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## Research Article

# Suicide is Impacted by Culture: Gender Suicide Rates

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### ABSTRACT

**Objective:** Over the last century mental disorder has been promoted as the universal suicide trigger. This view has been discredited and other triggers are being considered. The aim is to determine whether different regions have sustained different suicide rates for the genders male and female. In the affirmative case, as gender roles are culturally determined, an impact of culture on suicidal behaviour would be confirmed.

**Method:** The WHO Suicide Rates data by country (2016) was examined over a 17-year period. This was examined for details of countries which had demonstrated higher female than male suicide. 6 were located and an additional 6 countries were selected with similar total suicide rates and a higher male than female suicide rate. The stability of higher female or male suicide rates was explored.

**Results:** The 6 countries with higher female suicide rates continued this pattern of behaviour over 17 years – and the countries with higher male suicide rates also continued the established pattern.

**Conclusions:** The persistence of different gender suicide rates in 12 countries over 17 years confirmed that culture can strongly impact suicidal behaviour.

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### Introduction

The World Health Organization has declared that mental disorder is not the sole suicide trigger [1]. Other triggers can now be considered. Culture refers to the sets of attitudes, beliefs and traditional responses to circumstances (customs) of individuals integrated into a group. Cultural factors are likely important in suicidal behaviour, and we set out to further substantiate the impact of gender roles on suicidal behaviour [2]. The cultures of groups from different regions usually differ. Traditionally, within the same group the roles and behaviours of males and females differ, and across regions the roles and behaviours of members of the same gender may differ.

In the second half of the 19<sup>th</sup> century Durkheim studied the suicide rate of the genders in various European regions and published figures which provide the following male-female suicide rate ratios: Austria, 4.6; Prussia, 4.6; Saxony, 4.0; Italy, 4.0; France, 3.0; Denmark, 3.0 and England, 3.0 [3]. Recently, the global gender suicide rate ratio had been about 3.0 – being highest in the European region (4.0) and lowest in the Eastern Mediterranean region (1.1) [4]. However, there are occasional accounts of countries in which female suicide is more common than male suicide. Should it be confirmed that some areas have sustained higher

female (HF) suicide rates, while others have sustained higher male (HM) suicide rates, a clear impact of culture on suicide would be established.

### Method

The WHO Suicide Rates data by country (2016) was examined, which provides details at 4 time points over 17 years (2016, 2015, 2010 and 2000) [5]. From 2016 data, 6 countries were identified as having a HF suicide rate: Lesotho, Myanmar, China, Bangladesh, Morocco and Pakistan. For each of these we identified the high male (HM) suicide rate country with the closest average total suicide rate over the 17 years. For each time point, the male-female rate ratio was calculated. Results of <1.0 indicted a FH suicide rate. Lesotho with a 17-year average total suicide rate of 28.2, was linked with Guyana with an average total suicide rate of 29.1. Myanmar, 8 was linked with Seychelles, 8.8; China, 10 with Romania, 10; Bangladesh, 6.6 with Spain, 5.9; Morocco, 4.6 with Lebanon, 3.2; and Pakistan, 3.4 was linked with São Tomé and Príncipe, 2.9. The calculated male-female suicide rate ratios for the HF and HM suicide rate countries were entered on separate tables and examined for evidence of stability, i.e. the HF rate countries continuing to yield male-female rate ratios of <1.0 and HM rate countries continuing to yield male-female rate ratios of >1.0.

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**Table 1:** Six countries showing higher female than male suicide rate over a 17-year period.

Av Total Suicides	Country	male-female suicide rate ratios				
		2016	2015	2010	2000	Range
28.2	Lesotho	0.7	0.7	0.7	0.7	0.7-0.7
10	China	0.95	0.9	0.8	0.8	0.8-0.95
8	Myanmar	0.7	0.7	0.7	0.4	0.4-0.7
6.6	Bangladesh	0.8	0.8	0.6	0.8	0.6-0.8
4.6	Morocco	0.7	0.7	0.6	0.7	0.6-0.7
3.4	Pakistan	0.97	0.97	0.9	0.8	0.8-0.97

**Table 2:** Six countries showing higher male than female suicide rate over a 17-year period.

Av Total Suicides	Country	male-female suicide rate ratios				
		2016	2015	2010	2000	Range
29.1	Guyana	3.3	3.3	3.2	3.3	3.2-3.3
10	Romania	5.8	6.5	5.4	5.2	5.2-6.5
8.8	Seychelles	7.1	7.2	7	6.7	6.7-7.2
5.9	Spain	3.0	2.9	3.9	3.5	2.9-3.9
3.2	Lebanon	1.9	1.8	1.6	2.1	1.6-2.1
2.9	São Tomé	2.0	2.0	2.0	2.2	2.0-2.2

São Tomé = São Tomé and Príncipe

## Results

Table 1 gives the male-female rate ratio of the 6 countries with FH suicide rate in 2016. In none of these countries was there a remarkable change in the ratio. Pakistan score 0.8 in 2000 and would have reached unity in 2015 and 2016 if a second decimal point was not introduced (0.97). China, in 2016, was also described with a second decimal place (0.95). The ranges extended from 0.4-0.7 for Myanmar to 0.8-0.97 for Pakistan. Generally, there was little change with Lesotho maintaining the same ratio and Morocco registering 0.6-0.7 throughout the period.

