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HI-END SPATIAL INFORMATION TECHNOLOGIES: A CASE FOR MENTAL HEALTH

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Mental health 'incidences' are essentially tied to a spatial location: those parameters emanating from other than purely physiological and psychological triggers. The issue of spatio-temporal social interaction which identifies locational constructs such as patient's residence, everyday interactions and the resultant impacts of the neighbourhood fabric calls for a holistic approach in understanding health issues. This reality is why aetiology in mental health is described as bio-psycho-social. Recent observations suggest that serious mental illness [including Schizophrenia, Depressive psychosis and bipolar disorder] is more prevalent in inner cities. However, little explanation has thus far been offered as to what inner city socio-structural factors might induce the development of psychosis.

Based on an innovative Maltese spatio-temporal criminology study by Formosa (2007) that bridged the gap between urban-planning and socio-economic parameters, this study aims to further investigate the use of high-end geographical information systems (GIS) to serve as a tool for mental health epidemiological specialists. The Malta Study investigated routine-activity theory and opportunity theory, as based on the Chicago School Environmental Criminology model.

For this purpose, the original criminology study data will be used to demonstrate the method, which depicts spatio-temporal aspects based on where offenders live, interact and commit crime. The 50-year analysis' findings highlight highly-specific local-offender social situations with residential and poverty clustering. A feature of the system is that poverty is demonstrated by the use of government social/epidemiological data, which when analyzed produced maps of cumulatively higher and lower poverty risk. Residential analysis show a preference for the harbour region where offenders live in areas characterised by poverty that have disproportionate offender concentrations when compared to their shrinking population concentration.

The review of Malta's crime within a social and land-use structure lead to a CRISOLA model which can be investigated within the mental health scenario particularly with reference to patient's residence location, social cohesion, the impacts of spatial planning on well-being (clustering and distance), inner city impacts on social parameters and the issue of hotspots in relation to the daily/seasonal/temporal patients' interactions.

This study shall investigate mental health epidemiology in the island of Gozo; taking into account the incidence-reporting bias posited by the demographic, socio-economic, affluence and insularity factors. The intention is to map variables such as diagnosis and family history in correlation with the already established social factors, so as to identify correlation strengths with the social variables. The researchers will attempt to run a parallel London-area comparative study.

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MINIMISING METABOLIC AND CARDIOVASCULAR RISK IN SCHIZOPHRENIA:
DIABETES, OBESITY AND DYSLIPIDAEMIA

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There is increasing concern about the long-term physical health of people treated for schizophrenia who have increased age-specific mortality and morbidity, particularly from cardiovascular disease (CVD). Cardiovascular risk factors are suboptimal with patients showing prematurely aged risk profiles. A key issue is the extent to which CVD risk is mediated by disease-specific factors, associated lifestyle characteristics (e.g. smoking and lack of exercise) or caused by antipsychotic drug treatment.

Regarding the last of these, it is now clear that antipsychotic drugs differ in the extent to which their