

# Suicide attempts among children and adolescents at an university hospital emergency department in Italy over 10 years.

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None.



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## Introduction

Suicide is estimated to be the second leading cause of death among young people between 10–24 years old. Suicide mortality data Based on data from the World Health Organization, the worldwide suicide rate among 15-19-year-old adolescents is 6.04/100.000 people (Glenn, 2019). Therefore this should be a major public health concern all over the world. There are indications that suicide incidence among young people has been increasing in recent years. The U.S. Centers for Disease Control and Prevention reported a 30% increase in suicides in the United States from 2000 to 2016. Similar data are available from UK and Australia). The causes behind this increase are not known, but financial crisis in 2008, social media, cyberbullying, increasing academic pressures, and broader concerns about job prospects, financial security, and global politics are likely involved (Bould, 2019). Emergency departments (EDs) are a crucial setting for effective suicide prevention: in the majority of situations it is in the ED that adolescents at risk for suicide can be spotted (Da Cruz, 2011). Having the possibility of intercepting potential suicidal adolescents means that it is fundamental to identify risk factors: although no specific test is currently capable of predicting with precision suicide, a number of risk factors have been identified, such as male gender, previous suicide attempts, family history of suicide or suicide attempts, history of adoption, parental mental health problem, not heterosexual orientation, transgender identification, history of physical or sexual abuse, and non suicidal self-injurious behavior (NSSI). While adolescent suicide rates have been on the increase for several years, less documented is the rate of suicidal attempts (SA), which constitute a major risk factor for suicide.

