Chapter 5
Reflections on Suicide in Children and Adolescents

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Abstract Suicide attempts are the most common reason for seeking psychiatric care in the mid-teens. In the West, females predominantly attempt suicide while males usually commit suicide. In India, deaths in women occurred between 15 and 29 years and youth suicide is especially common. There are many risk factors to suicide behaviour in the young. Access to means is one of the most preventable of such factors. Psychiatric illness is one of the major risk factors in the young. Those include depression, conduct disorder, dissociative disorders and borderline personality disorder, anorexia and bulimia nervosa, and schizophrenia. When there is more than one disorder, then risks are multiplied. Three personality constellations are also evident in youngsters at risk for suicide attempts. Those include narcissism, perfectionism and the inability to tolerate failure; impulsive and aggressive characteristics combined with oversensitivity to life stress and hopelessness are often related to underlying depression and mental illness. Other risk factors are psychological. Suicidal adolescents should undergo a comprehensive clinical evaluation. It is important to emphasize seriousness of the problem to the child and the family and to ensure evaluation, since lack of compliance with treatment is characteristic of suicidal adolescents who are brought to emergency room. The chapter reviews some of the assessment measures that exist. Suicide prevention in youth includes primary, secondary and tertiary prevention strategies. Primary and secondary prevention programmes are often used at schools. The goal of tertiary prevention is to reduce the rate of relapse in adolescents with known suicidal ideation and attempts. Finally, the chapter reviews some of the interventions used in suicide behaviour.

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5.1 Introduction

Suicide is a leading cause of death in young people. In the USA, it is the third leading cause of death after car accidents and homicide. In India, it is the second most common cause of death in both boys and girls. Moreover, suicide attempts are the most common reason for seeking psychiatric care in the mid-teens and although attempts rarely predict a later suicide at this age they are nearly always associated with an impairing disorder (WHO 2014).

5.2 Terminology

Non-fatal suicidal behaviours include a heterogeneous spectrum of behaviours such as suicidal ideation, suicidal threats, suicidal gestures, suicide attempts, serious suicide attempts and interrupted attempts. Another related form of behaviour is self-cutting, which consists of repetitive and stereotypical cutting, the objective of which is to relieve distress/anger, pain and loneliness rather than to die. This often co-occurs with suicidal behaviour and is often termed "non-suicidal self-injury" (NSSI). NSSI was proposed for inclusion in the DSM 5 as a separate entity but this was not accepted and the decision was to await further evidence before making a final conclusion about the entity's final status.

5.3 Epidemiology

Suicide in the young is most common in Eastern Europe particularly in the countries of the former Soviet Union. The twentieth century showed huge increases in male youth suicides in the West except for the periods of both World Wars (WHO 2014). The explanation for the decrease is the camaraderie of soldiers giving each other support and also the effects of prohibition in the US. Just before the turn of the century, a gradual decrease in suicide rates occurred in young males, perhaps due to the increased use of specific serotonin uptake inhibitors (SSRI) for the treatment of adolescent depression. When the use of SSRI was suddenly decreased owing to the introduction of the black box label after a scare that SSRI agents could actually induce suicide, peaks of suicide in adolescent males reappeared. Indeed Gibbons et al. (2007) showed that between 2003 and 2005 youth suicide in the Netherlands increased by 49 % and in the USA by 14 %, while SSRI prescriptions for adolescents declined by approximately 22 % in both the USA

and the Netherlands. Attempted suicide is less common in males than in females. The highest rate for females is in the age range of 15–19 years (Nock et al. 2008). Social class and suicide attempts are inversely related (Nock et al. 2008). In high income countries, suicide rates increase with increasing age but in India young women have the highest suicide rates of all ages and to a lesser extent this is also true of young males. Interestingly, higher educational status and marriage which are protective factors are actually risk factors in India (Patel et al. 2012). In India 40 % of suicide deaths in men and 56 % of suicide deaths in women occurred between 15 and 29 years and youth suicide is especially common in South India due to a combination of social problems and mental illness. The high suicide rates in South India might also be attributable to the social acceptance of suicide as a method to deal with difficulties as well as ready access to highly lethal pesticides (Patel et al. 2012).

Suicide attempts tend to cluster in the younger age groups especially in the mid- and late teens. They occur predominantly in females during the teenage years. In the West, the discrepancy between the facts that females predominantly attempt suicide while males usually commit suicide is known as the "Gender Paradox" (Nock et al. 2008).

5.4 Risk Factors

There are many and varied risk factors for youth suicide. "Access to means" is one of the most preventable of such factors. Thus, reducing the access to firearms has achieved consistently good results especially in Israel and in Switzerland where young soldiers had been encouraged to keep their rifles at home. When these policies were changed, suicide rates dropped significantly. The introduction of pesticide control significantly reduced the rates of suicide in young women in Sri Lanka. Social fragmentation also is a potent risk factor for the 15–44-year-old age group.

