

SUICIDE IN THE MALTESE ISLANDS BETWEEN 1995 AND 2018 – INITIAL FINDINGS

Felice, E., Renaud, K., Bettenzana, K., Darmanin Kissuan, G., Felice, E. M.,
Camilleri Podesta, M. T., Gauci, D. & England, K

INTRODUCTION

- One person dies by suicide every 40 seconds in the world (WHO, 2018)
- Rates of suicide in most countries are higher in males than in females. China is one important exception, with very high rates in females, especially young women in rural areas (Cheng et Lee, 2000)
- Periods of economic recession are associated with increase in suicide particularly in males of working age (Haw et al, 2014)

- Debt and unemployment were the factors most strongly associated with rises in suicide during the recession in Europe (Reeves et al, 2014)
- Many individuals have contact with health providers in the time leading up to suicide
 - 45% of suicide victims have contact with primary care
 - 25% of suicide victims had contact with mental health services within a month before their suicide (Luoma et al, 2002) and were more likely to have carried psychiatric diagnoses in the previous year (Chock et al, 2015)
- Affective disorders predominate in suicides of both genders, with comorbidity of personality disorders in 40-50% (Henriksson et al, 1993)
- Substance misuse disorders are, however, generally more common in male suicides (Murphy et al, 2000)

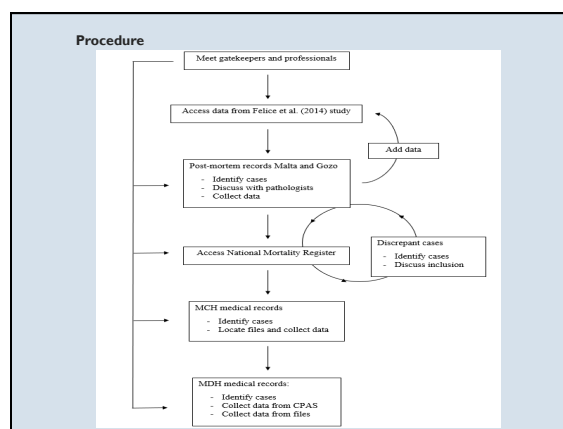
- Non-married people are at higher risk of suicide than married people, across gender and age (Kyung-Sook, SangSoo, Sangjin, & Young-Jeon, 2018)
- In almost all the regions of the world and across gender, suicide rates are **lowest under the age of 15 and highest over the age of 70** (WHO, 2013)
- Suicide is rare in childhood and early adolescence, but increases sharply with age in adolescence. It is one of the most common causes of death in young people (Pelkonen & Marttunen, 2003).
- Suicide rates appear to **increase with age from 60 to 90 years of age, then decline again** (Shah, Bhat, Zarate Escudero, DeLeo, & Erlangen, 2016)
- Month of Suicide – **peak season in summer** (found to coincide with peak in severity of mental health symptoms; Casey, Gemmill, Hirosh & Fulwood, 2012; Srivastava, 2013)

MALTA AND EUROPE

- Mediterranean countries have overall lower suicide rates than other European countries (Chisholm et al., 2003; Helema et al., 2014)
- European countries have shown a clear drop in suicide rate, however rates in Malta have shown a notable increase towards the present (Halmu et al., 2014)
- According to the WHO, the suicide rate in the Maltese Islands was 12.3 per 100,000 population for males and 0.5 per 100,000 for females in 2007 (WHO, 2011)
- According to the DHIR (2019), 0.7% of all deaths amongst Maltese residents in 2017 were deaths by suicide

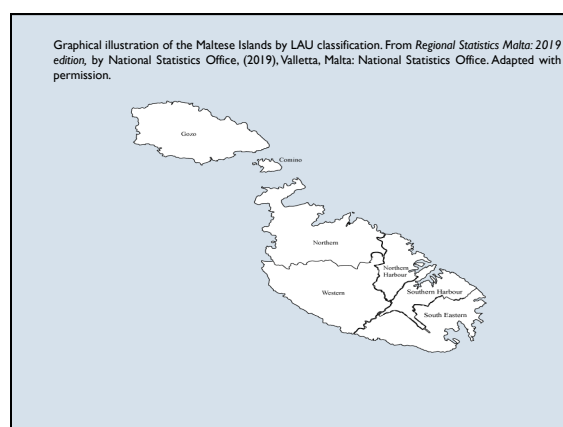
AIM

- To identify the number of suicides in the Maltese Islands between 1995 - 2018
- To examine the conditions and demographic factors that contribute to suicide locally



