

Suicide in children and adolescents

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As part of suicide prevention, evaluation of suicide risk should be carried out on a regular basis in order to attempt early intervention. The EU-funded Suicidality: Treatment Occurring in Paediatrics Programme was developed to provide suicidality measures, and is being piloted in children and adolescents to alert clinicians about increased suicide risk and prompt early intervention.

Suicide in children and adolescents has long been a matter of great concern to modern society, particularly for clinicians who deal with [mental health problems](#) of children and adolescents. For instance, in 1910 the Vienna Psychoanalytic Society with [Sigmund Freud](#) among the attending experts held a conference, dealing with what was perceived to be a growing [epidemic](#) of youth suicide (Greydanus & Calles, 2007). At the beginning of the 21st century, suicide and suicide attempts by children and adolescents continue to be a major public health problem, and topical research and surveys have clearly highlighted suicide as one of the commonest causes of death among young people.

Epidemiology of suicide

Suicide is one of the major causes of death worldwide and suicide rates vary according to region, sex, age, time, ethnic origin, and, probably, practices of death registration. Most people who die by suicide have psychiatric disorders, notably mood, substance-related, anxiety, psychotic, and personality disorders, with high rates of comorbidity.

Suicidal cognitions and behaviours can occur both independently and

together. Risk of onset of suicidal ideation increases rapidly during adolescence and young adulthood, and then stabilizes in early midlife. The prevalence rates in adolescents cross-nationally are reported to be 19.8.0% for suicide ideation, and 3.1%.8% for suicide attempts (Nock et al, 2008a). The incidence of suicide attempts reaches a peak during the mid-adolescent years, and at that age mortality from suicide, which increases steadily through the teen years, is the third leading cause of death.

Suicide in childhood and early adolescence is rare. However, in adolescents and young adulthood suicide rates increase to mean worldwide annual rates of suicide among 5 year olds of 0.5 per 100,000 for females and 0.9 per 100,000 for males, and for 15 year olds 12.0 per 100,000 for females and 14.2 per 100,000 for males, respectively (Pelkonen & Marttunen, 2003). Males often outnumber females in worldwide youth suicide statistics, although this is variable between different countries.

Suicide rates in elderly people have fallen in many countries, whereas those in young people have risen (Hawton & van Heeringen, 2009).

Risk factors for suicide

Important contributors to self-harm and suicide include genetic vulnerability and psychiatric, psychological, familial, social and cultural factors. For instance, the relationship between psychiatric disorders and adolescent suicide is well established. Mood disorders, substance abuse and prior suicide attempts are strongly related with youth suicides (Pelkonen & Marttunen, 2003). The effects of media and congestion are also relevant, with the internet having an important contemporary role, as well as family history of suicidal behaviour, family adversity and upbringing, social alienation, exposure to suicidal behaviour by others and in the media, and availability of means (Hawton et al., 2012; Hawton

& van Heeringen, 2009; Pelkonen & Marttunen, 2003).

The progression from suicidal ideation to self-harm and then to suicide is by no means absolute. Self-harm may escalate and this may be a marker for subsequent suicide: [Suicide risk](#) among self-harm patients is hundreds of times higher than in the general population (Owens et al., 2002). The risk of suicide attempt is significantly increased in those with suicidal ideations and planning, and risk of completed suicide is increased in patients who abscond from medical care or take precautions against discovery. Providing continuity of care for high-risk youth is a challenge, since they are often noncompliant and commonly drop out or terminate their treatment prematurely (Pelkonen & Marttunen, 2003).

Reportedly less than half of young people who have committed suicide have received psychiatric care (Pelkonen & Marttunen, 2003).

Approaches to suicide prevention

Prevention of self-harm and suicide needs both universal measures aimed at young people in general and targeted initiatives focused on high-risk groups (Hawton et al., 2012). The main target of effective prevention of youth suicide is to reduce suicide risk factors. In particular, recognition and effective treatment of psychiatric disorders, e.g. depression, as well as restriction of access to means for suicide, are essential in preventing child and adolescent suicides (Pelkonen & Marttunen, 2003). Furthermore, available evidence suggests that various treatment modalities are useful in the treatment of suicidal youths, e.g. cognitive behavioural therapy and specialized emergency room interventions.

Efforts to prevent subsequent attempts at suicide have not generally been successful, and many children and adolescents are not receiving treatment for the mood and other psychiatric disorders that are risk

factors. Evaluation of suicide risk should be carried out regularly in order to attempt [early intervention](#) as part of suicide prevention programmes.

To address this, a consortium of child mental health specialists across Europe, led by Dr. Paramala Santosh, London, UK, worked as part of the EU FP7 funded Suicidality: Treatment Occurring in Paediatrics (STOP) project, and specifically developed the Suicidality: Treatment Occurring in Paediatrics (STOP) Suite of Suicidality Measures, measuring suicidality, medication side effects, and risk and protective factors. These patient-reported outcome measures (PROMS) are hosted on the so called HealthTracker, a web-based multimedia health monitoring system. The STOP project is being piloted in children and adolescents to identify whether the patient reported measures can pick up suicidal ideation and behaviour allowing for alert systems to be set up and to warn clinicians about increased suicidal risk, resulting in early intervention, especially when new medication is initiated.

As part of this project, a detailed review of psychosocial factors associated with suicidality in children and adolescents was conducted. Studies of psychological factors, life events, temperamental factors, medication-related factors, and associated medical problems were reviewed. According to the findings, the majority of youth who have completed suicide had significant psychiatric problems, including depressive disorders and substance abuse disorders. Stressful life events and medical conditions were often reported to precede a suicide and/or suicide attempt. Youth suicide was marked by a distinct male preponderance, and some temperamental factors may mediate suicide risk.

Another aspect of the web-based HealthTracker monitoring system hosting the STOP Suicidality measures is its use in pharmacovigilance to detect medication-associated suicidality when new drugs are introduced

into the market.

Conclusion

Suicide and suicide attempts by children and adolescents are today a major public health problem. During the mid-adolescent years, the incidence of suicide attempts reaches a peak and mortality from suicide is the third leading cause of death.

Major risk factors for suicidal behaviour include genetic vulnerability, mental disorders (e.g. mood disorders, substance abuse), family adversity, social alienation, family history of suicidal behaviour, exposure to suicidal behaviour by others and in the media, availability of means, and previous self-harm.

Since less than half of young people who have committed suicide have received psychiatric care, broad prevention strategies are paramount needs in healthcare and social services. In particular, clinicians need to know how to identify individuals at greatest risk for suicide.

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