Psychiatric illness is a well-known risk factor at all ages. Some conditions are more specifically pertinent to the young. Apart from depression, these include conduct disorder, dissociative disorders and borderline personality disorder, anorexia and bulimia nervosa, and schizophrenia. When there is more than one disorder then risks are multiplied. In our experience, the following comorbid constellations are especially dangerous: schizophrenia, depression and substance abuse; substance abuse, conduct disorder and depression; affective disorder, eating disorder and anxiety disorders; affective disorder, personality disorder and dissociate disorder.

Schizophrenia in the young is paradoxically most dangerous in the better prognosis cases where insight is maintained. As the young person, especially male, realizes that he has an incurable mental illness which is destroying his identity, depression sets in. This can lead to self-medication often with alcohol or other psychoactive substances, which in turn makes for impulsive and faulty

decision-making and then subsequent suicide. There is now considerable evidence to show that aggression turned outward does not reduce aggression turned inward but in fact can potentiate inward aggression. Thus, aggressive young people are very prone to suicide and detention centres and juvenile prisons have accordingly high rates of self-harm. When the adolescent with conduct disorder is incarcerated and depressed and when he is using alcohol and drugs his situation becomes all the more dangerous for suicide (Galaif et al. 2007).

Eating disorders are associated with high rates of suicide. Since anorexia nervosa is a disorder of females, this is surprising given the "gender paradox". However, this disease has the highest standard mortality rate of all psychiatric conditions. Bulimia nervosa is also associated with all forms of suicidal behaviour both fatal and non-fatal. The term multi-impulsive bulimia was coined by Lacey (1993) to describe the combination of impulsive suicidal, sexual and eating behaviour seen in these young women.

Borderline personality disorder is also prominently a condition found in young adolescent women. The hallmark of this disorder is non-fatal suicidal behaviour, however completed suicide is not rare in these patients. These girls are often prone to dissociative states, commonly related to childhood sexual trauma. These dissociative states are often potent proximal risk factors for suicide in young women (Stanley and Jones 2009).

5.5 Personality Constellations

Suicidal behaviour in adolescence is very heterogeneous and can occur within the context of a variety of personality constellations. Three such sets are narcissism, perfectionism and the inability to tolerate failure; impulsive and aggressive characteristics combined with over sensitivity to life stress and hopelessness are often related to underlying depression and mental illness.

The narcissistic and perfectionist constellation was very evident in a group of soldiers who committed suicide and who were investigated as part of a psychological autopsy study (Apter et al. 1993, 2008). These soldiers showed strong narcissistic and perfectionist patterns, schizoid traits in their personality, a strong need to prove their worth, high self-expectations and hopes and were termed by those who knew them as being private and isolated people. The following is a **fictitious conglomerate** picture of a subset of cases—it does **not** refer to any particular individual.

Daniel was a 20-year-old officer when he killed himself. His family was achievement oriented and had high moral standards Their ideals stressed controlling one's emotions and living up to high standards. Daniel was a natural leader and popular with his teachers and peers. In the army he excelled and was selected as an instructor for new recruits. His superiors commended him for his ability to perform under stress. He became totally involved in his new duties. He vowed that his platoon would win the prize for the best performance but although they

did rather well, their overall performance rating was only average. Following the course graduation ceremony Daniel went to his room and shot himself.

Levi et al. (2008) have formulated a model to explain these types of suicide as follows: severe mental pain along with communication difficulty and the inability to ask for help lead to a high risk for suicide. As men in general have more difficulty in asking for help, this model might even explain why men are at higher risk for suicide than women.

The impulsive aggressive personality constellation is seen frequently in adolescents, in emergency rooms and adolescent inpatient units. The dynamics behind this type of suicidal behaviour can be described in terms of Menninger's famous triad: the wish to die, the wish to kill and the wish to be killed (Freud's "death instinct"). In these cases, the latter two wishes predominate (Menninger 1933).

The following is a **fictitious conglomerate** picture of a subset of cases—it does **not** refer to any particular individual. *Deborah had always been impulsive and oppositional from an early age. At about the age of 11 she developed anorexia nervosa probably because of her being an accomplished dancer in a ballet troop. With the onset of adolescence, she developed very severe bulimia. Her first admission to a psychiatric unit was occasioned by a suicide note, which she wrote to her teacher at school. In the unit, she was "an impossible patient". By the time, she was 22 she had made over 100 suicide attempts. She received all kinds of psychosocial and biological therapies but of no avail, although with age (now 25) there is some tempering of her emotional instability.*

These impulsive aggressive cases appear to be related to the concept of the "Serotonin-related anxiety/aggression stressor precipitated depression" (Apter et al. 1990). According to this concept, certain individuals faced with relatively minor life stressors react with anger and anxiety and develop a secondary depression often accompanied by suicidal behaviour. Interestingly, these kinds of suicidal behaviour appear to be under specific genetic control where as in older suicides the genetic of suicide are more related to the underlying psychiatric illness.

