

Risk of suicidality in adolescents

Survey of a multi-ethnic sample of 14-year olds living in the city of Antwerp with an adapted version of the Youth Monitor Rotterdam (YMR)

K. Kluppels, G. Portzky, M. Roelants, K. Hoppenbrouwers

EUSUHM 2017

Leuven, September 6 – 8, 2017

Background

- Suicide is main cause of death in 15-19 year olds (Flanders: 8,15/100000 in 2013)
- In Flanders: 2 – 2,8 x more suicidality compared to Dutch adolescents (Portzky et al.,2008)
- Risk and protective factors are well known (Evans et al, 2004; Bridge et al.,2006, Portzky., 2008)
- Suicide is a criterion of mental health in society

Youth Health Care: prevention of and reduction of suffering for these children and their environment

Definition of suicidality

- **Suicidality** refers to cognitive and behavioural characteristics: suicidal thoughts and behaviour (Van Heeringen, 2001)
- Behaviour: distinction **Non suicidal vs. Suicidal deliberate self harm (DSH)** depending on the suicidal intent of the behaviour (Kerkhof, 2015)
- Current survey: suicidality assessed by **3 questions**
 1. Have you ever thought about ending your life?
 2. Have you ever tried to hurt or poison yourself?
 3. Have you ever tried to end your life?Answer categories: never, once, sometimes, often, very often
Timing: less or more than 12 months ago

Aims

- **Suicidality rate** in a multi-ethnic cohort of 14-year-olds
- Adapted version of **YMR** (Youth Health Monitor Rotterdam): instrument to monitor general health, well-being, and behaviour
- **Risk factors** associated with suicidality
- Comparison with **other surveys**

Methods

- **Participants**

- 184 pupils (55% < 15 years); all educational levels (general, technical, vocational, arts)
- Participation rate (pupils): 81,8%

- **Instrument**

- YMR + additional items on (non)suicidal deliberate self harm (DSH), self-esteem, coping, eating problems and sexual orientation.
- Assessment with interview conducted by SHS doctor

- **Statistical tests:**

- Chi-square, (ordinal) logistic regression
- Main outcome = 3 screening questions

Results: Prevalence of suicidality

	n	Suicidal thoughts (%)	Non suicidal DSH (%)	Suicidal DSH (%)
Overall	183	25,1	12,0	4,9
1x		15,8	4,9	1,1
Seldom		6,0	3,8	2,2
Often		2,2	1,1	1,6
Very often		1,1	2,2	0
Boys	78	24.3	10.2	3.8
Girls	105	25.7	13.3	5.8
ASO (general)	69	18.8	4.3	1.4
TSO (technical)	49	24.5	12.1	4.0
BSO (vocational)	30	23.3	16.6	10.0
KSO (arts)	35	40.0	22.9	8.6

Prevalence of suicidality: other surveys

Authors	Suicidal thoughts	DSH
Portzky et al., 2008	20,1% (BE) 9.5% (NL)	12,8% (BE) 5.2% (NL)
Baetens et al., 2011		14%
CASE, 2008		10,4%
Vanderstraeten, 2015		15,5%
HBSC, 2014 (≥ 15 yrs)	14%	
De Wilde et al., 2011	4% (NL) (thoughts or behaviour)	

- Girls: 2.3 – 5 times higher frequency
- HBSC: higher frequency suicidal thoughts in vocational ed.

Results: socio-demographic factors and suicidality

	Suicidal thoughts	Non suicidal DSH	Suidal DSH
	OR (95%BI)	OR (95%BI)	OR (95%BI)
Girls vs. boys	1.2 (0.6-2.4)	1.4 (0.6-3.7)	1.6 (0.4-7.5)
Age ≥ 15 years (vs. < 15 years)	1.5 (0.8-2.9)	1.7 (0.7-4.4)	2.6 (0.7-13)
Education level (vs, ASO: general)			
BSO: vocational	1.5 (0.5-4.0)	4.7 (1.1-24)*	7.5 (0.9- >100)°
TSO: technical	1.4 (0.6-3.5)	3.1 (0.8-15)	3.0 (0.3- 65)
KSO: art	3.2 (1.3-7.9)*	6.6 (1.8-32)**	6.6 (0.8- > 100)
Origin of parents (vs. Belgium)			
West Europe	1.60 (4-5.7)	1.3 (0.2-5.9)	<i>na</i>
Marocco	0.6 (0.2-1.4)	0.7 (0.2-2.1)	<i>na</i>
Other countries	1.1 (0.5-2.25)	0.6 (0.2-1.9)	<i>na</i>
Religion/Belief (vs. 'No')			
Christianity	0.4 (0.2-1.0)°	0.2 (0-0.6)*	0.3 (0-1.8)
Islam	0.5 (0.2-1.1)°	0.4 (0.1-1.0)°	0.3 (0-1.4)
Other	0.8 (0.3-2.6)	0.2 (0-1)°	0.5 (0-3.7)
Not living with parent(s)	1.8 (0.8-3.7)	3.2 (1.2-7.9)*	1.7 (0.3-6.6)

na: not available; Univariate ordinal logistic regression: ° p < 0.1 (trend); *p < 0.05; **p < 0.01

