that has found a high degree of spatial clustering of police contacts (e.g., Andresen & Malleson, 2011 found clustering in Vancouver, BC), the findings from this study also indicate that EDP calls cluster within specific areas.

The question then becomes, what is it about these areas that attract these types of individuals? Locations frequently visited by EDPs overlapped many of the hot spots identified by the kernel density estimate. Although this study is exploratory in scope, these findings suggest that there may be a link between the density of environmental risk factors associated with healthcare and treatment and the density of EDP calls-for-service. A better understanding of the nature of police contacts with this population may provide the necessary empirical foundation to inform future policy development.

## REFERENCES

Andresen, M. A., & Malleson, N. (2011). Testing the stability of crime patterns: Implications for theory and policy. *Journal of Research in Crime and Delinquency*, 48(1), 58-82.

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