The final constellation is that of the demoralization—hopelessness constellation. In these cases the adolescent is usually suffering from an underlying mental illness more often depression. An example is a classic case from the literature, the case of Ellen West who was treated by the famous Swiss psychiatrist, Leon Binswanger.

She was the daughter of wealthy Jewish parents who had great control over her. Her father interfered twice when she became engaged and when she finally married it was to a cousin. From age 19 she developed the fear of becoming fat and by 21 had developed anorexia nervosa. She was hospitalized but this only increased her suicidal thoughts. She was discharged from the sanatorium at the request of her family. On the third day after returning home, she appeared to be a changed person. She ate and enjoyed a walk with her husband. That evening, she took a lethal dose of poison. In her diary published posthumously she described the tyranny of her thoughts about weight and food which could escape only by killing herself.

5.6 Psychological Risk Factors

There are of course a myriad of psychological risk factors for adolescent suicidal behaviour and there is only space here to highlight a few of special interests which may have a value for understanding adolescent suicidal behaviour.

Dysfunctional Attitudes are the corner stones of the learning theory approach to depression and suicide and form the central fulcrum for the cognitive behaviour approaches to depression and suicide developed by Brown et al. (2005) and adapted for adolescents by David Brent. They are the results of false beliefs that can be attacked by logical reasoning and Socratic argumentation.

Rumination/Distraction Rumination is the compulsively focused attention on the symptoms of one's distress, and on its possible causes and consequences, as opposed to its solutions. It is similar to worry except rumination focuses on bad feelings and experiences from the past, whereas worry is concerned with potential bad events in the future. Rumination has been widely studied as a cognitive vulnerability factor to depression; however its measures have not been unified in the Response Styles Theory proposed by Nolen-Hoeksema (2000). Distraction is the healthy alternative to rumination, where focus is directed to positive stimuli instead of distress. Rumination is believed to predict the duration of depressive symptoms.

In other words, ruminating about problems was presumed to be a form of memory rehearsal which was believed to actually lengthen the experience of depression. Many of the modern mindfulness therapeutic strategies for suicidal behaviour in adolescence are based on the notion that mindfulness combats rumination.

Autobiographical Memory There has been a suggestion that in the presence of early childhood adversity repression occurs. This leads to the production of overgeneralized autobiographical memories. The lack of specific autobiographical memories is associated with paucity of interpersonal problem-solving strategies which are in turn associated with the use of suicidal behaviours to solve such problems. This too can often be counteracted by mindfulness techniques (Arie et al. 2008).

Appraisal/Reappraisal (Carthy et al. 2010) **Cognitive reappraisal** is an emotion regulation strategy that involves changing the trajectory of an emotional response by reinterpreting the meaning of the emotional stimulus. For example, a person may fail a series of tests and think negatively about his or her performance upon first receiving the results. The person revisits his or her emotional response to the situation and later views the results as a way to challenge and better him or herself. This process involves two parts: (a) recognition of one's negative response and (b) reinterpretation of the situation to either reduce the severity of the negative response or exchange the negative attitude for a more positive attitude. This strategy is one of the three broad categories of coping which include appraisal-focused behaviour, problem-focused behaviour and emotion-focused behaviour. It differs from the other two methods of coping because it primarily addresses an

individual's perception of a situation, rather than directly altering environmental stressors or emotional responses to those stressors.

Emotional Regulation Generally speaking, emotional dysregulation has been defined as difficulties in controlling the influence of emotional arousal on the organization and quality of thoughts, actions and interactions. Individuals who are emotionally dysregulated exhibit patterns of responding in which there is a mismatch between their goals, responses and/or modes of expression, and the demands of the **social environment** (Linehan et al. 1991). For example, there is a significant association between emotion dysregulation and symptoms of depression, anxiety, eating pathology and suicidal behaviour in adolescents. Dialectic behaviour therapy (DBT) probably the most effective form of therapy for suicidal adolescents is heavily focused on this psychological process.

5.7 Assessment

Suicidal adolescents should undergo a comprehensive clinical evaluation. It is important to emphasize seriousness of the problem to the child and the family and to ensure evaluation, since lack of compliance with treatment is characteristic of suicidal adolescents who are brought to emergency rooms.