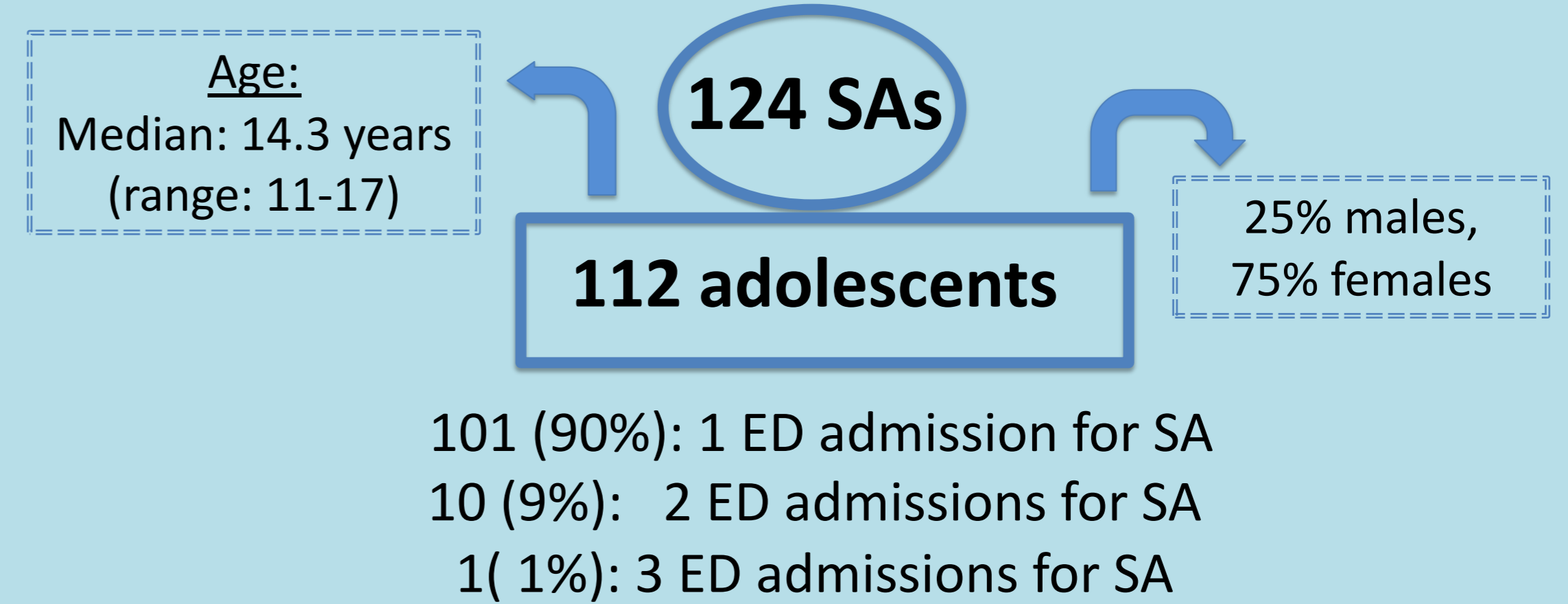
## Aims of the study

- To examine the demographics and clinical characteristics of SAs by youth (under 18 years of age) in the ED of a large Italian metropolitan university paediatric hospital during the last 10 years (2009-2018).
- To determine whether the number and rate of SAs has increased over the period of observation.

## Methods

The records of all the admissions to the ED of the “Regina Margherita” Children’s Hospital in Turin were searched for SAs, in the period between 2009 and 2018, and demographic, medical, and psychiatric characteristics were retrospectively extracted. Descriptive statistics were applied to the data.

## Results



## Results

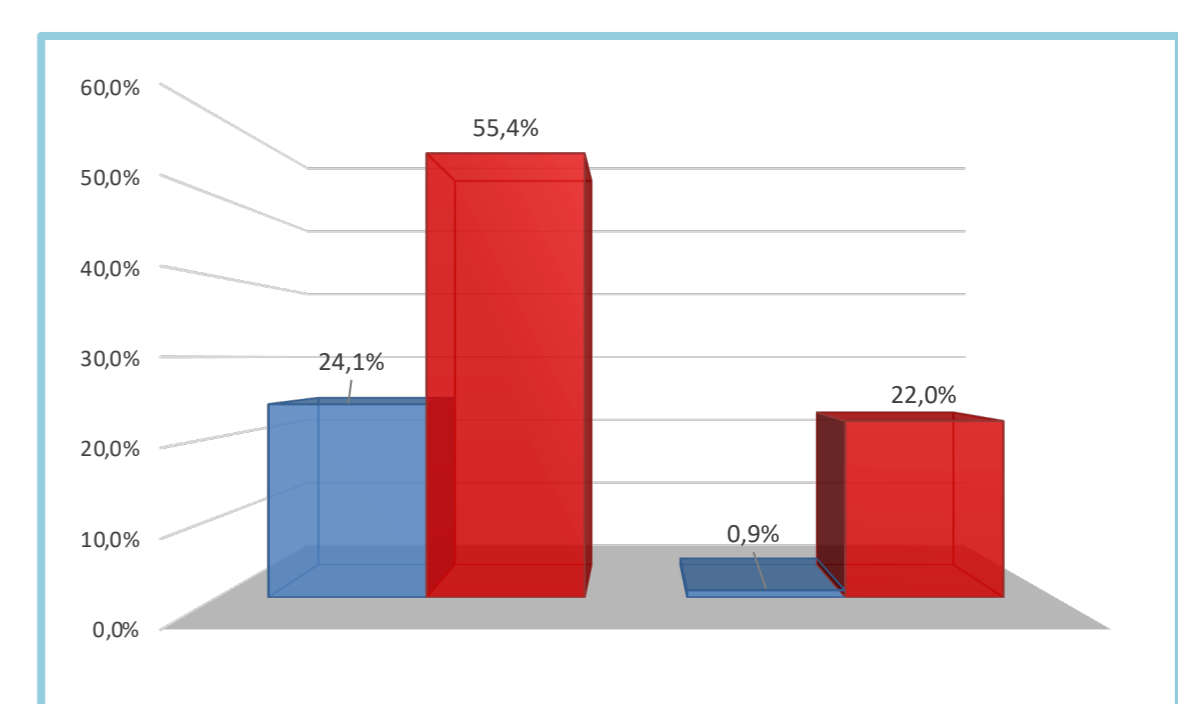
- Age:** the majority of SAs has been carried out by adolescents between 13 and 14 years old (56% of all SA).
- The male to female ratio was 1:3
- Of the 112 adolescents, 84 (75%) were Italian and 28 (25%) were not (most from Eastern Europe). Among Italians, the SA female to male ratio was 2:1, while in non-Italian attempters it was 24:1 ( $p < 0.05$ ).
- Upon ED admission, 47 (42%) has a previous **psychiatric diagnosis**: eating disorder (n=9), neurodevelopmental disorder (n=8), conduct disorder (n=3), anxiety disorder (n=2), depressive disorder (n=2), substance abuse (n=1), personality disorder (n=1), a somatization disorder (n=1), a psychosis and more than one diagnosis (n= 18).
- In 71 SAs (57%), there was current or previous NSSI: self-cutting (n=58), scratching (n=2), self-beating (n=3), other self injuries (n=8). NSSI was more frequent in females ( $p < 0,05$ ).
- Of the 124 SAs, in 45 (36%) there was recent (1-year) history of **somatic symptoms** (gastrointestinal symptoms, headache or dizziness, anxiety, eating habits alterations, asthenia, others).
- Monthly distribution of SAs:** two peaks, one in January (n=16, 13%) and another in October (n=15, 12%); regarding the moment of the **day** the majority of SA was performed during the afternoon (40%), then in the evening (33%).
- SA methods:** drug ingestion (58%), defenestration or attempts (34%), other harmful substance ingestion (21%), cutting (5%), hanging (3%), other (2%).
- The **incidence of SA** has increased from 14.6 SA per 100,000 ED admissions per year in 2009 to 65.2 in 2018. The increase was especially evident in females (28.6 in 2009 to 111.1 in 2018).
- The **M:F ratio** of SA changed significantly over time, being 16 M:26 F (or 1:1.6) in 2009-2013 and 26 M:66 F (or 1:2.5) in 2014-2018 ( $p < 0,05$ ).