Classification of Variables

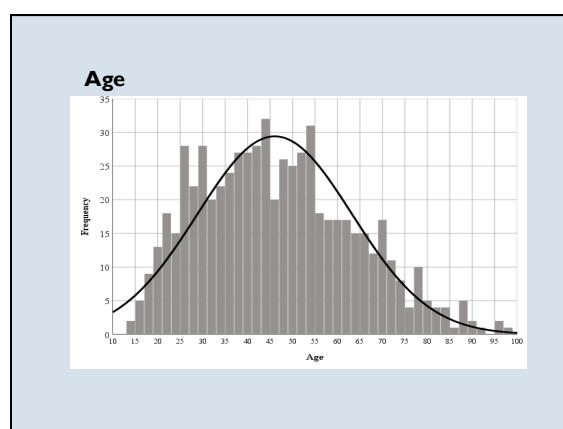
Variable	Classification system	Further details
Residence	Local Administrative Units (LAUs) created by Eurostat ¹ , compatible with Nomenclature of Territorial Units for Statistics (NUTS) in the European Union	
Occupation	International Standard Classification of Occupations (ISCO-88)	
Suicide method	ICD-10 codes for external causes of mortality: Intentional self-harm	
Mental illness diagnosis	ICD-10 classification of mental and behavioural disorders	Undiagnosed depression coded separately and refers to reported depression without an official ICD-10 diagnosis In cases of more than one diagnosis, recorded the most recent diagnosis
Psychiatric medication type	Anatomical Therapeutic Chemical (ACT) classification	Limited description of potential uses and intended effects of medication



RESULTS

- A total number of **708** individuals were identified
- However, **73** of these cases were either illicit drug overdoses with undetermined intent, or other unclear cases, and were therefore omitted from the study

Therefore, in this study, the total number of suicide from 1995 to 2018 in the Maltese Islands was **635**
509 males (80.2%) and **126** females (19.8%)



- **Marital status** - Of the 559 individuals for whom this variable was available, 42.0% (n = 235) were single
46.5% (n = 260) were married
 4.7% (n = 26) were widowed
 6.8% (n = 38) were separated

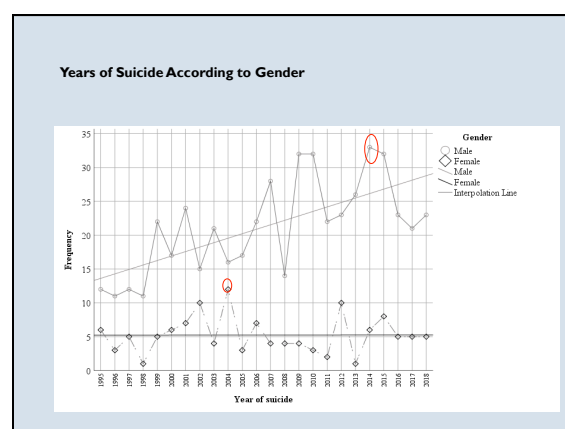
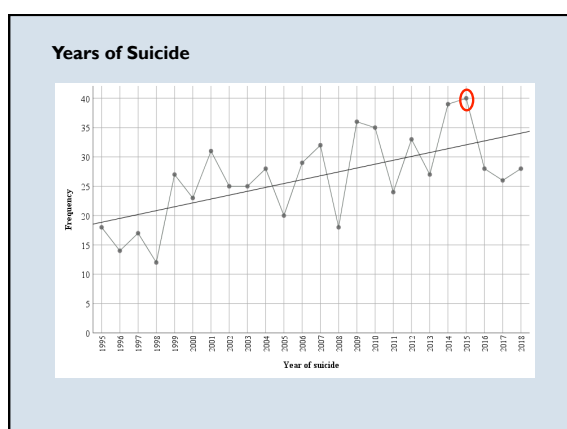
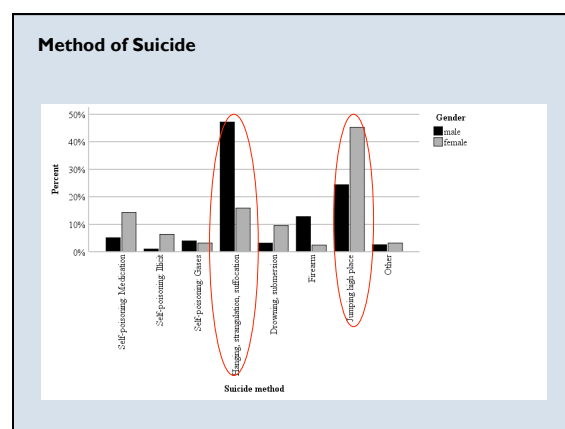
The marital status was similar across gender, however only **2.0% of men** were widowed whereas **14.7% of women** were widowed (this difference was statistically significant)