Clinicians' ability to undertake accurate assessment of suicidality among adolescents has been compromised by a lack of well-defined terminology and understanding as to what constitutes suicidal behaviour (Posner et al. 2007). One important publication to deal with this problem is a study by Posner et al. (2007) describing the Columbia Classification Algorithm for Suicide Assessment (C-CASA), which is a standardized suicidal rating system providing data for the pediatric suicidal risk analysis of antidepressants conducted by the FDA.

Following the development of the C-CASA, a low-burden measure of the spectrum of suicidal ideation and behaviour, the Columbia-Suicide Severity Rating Scale (C-SSRS), was developed in the NIMH Treatment of Adolescent Suicide Attempters Study (TASA) to assess severity and track suicidal events through treatment. This clinical interview focuses on both ideation and behaviour. It can be administered during evaluation or risk assessment to identify the level and type of suicidality present. It can also be used during treatment to monitor clinical deterioration or improvement (Posner et al. 2007).

In young people, in whom assessment takes time, emergency room personnel tend to take a rapid history of present circumstances and briefly assess for depression, and the mistaken diagnosis of adjustment disorder is often made. In adolescents who are identified as being school dropouts, truants or unemployed, it is important to take a careful history of impulsive behaviour and conduct problems as well as history of drug and alcohol use. In adolescents, questions of identity and sexual orientation (Garofalo et al. 1999) must be sought in all patients (Eskin 2012).

5.8 Suicide Prevention in Youth

Suicide prevention in youth includes primary, secondary and tertiary prevention strategies. Current efforts to establish better empirical evidence for suicide prevention include the National Registry of Evidence-Based Programmes and Practices (NREPP), a federal registry of effective prevention programmes in the USA (Rodgers et al. 2007). Examples of successful primary prevention strategies are involvement of the media in responsible reporting of suicides (Pirkis et al. 2009; Niederkrotenthaler and Sonneck 2007) and limiting the access to commonly used and potentially lethal methods of suicide, such as guns, pesticides, pills, etc. (Biddle et al. 2008; Gunnell et al. 2007).

Secondary prevention strategies address individuals at risk, such as those with mental disorder, and aim to provide early treatment (Anderson and Jenkins 2006). An example of secondary prevention in youth is gatekeeper training in schools, community or health care settings. The idea is to train school staff and health care professionals to recognize youths at risk and refer them to appropriate treatment facilities/services.

Another secondary prevention strategy is screening of the general adolescent population for individuals with suicidal ideation and previous attempts, as well as depression and other suicide risk factors (Gould et al. 2005). The recent studies on the relation between bullying and suicidality suggest that early school years suicide prevention and active screening strategies should also focus on those who are frequently bullied and victimized.

Primary and secondary prevention programmes are often used at schools. They have become a significant feature of most national suicide prevention strategies (Gould et al. 2009). In school, children and adolescents can easily be reached, although dropouts comprise a definite risk group which is often missed. Some of those programmes are aimed at case finding using suicide awareness educational curricula, gatekeeper training or screening, while others aim at risk reduction through skills training or a combination of skills training and suicide awareness educational curricula. Thus far, signs of suicide (SOS) is one of the best empirically supported school-based prevention programme and is listed as such in the National Registry of Evidence-based Programmes and Practices (NREPP). SOS is a two-day programme for adolescents ages 13–18 years, combining a curriculum component (a video and teacher-led class discussion) aimed at raising awareness, with a screening component to identify students with depression and at risk of suicide. An evaluation in more than 6000 students in five high schools showed a 40 % short-term decrease in self-reported suicide attempts and modest changes in knowledge and attitudes. Yet, no changes were found in suicide ideation and help-seeking behaviours (Aseltine and DeMartino 2004). The most recent replication study of SOS (Aseltine et al. 2007) involved over 4000 adolescents from diverse ethnic/racial background in nine different high schools across three states in the USA. Results confirmed earlier findings and showed significantly lower rates of suicide attempts, greater knowledge about, and more adaptive attitudes towards,

depression, independent of race/ethnicity, grade and gender. However, no effect was found for help-seeking behaviours. Both studies lack follow-up data beyond 3 months and baseline pretest data.

Another school-based strategy is skills training, with a specific focus on improving problem-solving and coping skills, thereby aiming to “immunize” youths against suicidal behaviour. These programmes also intend to reduce suicide risk factors, such as depression, hopelessness and drug abuse. Orbach and Bar-Joseph (1993) assessed a group-based prevention programme in Israeli schools and found that a gradual, controlled exploration of inner experiences and life difficulties related to suicidal behaviour, while teaching coping strategies, can immunize adolescents against self-destructive feelings.

The Awareness programme of primary intervention targets adolescents between 14 and 26 years old and increases pupils’ awareness of mental health, healthy/unhealthy behaviour (Wasserman et al. 2012).

Question, persuade and refer (QPR) (http://www.hopes-wi.org/gpr.htm) is a gate keeping programme, designed to educate teachers and other school-based adults in identifying at-risk adolescents and referring them to mental health facilities (Wasserman et al. 2012).

