

# "The Register for Suicide Attempts - Methods and rates in relation to age and gender in two regions of Denmark".

MHS. Christina Petrea Larsen, Centre for Suicide Research, Denmark

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## Introduction:

In Denmark, there are approximately 18 suicide attempts per day. Knowledge of the extent of attempted suicides in Denmark can be found in the Register for Suicide Attempts. The register has existed since 1989 covering the former County of Funen. Since 2012, an extension of the Register has gradually been carried out. The results are based on data collected from two out of five Regions of Denmark: The North Denmark Region and the Region Zealand.

## Methods:

We received transcripts of all civil registration numbers that had been in contact with an emergency ward (somatic), due to a suicide attempt in 2012-2016. From each patient's medical record, we registered the following variables: age, gender, place of registration, time and date of attempt, code for cause of contact, method, circumstances in relation to the attempt (proximal- and distal factors), and medicinal product if the used method was self-poisoning. Results concern rates in relation to age in the two regions and the most frequent used methods in the two regions.

## Results:

The main results: During 2012-2016, there were 2,768 registered suicide attempts (age 15-70+) in the two regions combined, women ( $n=1,771$ ) and men ( $n=997$ ). Attempted suicide rates in The North Denmark Region was in 2012: 43.8, 2013: 37.6, 2014: 92.9, 2015: 102.5 and in 2016: 93. In the Region Zealand 2012: 29.5, 2013: 32.1, 2014: 29.5, 2015: 24.6 and in 2016: 25.5. Table 1 shows rate for attempted suicide per 100.000 in each age group in the Region Zealand and The North Denmark Region respectively. Table 2 & 3 shows rates for attempted suicide in relation to sex and age group in Region Zealand and in The North Denmark Region respectively.

The North Denmark Region has a higher rate of attempted suicide compared to Region Zealand. Especially 2014, 2015 and 2016 in The North Denmark Region stand out in relation to all age groups. Both male and female suicide attempts rates (table 2 & 3) are significantly higher in 2014, 2015 and 2016 in The North Denmark Region than in 2012 and 2013. The highest rate for attempted suicide is found in the age group 15-19 years in both regions except for 2015 in both regions; followed by age group 20-29 years.

The most frequent method used in both regions and throughout all years is 'self-poisoning' followed by 'sharp objects' (Table 3). It seems that 'hanging' has been used more frequently from 2012 to 2015 in the Region Zealand without the total number ( $n$ ) of suicide attempts changing markedly. That also applies to The North Denmark Region except here the total number of suicide attempts has doubled over the years from 2012-2016.

Zealand	2012	2013	2014	2015	2016
Self-poisoning	180	205	156	115	132
Hanging	9	10	21	15	11
Drowning	1	1	4	0	4
Firearms	0	0	1	1	0
Sharp objects	27	31	33	44	38
Other methods	2	0	5	4	3
North	2012	2013	2014	2015	2016
Self-poisoning	186	150	373	407	390
Hanging	8	2	14	25	22
Drowning	0	2	2	9	4
Firearms	2	0	3	2	1
Sharp objects	20	34	61	66	45
Other methods	1	1	8	10	12

Table 4

## Discussion:

The number of suicide attempts is only the tip of the iceberg as not all suicide attempters have subsequent contact with an emergency ward. We registered more than twice as many suicide attempts in The North Denmark Region in 2014/2015/2016 compared to 2012. We do not see the same development in Region Zealand. The Data collecting procedure has not changed. The assessment in the psychiatric system in The North Denmark Region has not changed. The North Denmark Region has had an increased focus on registration of suicide attempts. Could this be some of the answer? At this point - we do not have the answer.

## Conclusion:

Findings on methods are consistent with existing research. Further knowledge on the development in suicide attempts will be generated during the ongoing data collection. It will be interesting to see if the two regions continue to differ regarding numbers of suicide attempts. Also how and if the remaining three regions differ from The North Denmark Region and Region Zealand.

Zealand	15-19 yrs.	20-29 yrs.	30-39 yrs.	40-49 yrs.	50-59 yrs.	60-69 yrs.	70+ yrs.
2012	101.4	55.3	34	29.4	14.9	10.3	6.9
2013	87.5	65.1	22.8	33.6	22.6	12.8	18.1
2014	82.8	57.4	24.7	29.9	18	16.4	13.6
2015	53.9	54.7	22.7	20.4	18.5	13.2	13.8
2016	80.6	40.5	22.9	22.5	19.7	13.4	13.1
North	15-19 yrs.	20-29 yrs.	30-39 yrs.	40-49 yrs.	50-59 yrs.	60-69 yrs.	70+ yrs.
2012	69.6	69.6	65.6	50.4	41.7	14.5	11.1
2013	65.4	55.9	42.7	52.3	30.1	17	14.8
2014	228.8	132.8	85.2	115.4	83.4	39.4	35.1
2015	181.5	192.6	111.3	126.4	81.3	41.1	31.3
2016	267.9	145.8	105.8	104	73.1	29.4	25.3

Table 1

North	2012		2013		2014		2015		2016	
	M	F	M	F	M	F	M	F	M	F
15-19 yrs.	29.9	112.4	25.2	108.8	46.3	424.1	57.7	313.6	42.7	509
20-29 yrs.	55.8	85	29.7	85.5	90.8	180.5	109.9	287.8	60.7	244.3
30-39 yrs.	32.1	100.9	32.7	53.2	72.2	99	97.1	126.4	82.2	131
40-49 yrs.	45.9	55	22.1	83.6	97.4	134	121.9	131.1	101	107.1
50-59 yrs.	47.9	35.6	30	30.3	74.4	92.5	90.7	71.8	72.7	73.5
60-69 yrs.	13.1	15.9	13	21.1	20.9	58.2	36.9	45.3	29.4	29.5
70+ yrs.	6.3	14.8	18.3	12.1	43.8	28.2	22.3	38.6	29.2	22

Table 2

Zealand	2012		2013		2014		2015		2016	
	M	F	M	F	M	F	M	F	M	F
15-19 yrs.	17.6	189.6	21.3	157.6	17.8	152.1	18	92.3	32.7	131.8
20-29 yrs.	21.7	92.3	55.3	76	27.9	90.4	33.7	78.5	27.7	55
30-39 yrs.	38	30.1	32.6	13.4	21.5	27.8	19.3	26.1	24.1	21.7
40-49 yrs.	12.7	46.2	24	43.2	35.6	24.2	19.6	21.2	18.4	26.5
50-59 yrs.	15.8	14	27.9	17.4	22.3	13.7	18.5	18.5	11.5	28
60-69 yrs.	19.1	1.7	15.6	10.1	15.8	17	10.7	15.5	7.3	19.3
70+ yrs.	2.3	10.6	21.5	15.4	14.2	13.1	23	6.20	7.2	17.9

Table 3