## Results

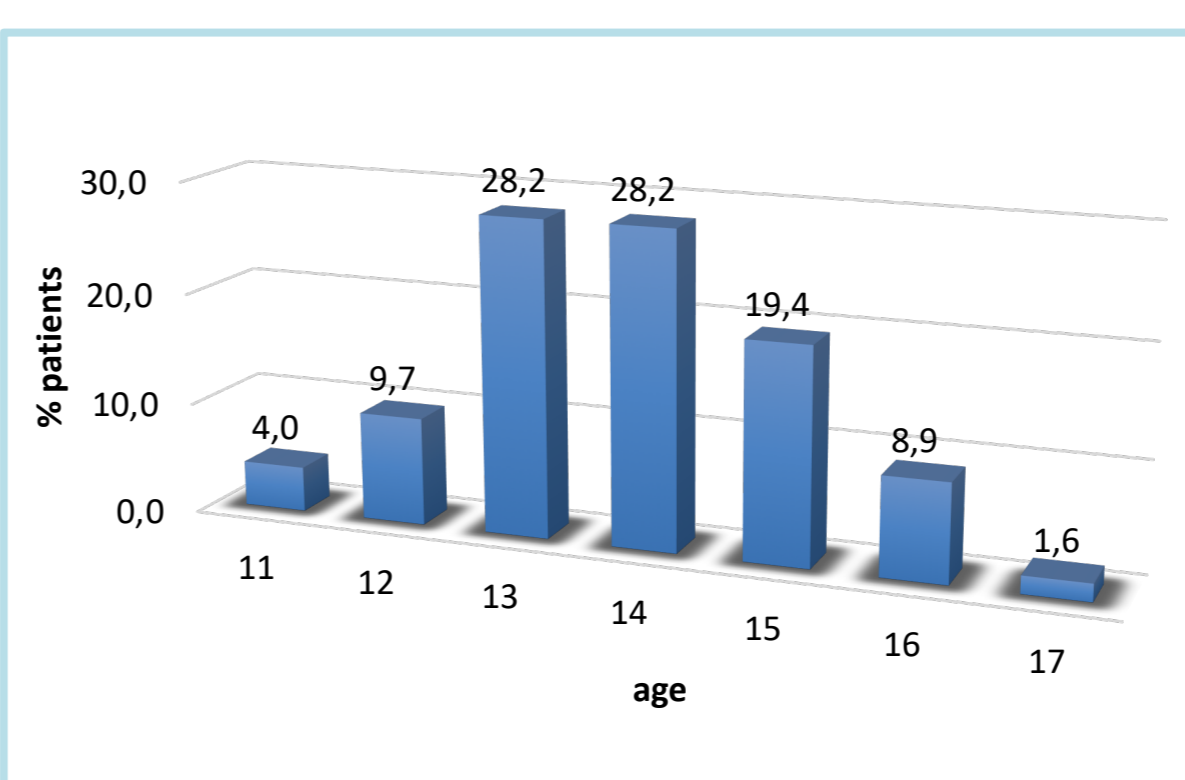
Total patients =112	Yes: n (%)	No: n (%)
Italian	84 (75%)	28 (25%)
Urban area	90 (80%)	22 (20%)
Parents living together	71 (63%)	39 (35%)
Systematic comorbidity	32 (29%)	80 (71%)
Psychiatric diagnosis at admission	47 (42%)	65 (58%)
Peer bullying	36 (32%)	76 (68%)
History of trauma	22 (20%)	90 (80%)
Social isolation	38 (34%)	74 (66%)
Family history positive for mental disease	68 (61%)	43 (39%)
Family history positive for suicidality	12 (11%)	99 (89%)
Family history positive for systematic disease	29 (26%)	82 (74%)