Research on gatekeeper training has shown significant improvement in knowledge, attitudes, intervention skills and willingness to cope with a crisis, as well as referral practices among school personnel (King and Smith 2000; Wyman et al. 2008). Three gatekeeper programmes in particular have been widely used: Living Works’ applied suicide intervention skills training (ASIST) (www.livingworks.net) and question persuade and refer (QPR) (Wasserman et al. 2012) (www.qprinstitue.com).

The goal of tertiary prevention is to reduce the rate of relapse in adolescents with known suicidal ideation and attempts. This requires multidisciplinary services with easy access, continuity of care and rehabilitation, as well as inclusion of the family in the process (Wasserman and Durkee 2009). The aim of post-intervention programmes is to assist survivors in their grief process, in addition to identifying and referring those who may be at risk of developing morbidity and mortality related to pathological bereavement. However, although the value of suicide post intervention is increasingly recognized, there is insufficient research on the efficacy of programmes targeting youths in general and school-based programmes in particular.

5.9 Psychosocial Therapies

Adolescent attempters often fail to attend and complete treatment. As a matter of fact, it has been suggested that about half of the adolescent suicide attempters do not receive adequate psychotherapy after their attempt. Parental denial and psychopathology may interfere with treatment planning. This poses a major problem in the management of adolescent suicide attempters (Rotheram-Borus et al. 1996).

The same problem occurs in family therapy, because of the high rejection rate by parents, as reflected by high levels of non-attendance at treatment sessions.

Little research is available on treatment targeting suicidal adolescents and, until recently, suicidal adolescents were excluded from clinical trials. Currently, there are only two psychotherapies that have been found to be effective in reducing suicide attempts among adults: CBT (Brown et al. 2005) and dialectical behaviour therapy (DBT) (Linehan et al. 1991). These have been adapted to adolescents and appear to be promising, as described below.

DBT has been adapted for adolescents with borderline features (DBT-A). DBT-A is based on a dialectical perspective and a mindfulness orientation (based on Eastern Zen Buddhist principles). The dialectic of the treatment is the emphasis on balancing change and acceptance. Identity problems, impulsivity, emotional instability and interpersonal problems are targeted by teaching mindfulness, distress tolerance, emotion regulation and interpersonal effectiveness. This is a 16-week treatment that includes individual psychotherapy, multifamily skills training group (a didactic framework in which the patients and parent/family members are taught four sets of skills and practice with one another) and the therapist's consultation team. Parents are an integral part of DBT-A and participate in the skills training group and in the individual sessions, as needed, to address familial issues. Behaviour change in DBT-A is facilitated by a combination of direct instruction about the skills to be learned, modelling of the behaviour, repeated practice by the patient and positive reinforcements offered by the therapist (Brunstein Klomek and Stanley 2007).

Mehlum et al. (2014) examined whether a shortened form of dialectical behaviour therapy, dialectical behaviour therapy for adolescents (DBT-A) is more effective than enhanced usual care to reduce self-harm in adolescents. They studied 77 out-patients adolescents with recent and repetitive self-harm who were randomly allocated to either DBT-A or enhanced usual care. Treatment retention was generally good in both treatment conditions, and the use of emergency services was low. DBT-A was superior to EUC in reducing self-harm, suicidal ideation, and depressive symptoms. Effect sizes were large for treatment outcomes in patients who received DBT-A, whereas effect sizes were small for outcomes in patients receiving enhanced usual care.

Another therapy for suicidal behaviour is the TASA therapy. It combines cognitive behavioural techniques based on Beck's model (Brown et al. 2005), skills enhancement based on DBT and family therapy. The family is encouraged to support; to improve the family's problem-solving skills, and modify the family's communication patterns (Brunstein Klomek and Stanley 2007). Results show positive outcome for adolescents vigorously treated with a combination of medication and psychotherapy. Adolescents with depression who have recently attempted suicide showed rates of improvement and remission of depression that seem comparable to those observed in no suicidal adolescents with depression (Vitiello et al. 2009).

Other psychotherapies include multisystemic therapy (MST) (Huey et al. 2004), psychoeducation and cognitive behavioural family therapy (Rotheram-Borus et al. 1996), home-based family therapy (Harrington et al. 1998), developmental group

therapy (Wood et al. 1996) and Youth-Nominated Support Team (YST-1) (King et al. 2006). A recent study in Australia failed to replicate the benefits of the developmental group therapy (Hazell et al. 2009). As far as we are aware, none of the other studies has been replicated, so these therapies remain unproven.