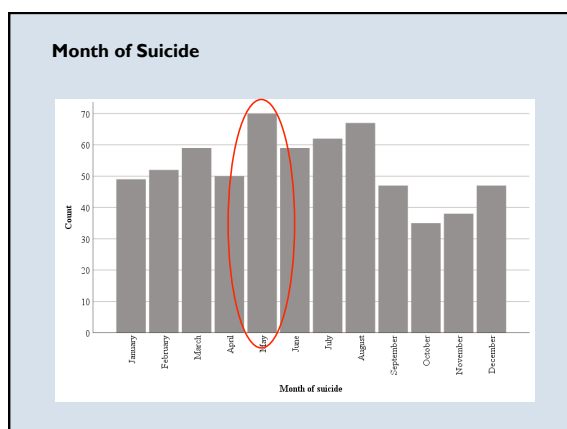
- **Nationality** - Of the total 635 individuals
83.1% (n = 528) had a local nationality
 6.9% (n = 107) had a foreign nationality

More specifically, **80.3% (n = 510) were Maltese** and **2.8% (n = 18) were Gozitan**

- **Employment status** - Of the 467 individuals for whom this variable was available,
40.7% (n = 190) were employed
 18% (n = 84) were unemployed
 26.1% (n = 122) were pensioners
 2.1% (n = 10) were boarded out or unable to work
 8.6% (n = 40) were homemakers
 4.5% (n = 21) were students

Occupation category	n	%
Armed forces	1	0.6
Legislators, senior officials, managers	11	6.8
Professionals	14	8.6
Technicians, associate professionals	34	21.0
Clerks	3	1.9
Service and sales workers	20	12.3
Agricultural and fishery workers	3	1.9
Craft and trades	27	16.7
Plant and machine operators	15	9.3
Elementary occupations	34	21.0
Total	162	100.0





Mental Illness

Mental illness	n	%
Mood disorders: Depressive	60	27.6
Schizophrenia, schizotypal and delusional disorders	38	17.5
Mood disorders: Bipolar	11	5.1
Neurotic disorders: Anxiety	10	4.6
Personality disorders	9	4.1
Psychoactive substance use	18	8.3
Dementias	2	0.9
Undiagnosed depression	69	31.8
Total	217	100.0

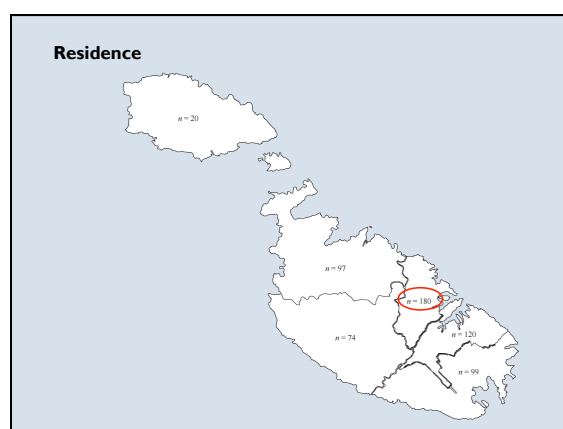
Contact with Services

Service	n	%
MCH	62	41.1
PU	18	11.9
POP	10	6.6
HC	4	2.6
AE	8	5.3
Multiple	49	32.5
Total	151	100.0