Table 2 gives the male-female rate ratio of the 6 countries who showed MH suicide rate in 2016 which had an average total suicide rate approximating those encountered in the FH suicide rate sample. The ranges extended from 1.6-2.1 for Lebanon to 6.7-7.2 for the Seychelles, but there was not remarkable change. São Tomé and Príncipe displayed a limited range: 2.0-2.2. We examined both MH and FH suicide rate countries, and we did not find persuasive evidence of change from one pattern to another.

## Discussion

A limitation of this study, it may be argued, is that it does not rely on statistics. We contend, our findings do not require statistical support. Cultures change over time in response to political, economic and environmental change. Invasion by dominant cultures and philosophies has changed the culture of indigenous people, and currently, the IT revolution is bringing about worldwide cultural changes. Nevertheless, the male-female suicide rate ratio in Lesotho, China, Myanmar, Bangladesh, Morocco and Pakistan has remained <1.0 (greater rate among females) over the 17-year study period (2016-2000). Future figures may show China and Pakistan moving into the HM category. But this would not damage the argument that cultural factors impact suicidal behaviour. In the WHO 2016 data the Pakistan ratio was clearly <1.0 from 2000 to 2010, and China ratio was clearly <1.0 from 2000-2015 [5]. It is agreed that the culture of regions gradually change, and with such changes, suicidal behaviour will change. In the other parts the world, the male rate has been unwaveringly higher. Ratios calculated from Durkheim and WHO 2016 data one and a half centuries later are as follows: Italy, 4.0 and 3.2; France 3.0 and 2.5; Denmark 3.0 and 2.5; and England 3.0 which we compared to United Kingdom, 3.4. Durkheim's figures also give ratios which are close to the 4 attributed to Europe by Varnik in 2012 [3-5].

While the demonstration of sustained rates of <1.0 is persuasive regarding a role for culture in suicidal behaviour, so too, is the demonstration that some countries have sustained high positive numbers while other countries have sustained low positive numbers. The above paragraph gives evidence of sustained high positive numbers. Table 2 reveals examples of low positive numbers sustained over 17 years: Lebanon, 1.6-2.1; São Tomé and Príncipe, 2.0-2.2. Other low positive ratio countries are available. A recent paper from Spain found that for different Autonomous Communities during 1980-2016, the pattern of suicide lacked uniformity [6]. In some female rates increased while male rates declined, and in others the opposite occurred. The authors gave no opinion regarding determinants. We propose local cultural factors as a probable explanation.

Gender roles also influence the choice of suicide method. Self-immolation results in death (suicide) in is 60-70% of cases. In some low-income countries, including India and Iran, self-immolation accounts for a high level of suicides (about a third of total suicides) and is performed mainly by women. In Iran the self-immolation ratio is 3:31 [7]. In the West, this method is uncommon and is more commonly used by males. In a recent review of self-immolation in Switzerland, it formed about 1% of total suicides and 64% of the completers were male [8]. Gender roles are determined by regional culture. Gender roles profoundly influence gender suicide rates. Gender suicide rates differ around the world, the potential of culture to influence suicidal behaviour is clearly demonstrated.

## Conflicts of Interest

None.

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**REFERENCES**

1. World Health Organization (2014) Preventing suicide: A global imperative.
2. Pridmore S, Walter G (2013) Culture and suicide set points. *German J Psychiatry* 16: 143-151.
3. Durkheim E (1897/1951) *Suicide: A study in sociology*. New York: Free Press.
4. Varnik P (2012) Suicide in the world. *Int J Environ Res Public Health* 9: 760-771. [[Crossref](#)]
5. World Health Organization (2016) Suicide rate estimates, age-standardized – Estimates by country. Global Health Observatory data repository.
6. Cayuela L, Piol Uceda FJ, Sanchez Gayango A, Rodriguez Domingues S, Velasco Quiles AA et al. (2019) Divergent trends in suicide mortality by Autonomous Community and sex (1980-216). *Rev Psiquiatr Salud Ment pii: S1888-9891(19)30095-3*. [[Crossref](#)]
7. Saadati M, Azami Aghdash S, Heydart M, Derakhshani N, Rezapour R (2019) Self-immolation in Iran: Systematic Review and Meta-analysis. *Bull Emerg Trauma* 7: 1-8. [[Crossref](#)]
8. Gauthier S, Reisch T, Bartsch Ch (2014) Self-burning - a rare suicide method in Switzerland and other industrialised nations - a review. *Burns* 40: 1720-1726. [[Crossref](#)]