5.10 Hospitalization

Some suicide attempters need hospitalization. Those include youngsters who express a persistent wish to die or who are psychiatrically ill (Brent 1997). In order for hospitalization to benefit the patient, a relationship with the suicidal adolescent and his family should be established in the emergency room and the importance of treatment should be stressed. An appointment and a follow-up plan should be scheduled before discharge. A "no-suicide contract", in which the child or adolescent agrees not to engage in self-harming behaviour and to tell an adult if he or she is having suicidal urges, may be useful but should not be relied on. The contract should never decrease a clinician's vigilance or curtail monitoring of the child or adolescent. Clinicians should also be aware of suicide contagion in the case of exposure to suicidal behaviour on a ward.

Suicidal adolescents should only be discharged home if adequate supervision and support will be available over the next few days and if a responsible adult has agreed to dispose of potentially lethal medications and firearms. Warning the child or adolescent and family about the dangerous disinhibiting effects of alcohol and other drugs is important. The first days after an attempt pose danger for repeated ideation and attempt, thus the clinician treating the suicidal child or adolescent should be available to the patient and family.

Once a therapeutic alliance is established and the child or adolescent has attended the first treatment sessions, the child or adolescent is more likely to continue treatment. Length of the treatment is individual, but 3–6 months should be a rule, with successively fewer contacts up to 1 or 2 years, sometimes longer (Harrington et al. 1998).

5.10.1 Psychopharmacology

Any medication prescribed to the suicidal child or adolescent must be carefully monitored by a third party and any change of behaviour or side effects should be reported immediately.

Only one medication, lithium, has been shown to have a potential anti-suicide effect (Cipriani et al. 2005). Apart from one report describing the preventive effects of lithium on suicidal thoughts and behaviours in adolescents (Masters 2008), there have been no studies on the effects of this treatment on adolescent suicidal behaviour (Bursztein and Apter 2009). Tricyclic antidepressants should not be prescribed

for the suicidal child or adolescent as a first line of treatment. They are potentially lethal, because of the small difference between therapeutic and toxic levels of the drug, and they have not been proved effective in children or adolescents.

Selective serotonin reuptake inhibitors (SSRIs) reduce suicidal ideation and suicide attempts in non-depressed adults with cluster-B (borderline, antisocial, histrionic, narcissistic) personality disorders. They are safe in children and adolescents, have low lethality and are effective in treating depression in non-suicidal adolescents. Further research is needed to determine whether SSRIs influence suicidal behaviour or ideation in children and adolescents. Finally, it should be noted that the recent decrease in youth suicide rates may parallel the increased use of SSRI medications in this age group.

Other medications that may increase disinhibition or impulsivity, such as the benzodiazepines and phenobarbital, should be prescribed with caution in children and adolescent.

5.11 Conclusions

Adolescent suicide remains a cause of death in young people and a major health problem. Non-fatal suicidal behaviour causes also a great deal of morbidity and suffering. In order to improve the prediction of suicidality, to enhance assessment process, and find more effective treatment and more targeted prevention programmes, the identification of more specific risk factors is prerequisite. The presence of mental illness, alcohol and drug abuse, conduct disorder, poor communication within the family, personality disorder and lack of compliance with therapy make cases of suicide attempts difficult to treat.

References

Anderson, M., & Jenkins, R. (2006). The national suicide prevention strategy for England: The reality of a national strategy for the nursing profession. *Journal of Psychiatric and Mental Health Nursing, 13*(6), 641–650.

Apter, A., Bleich, A., King, R. A., Kron, S., Fluch, A., Kotler, M., et al. (1993). Death without warning? A clinical postmortem study of suicide in 43 Israeli adolescent males. *Archives of General Psychiatry, 2*, 138–142.

Apter, A., King, R. A., Bleich, A., Fluck, A., Kotler, M., & Kron, S. (2008). Fatal and non-fatal suicidal behaviour in Israeli adolescent males. *Archives of Suicide Research, 12*, 20–29.

Apter, A., van Praag, H. M., Plutchik, R., et al. (1990). Interrelationship among anxiety, aggression, impulsivity, and mood: A serotonergicaly linked cluster? *Psychiatry Research, 32*(2), 191–199.

Arie, M., Apter, A., Orbach, I., Yefet, Y., & Zalzman, G. (2008). Autobiographical memory, interpersonal problem solving, and suicidal behaviour in adolescent inpatients. *Comprehensive Psychiatry, 49*, 22–29.

Aseltine, R. H., & DeMartino, R. (2004). An outcome evaluation of the SOS suicide prevention program. *American Journal of Public Health, 94*(3), 446–451.

Aseltine, R., James, A., Schilling, E., & Glanovsky, J. (2007). Evaluating the SOS suicide prevention program: A replication and extension. *BMC Public Health, 7*, 161.

Biddle, L., Donovan, J., Hawton, K., Kapur, N., & Gunnell, D. (2008). Suicide and the internet. *BMJ, 336*(7648), 800–802.