Time Since Contact with Services

Time	n	%
At time	6	9.5
<1 week	16	25.4
<1 month	12	19.0
<3 months	15	23.8
<6 months	4	6.3
<1 year	6	9.5
>1 year	4	6.3
Total	63	100.0

- **Admission to psychiatric ward** – (available for 318 individuals)
42.5% (n = 135) had been admitted and 57.5% (n = 183) had not
- **History of suicide attempts** - A history of suicide attempts was identified for 73 individuals (15%) in the time period for which this variable was available.
- **Number of suicide attempts** – (available for 41 individuals)
Mean =3 (minimum =1 & maximum = 7)



Locality of Suicide



Location

Location	n	%
At home	284	47.6
Residential institution	9	1.5
General hospital	14	2.3
Psychiatric hospital	5	0.8
Correctional facilities	10	1.7
Outside or not home	254	42.5
At sea	21	3.5
Total	597	100.0

Location Hotspots

Hotspot location	n	%
Dingli cliffs	12	26.1
Mosta bridge	12	26.1
L-Ahrax Mellieha	4	8.7
Lascaris ditch	12	26.1
Valletta		
St James ditch	3	6.5
Valletta		
Upper Barrakka	3	6.5
Valletta		
Total	46	100.0

DISCUSSION

- The average suicide rate in the Maltese Islands was similar to the WHO (2014) estimates of 6.0 per 100,000 population for high income countries
- Suicide appears to be under-reported or incompletely documented, which may lead to difficulties in determining prevalence (DHR, 2013)
- Under-reporting has been attributed to religious beliefs and sanctions (Goldney, 2010); social pressures (Krug et al., 2002); the sensitivity of suicide in the family and community (WHO, 2014); as well as underlying stigma and shame (Crosby et al., 2011; Krug et al., 2002; O'Reilly Mraz, 1994; Tabone, 1994; Darmanin Kassam, 2017)

SOME SIGNIFICANT FINDINGS

AGE DIFFERENCES

- Given the international literature (Snowdon et al., 2017; Varnik et al., 2008), it was expected that males would have an older average age than females
- However, this hypothesis was **not supported**, as the gender difference in age was not statistically significant

MARITAL STATUS

- Studies have shown that males benefit from marriage more than females, given females' investment in caring for the family, thereby placing males at higher risk following widowhood (Denney et al., 2009; Stack, 1998)
- However, the contrary appears to be true in the local context as being widowed did not place males at a higher risk for suicide

RECOMMENDATIONS

- More accurate and consistent classification and recording of suicide according to intent (Crosby et al., 2011; Krug et al., 2002; WHO, 2014)
- National data collection by setting up regular surveillance or a suicide database (U.S. Department of Health and Human Services, 2012). This is essential in order to, subsequently, be able to implement a national strategy or action plan for suicide prevention (WHO, 2014).
- Evidence-based suicide prevention requires interventions at multiple levels (Hawton & Pirkis, 2017; Zalsman et al., 2017).
- An important universal intervention is reducing stigma surrounding suicide and mental health in the local context.
- Increasing and improving the provision of mental health care is another important recommendation. Given that almost half of the individuals in the study had never had contact with psychiatric services, psychoeducation may also be important in order to help significant others recognize signs and refer individuals to the appropriate services.

- Reducing access to lethal means, such as setting up safety fences at the suicide hotspots (Florentine & Crane, 2010)
- Interventions may target males, individuals in the 30 to 49 age group, and individuals at risk of unemployment
- Assessment of suicide risk prior to discharge from psychiatric services, and to support such transitions, especially in the first week following discharge
- Local services should be better equipped to deal with crises effectively

SUICIDE PREVENTION

- Prevention methods for suicide are known but it is still not categorically preventable. However, it is still one of most substantial public health problems worldwide (Walter & Pridmore, 2012)
- It is said that 10 - 20 times more people will attempt suicide on a global basis by the year 2020 (WHO, 1999)

No current National Suicide Prevention Program set up to cater for the Maltese population

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