Results: Health behaviour and suicidality

	Suicidal thoughts	Non suicidal DSH	Suicidal DSH
	OR (95%BI)	OR (95%BI)	OR (95%BI)
Psychosomatic problems (often)	3.6 (1.7-7.6)***	2.5 (1.0-6.5)°	3.3 (0.8-13)°
Sleeping badly (often)	4.2 (2.0-8.7)***	4.9 (1.9-13)***	3.1 (0.7-12)°
Smoking	2.6 (1.2-5.4)°	7.8 (3.1-21)***	2.0 (0.4-7.8)
Alcohol use	2.0 (1.0-4.2)°	2.8 (1.1-7.1)°	5.7 (1.3-29)*
Soft drugs	1.9 (0.5-6.4)	3.3 (1.1-7.1)°	2.0 (0.1-12)
TV (≥ 7 hrs/day)	18.9 (1.6- >100)*	6.1 (0.3-80)	15 (0.6- >100)*

Health behaviour in the past 4 weeks;

Univariate ordinal logistic regression: °p < 0.1 (trend); *p < 0.05; **p < 0.01; ***p < 0.001

Results: Mental health factors and suicidality

	Suicidal thoughts	Non suicidal DSH	Suicidal DSH
	OR (95%BI)	OR (95%BI)	OR (95%BI)
SDQ			
Emotional problems (score > 5)	6.6 (3.1-14)***	5.3 (2.1-14)***	8.5 (2.1-4)**
Conduct problems (score > 4)	4.8 (0.9-24)°	6.0 (0.8-34)°	<i>na.</i>
Hyperactivity problems (score > 7)	4.9 (1.4-16)**	2.4 (0.3-11)	6.3 (0.9-32)**
Peers Problems (score > 5)	5.7 (1.5-21)**	2.8 (0.4-13)	7.5 (1.0-39)*
Total Problems (score > 17)	5.6 (2.3-14)***	4.5 (1.4-13)**	11.8 (2.9-52)***
Self-esteem (Rosenberg) (score <25)	14 (5.3-36)***	11 (3.9-33)***	24 (5.6- > 100)***
Non hetero sexual orientation	9.3 (2.9-31)***	3.9 (0,8-16)°	12 (2.3-59)**
Eating problem (SCOFF ≥ 2)	5.1 (2.5-10)***	3.5 (1.4-9.0)**	2.7 (0.7-11)

Univariate ordinal logistic regression: °p < 0.1 (trend); *p < 0.05; **p < 0.01; ***p < 0.001

na: not available

Results: Life events and suicidality

	Suicidal thoughts	Non suicidal DSH	Suicidal DSH
	OR (95%BI)	OR (95%BI)	OR (95%BI)
Serious illness parents	2.0 (0.8-4.5)	2.5 (0.8-6.9)[°]	1.8 (0.3-8.1)
Mental problems parents	13 (4.6-40)^{***}	7.4 (2.3-23)^{***}	7.5 (1.4-33)^{**}
Mental problems siblings	2.9 (0.9-8.7)[°]	5.0 (1.4-16)^{**}	3.5 (0.5-16)
Death parent(s)	2.2 (0.4-9.5)	6.9 (1.3-32)[*]	8.5 (1.1-46)[*]
Frequent arguments between parents	2.4 (1.2-4.6)[*]	3.3 (1.3-8.6)[*]	3.3 (0.9-16)[°]
Physically abused	5.6 (2.0-15)^{***}	4.7 (1.4-15)^{**}	3.7 (0.5-1.7)
Sexually abused	7.3 (1.2-44.4)[*]	17.2 (2.7- >100)^{**}	13.3 (1.7-80)^{**}
Mentally abused	9.0 (4.1-20.2)^{***}	20.7 (7.6-61)^{***}	11.4 (2.8-57)^{***}
Bullied at school	2.8 (0.9-8.2)[°]	2.2 (0.5-7.8)	7.4 (1.4-32)^{**}
Feeling of unsafety at school	4.4 (1.2-16)[°]	<i>na.</i>	<i>na.</i>

Univariate ordinal logistic regression: [°]p < 0.1 (trend); *p < 0.05; **p < 0.01; ***p < 0.001
na: not available

Results: communication, situation at home, future prospects and suicidality

	Suicidal thoughts	Non suicidal DSH	Suicidal DSH
	OR (95%BI)	OR (95%BI)	OR (95%BI)
Not talking to mother	2.6 (0.7-8.2)	4.8 (1.2-16)*	1.9 (0.1-12)
Not talking to father	3.5 (1.6-7.5)**	4.9 (1.9-13)***	2.4 (0.5-9.6)
Severe argument with parents	2.9 (1.0-7.9)*	6.9 (2.1-21)***	6.3 (1.2-27)*
Bad atmosphere at home	5.1 (2.2-12)***	3.4 (1.1-9.5)*	6.9 (1.5-31)**
Feeling isolated at home	6.6 (2.7-16)***	7.8 (2.7-22)***	9.1 (2.0-41)**
Frequent arguments at home	3.9 (1.8-8.4)***	2.8 (1.0-7.4)*	6.6 (1.6-28)**
Enduring beatings at home	4.8 (0.6-35)	4.0 (0.2-35)	9.6 (0.4-90) ^o
Thinking of running away from home	6.8 (2.8-17)***	7.2 (2.5-20)***	6.9 (1.6-28)**
No good prospects for the coming 5 years	10.8 (4.7-26)***	9.6 (3.4-26)***	9.1 (2.3-39)**

Univariate ordinal logistic regression: ^op < 0.1 (trend); *p < 0.05; **p < 0.01; ***p < 0.001

Conclusions

- High prevalence of suicidality
- Personal and environmental factors are highly predictive
- Active assessment in school health care needed