## Sex distribution per type of SA ( $p < 0.05$ )

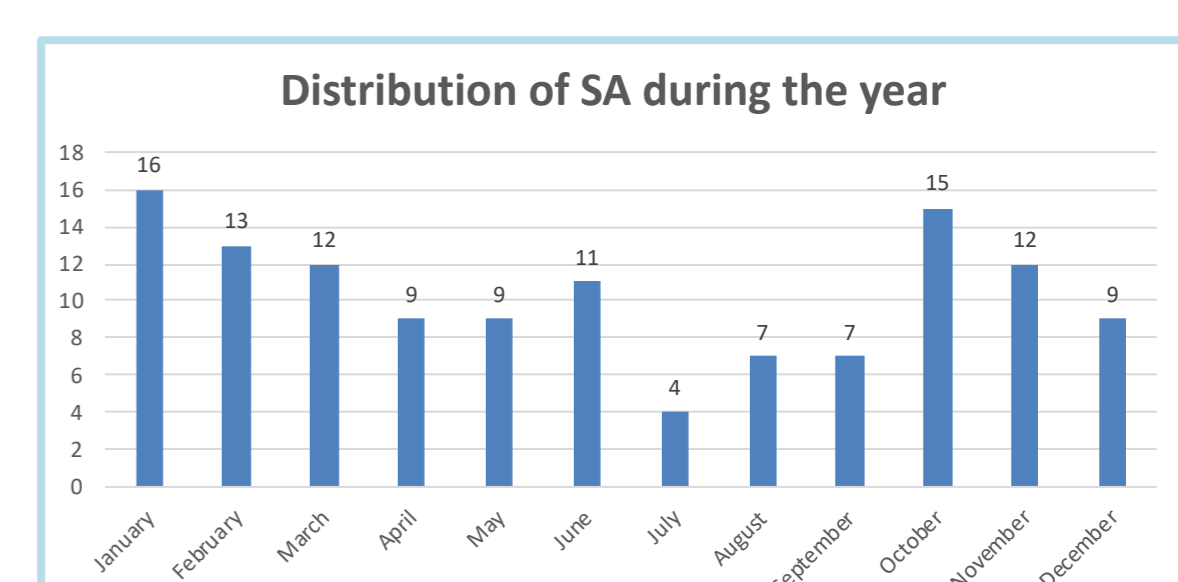
	Non-violent	Violent	Total
<b>Males</b>	14 (44%)	18 (56%)	32 (100%)
<b>Females</b>	66 (72%)	26 (28%)	92 (100%)
<b>Total</b>	80 (65%)	44 (35%)	124 (100%)



SAs per sex and nationality: red, female, blu males. First two columns: italians, last two, non italians.