Brent, D. A. (1997). The aftercare of adolescents with deliberate self-harm. *Journal of Child Psychology and Psychiatry, 38*, 277–286.

Brown, G. K., Have, T. T., Henriques, G. R., Xie, S. X., Hollander, J. E., & Beck, A. T. (2005). Cognitive therapy for the prevention of suicide attempts: A randomized controlled Trial. *JAMA, 294*(5), 563–570.

Brunstein Klomek, A., & Stanley, B. (2007). Psychosocial treatment of depression and suicidality in adolescents. *CNS Spectrums, 12*(2), 135–144.

Bursztein, C., & Apter, A. (2009). Adolescent suicide. *Current Opinion Psychiatry, 22*(1), 1–6.

Carthy, T., Horesh, N., Apter, A., Edge, M. D., & Gross, J. (2010). Emotional reactivity and cognitive regulation in anxious children. *Behaviour Research and Therapy, 48*, 384–393.

Cipriani, A., Pretty, H., Hawton, K., & Geddes, J. R. (2005). Lithium in the prevention of suicidal behaviour and all-cause mortality in patients with mood disorders: A systematic review of randomized trials. *American Journal of Psychiatry, 162*, 1805–1819.

Eskin, M. (2012). Problem solving therapy in the clinical practice. *Newnes*.

Galaif, E., Sussman, S., Newcomb, M., & Locke, T. (2007). Suicidality, depression, and alcohol use among adolescents: A review of empirical findings. *International Journal of Adolescent Medicine and Health, 19*(1), 27–36.

Garofalo, R., Wol, R. C., Wissow, L. S., et al. (1999). Sexual orientation and risk of suicide attempts among a representative sample of youth. *Archives of Pediatrics and Adolescent Medicine, 153*, 487–493.

Gibbons, R. D., Brown, C. H., Hur, K., et al. (2007). Early evidence on the effects of regulators' suicidality warning on SSRI prescriptions and suicide in children and adolescents. *American Journal of Psychiatry, 164*, 1356–1363.

Gould, M., Brunstein Klomek, A., & Batejan, K. (2009). The role of schools, colleges and universities in suicide prevention. In D. Wasserman & C. Wasserman (Eds.), *The Oxford textbook of suicidology and suicide prevention—A global perspective* (pp. 551–560). New York: Oxford University Press.

Gould, M. S., Marrocco, F. A., Kleinman, M., Thomas, J. G., Mostkoff, K., Cote, J., et al. (2005). Evaluating iatrogenic risk of youth suicide screening programs: A randomized controlled trial. *JAMA, 293*(13), 1635–1643.

Gunnell, D., Fernando, R., Hewagama, M., Priyangika, W. D., Konradsen, F., & Eddleston, M. (2007). The impact of pesticide regulations on suicide in Sri Lanka. *International Journal of Epidemiology, 36*(6), 1235–1242.

Harrington, R., Kerfoot, M., Dye, E., et al. (1998). Randomized trial of a home-based family intervention for children who have deliberately poisoned themselves. *Journal of the American Academy of Child and Adolescent Psychiatry, 8*(37), 512–518.

Hazell, P. L., Martin, G., McGill, K., Kay, T., Wood, A., Trainor, G., et al. (2009). Group therapy for repeated deliberate self-harm in adolescents: Failure of replication of a randomized trial. *Journal of the American Academy of Child and Adolescent Psychiatry, 48*(6), 662–670.

Huey, S. J., Henggeler, S. W., Rowland, M. D., Halliday-Boykins, C. A., Cunningham, P. B., Pickrel, S. G., et al. (2004). Multisystemic therapy effects on attempted suicide by youths presenting psychiatric emergencies. *Journal of the American Academy of Child and Adolescent Psychiatry, 43*, 183–190.

King, C. A., Kramer, A., Preuss, L., Kerr, D. C., Weisse, L., & Venkataraman, S. (2006). Youth-nominated support team for suicidal adolescents (Version 1): A randomized controlled trial. *Journal of Consulting and Clinical Psychology, 74*(1), 199–206.

King, K. A., & Smith, J. (2000). Project SOAR: A training program to increase school counselors' knowledge and confidence regarding suicide prevention and intervention. *Journal of School Health, 70*(10), 402–407.

Lacey, J. H. (1993). Self-damaging and addictive behaviour in bulimia nervosa. A catchment area study. *British Journal of Psychiatry, 162*, 190–194.
Levi, Y., Horesh, N., Fischel, T., et al. (2008). Mental pain and its communication in medically serious suicide attempts: An “impossible situation”. *Journal of Affective Disorders, 111*(2), 244–250.
Linehan, M. M., Armstrong, H. E., Suarez, A., Allmon, D., & Heard, H. L. (1991). Cognitive-behavioural treatment of chronically parasuicidal borderline patients. *Archives of General Psychiatry, 48*(12), 1060–1064.
Masters, K. J. (2008). Anti-suicidal and self-harm properties of lithium carbonate. *CNS Spectrums, 13*(2), 109–110.
Mehlum, L., Tørmoen, A. J., Ramberg, M., Haga, E., Diep, L. M., Laberg, S., et al. (2014, July). Dialectical behaviour therapy for adolescents with repeated suicidal and self-harming behaviour—A randomized trial. *Journal of the American Academy of Child & Adolescent Psychiatry, 53*(10), 1082–1091.
Menninger, K. A. (1933). Psychoanalytic aspects of suicide. *International Journal of Psychoanalysis, 14*, 376–390.
Niederkrotenthaler, T., & Sonneck, G. (2007). Assessing the impact of media guidelines for reporting on suicides in Austria: Interrupted time series analysis. *Australian and New Zealand Journal of Psychiatry, 41*(5), 419–428.
Nock, M. K., Borges, G., Bromet, E., Cha, C. B., Kessler, R. C., & Lee, S. (2008). Suicide and suicide behaviour. *Epidemiological Review, 30*, 133–154.
Nolen-Hoeksema, S. (2000). The role of rumination in depressive disorders and mixed anxiety/depressive symptoms. *Journal of Abnormal Psychology, 109*(3), 504–511.
Orbach, I., & Bar-Joseph, H. (1993). The impact of a suicide prevention program for adolescents on suicidal tendencies, hopelessness, ego identity, and coping. *Suicide and Life Threatening Behavior, 23*(2), 120–129.
Patel, V., Ramasundarahettige, C., Vijayakumar, L., Thakur, J. S., Gajalakshmi, V., Gururaj, G., et al. (2012). Suicide mortality in India: A nationally representative survey. *Lancet, 379*(9834), 2343–2351.
Pirkis, J., Dare, A., Blood, R. W., Rankin, B., Williamson, M., Burgess, P., et al. (2009). Changes in media reporting of suicide in Australia between 2000/01 and 2006/07. *Crisis, 30*(1), 25–33.
Posner, K., Oquendo, M. A., Gould, M., Stanley, B., & Davies, M. (2007). Columbia Classification Algorithm of Suicide Assessment (C-CASA): Classification of suicidal events in the FDA’s pediatric suicidal risk analysis of antidepressants. *American Journal of Psychiatry, 164*(7), 1035–1043.
Rodgers, P. L., Sudak, H. S., Silverman, M. M., & Litts, D. A. (2007). Evidence-based practices project for suicide prevention. *Suicide and Life Threatening Behaviour, 37*(2), 154–164.
Rotheram-Borus, M. J., Piacentini, J., Van Rossem, R., et al. (1996). Enhancing treatment adherence with a specialized emergency room program for adolescent suicide attempters. *Journal of the American Academy of Child and Adolescent Psychiatry, 35*, 654–663.
Stanley, B., & Jones, B. (2009). Risk for suicidal behaviour in personality disorders. In D. Wasserman & C. Wasserman (Eds.) *Oxford textbook of suicide prevention a global perspective* (pp. 287–292). Oxford: Oxford University Press.
Vitiello, B., Brent, D., Greenhill, L. L., Emslie, G., Wells, K., Walkup, J. T., et al. (2009, August 21). Depressive symptoms and clinical status during the treatment of adolescent suicide attempters study. *Journal of the American Academy of Child & Adolescent Psychiatry, 48*, 997–1004.
Wasserman, D., & Durkee, T. (2009). Strategies in suicide prevention. In D. Wasserman & C. Wasserman (Eds.), *The Oxford textbook of suicidology and suicide prevention—A global perspective* (pp. 381–386). New York: Oxford University Press.

Wasserman, C., Hoven, C. W., Wasserman, D., Carli, V., Sarchiapone, M., Al-Halabí, S., et al. (2012). Suicide prevention for youth—A mental health awareness program: Lessons learned from the saving and empowering young Lives in Europe (SEYLE) intervention study. *BMC Public Health*, *12*, 77.

Wood, A., Harrington, R., & Moore, A. (1996). Controlled trial of a brief cognitive-behavioural intervention in adolescent patients with depressive disorders. *Journal of Child Psychology and Psychiatry, 37*(6), 737–746.

World Health Organization (WHO). (2014). *Preventing suicide: A global imperative*. Geneva: WHO.

Wyman, P. A., Brown, C., & Hendricks, I. (2008). Randomized trial of a gatekeeper program for suicide prevention: 1-year impact on secondary school staff. *Journal of Consulting and Clinical Psychology, 76*(1), 104–115.