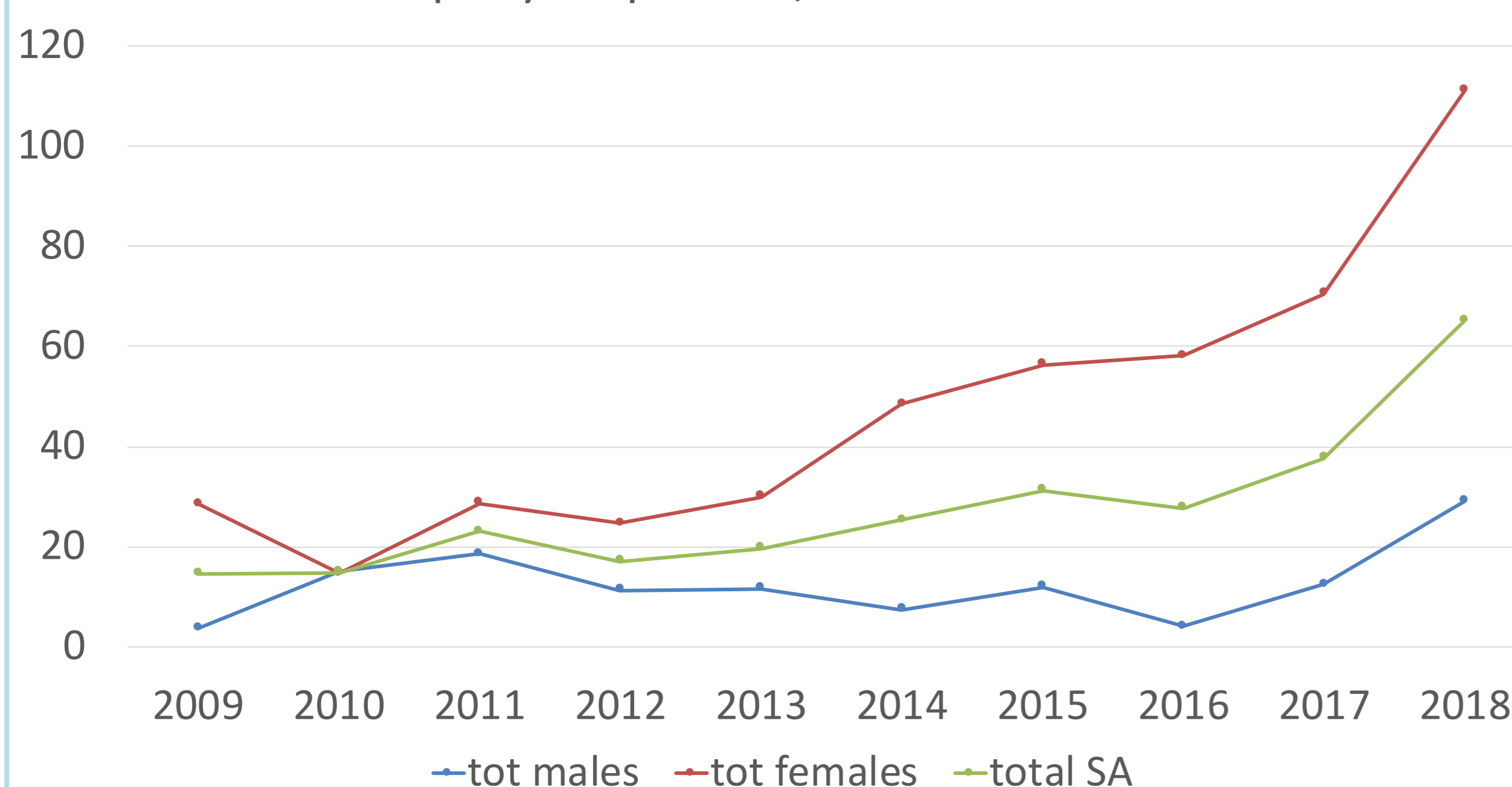


SAs distribution by age.



SAs by month of the year.

## SAs per year per 100,000 ED admissions



SAs per year per 100,000 ED admissions.

## References

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## Conclusions

Also in Italy, adolescent SA is a growing and alarming phenomenon, calling for further research on the early identification of risk factors and the development of effective approaches to prevention.