

Prevention of Suicide among Adolescents: Necessary and Possible

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Abstract

In this article, we will present the topic of suicide among adolescents as a phenomenon that can be prevented. The article reviews the issue of suicide risk assessment, a clinical evaluation that it is important for every professional to know how to perform. Additionally, the section describes the three levels of suicide prevention:

- Primary Level - Population Immunization: This level includes training students in schools as "gatekeepers," hotlines operated by professionals specializing in suicide prevention, limiting access to lethal means, building and maintaining a continuum of care, and similar actions.
- Secondary Level - Treatment for Adolescents at Risk: This includes adolescents suffering from depression. At this level, professionals need to undergo training focused on proven pharmacological and psychosocial treatments for reducing depression among adolescents, as well as treatments for preventing depression. The involvement of parents in these treatments is crucial.

- Tertiary Level - Treatment for Adolescents After a Suicide Attempt: This involves care for adolescents after a suicide attempt and in settings where a suicide has occurred, to prevent contagion.

It is very important for professionals to know how to work with adolescents at risk of suicide, with their parents, and with their educational environments, to specifically focus on suicide prevention. These treatments require specialization, experience, teamwork, and a lot of empathy and hope. Treatments characterized by all these elements have the potential to save lives.

Keywords: Suicide, Adolescents, Three Levels of Prevention, Risk Assessment, Treatment.

Introduction

Approximately 800,000 people die by suicide worldwide each year, making it the second leading cause of death among young people aged 15 to 29 in most countries, and the first in others (World Health Organization, 2019). In Israel, about 400 people die by suicide each year (Ministry of Health Information Division, 2019). Therefore, it is essential for every professional who interacts with adolescents to be familiar with methods for preventing suicide. This chapter will present the risk factors and resilience factors related to suicide, and explain how to conduct a professional risk assessment. Additionally, we will elaborate on the three levels of suicide prevention, which include a variety of programs aimed at preventing suicide across all populations, interventions for at-risk adolescents, and specific interventions designed for adolescents in active suicidal danger.

Risk Factors for Suicide

It is crucial for every professional working with adolescents to recognize the risk factors for suicide in order to identify them in the statements and behaviors of youth

in at-risk groups. The more risk factors an adolescent has, the greater their likelihood of being at risk for suicide.

First, it should be noted that men are at a higher risk of suicide than women. One of the most significant risk factors is previous suicidal behavior, meaning suicidal thoughts or attempts by the adolescent in the past. A second significant risk factor is psychopathology, with over 90% of individuals who have died by suicide suffering from at least one mental disorder, the most common being depression. Other mental disorders correlated with suicidal risk include addictions, such as drug and alcohol addiction, and possibly screen addiction as well. Additional mental disorders found to be risk factors include schizophrenia, post-traumatic stress disorder, behavioral disorders, and anxiety disorders. Struggling with sexual orientation and identity is also a risk factor, with a higher risk of suicide among youth from the LGBTQ community due to difficulties with social acceptance.

Furthermore, there are several personality factors and psychological factors that increase suicidal risk, including impulsive and aggressive personality traits, difficulties with emotional regulation, perfectionism, rigidity in thinking, hopelessness or pessimism, difficulties in problem-solving, and challenges with self-disclosure. Additionally, there are familial factors that elevate suicidal risk: physical and sexual abuse, suicide in the family, divorce, changes in economic status, and the loss of a loved one. Moreover, there are social factors that increase the risk of suicide among adolescents, such as school dropout, difficulties in interpersonal relationships leading to loneliness and social isolation, and bullying or cyberbullying. Immigration to another country is also a risk factor, particularly in Israel concerning immigrants from Ethiopia and countries that were previously part of the Soviet Union. The availability of means for self-harm, such as firearms or medications, is a proven and significant risk factor for suicide.

Alongside the risk factors, there are also resilience factors that reduce the risk of adolescents attempting suicide. Adolescents who manage to find reasons to live and those who have a sense of hope are at lower suicidal risk. Similarly, adolescents who feel a sense of responsibility towards their family or loved ones, or those who feel committed to work or studies, are also at lower risk. Additionally, when the adolescent has a supportive family or social network they can rely on in times of distress, their risk is lower. Another resilience factor is the fear of death and the pain that a suicide attempt may cause. Furthermore, adolescents who believe that suicide is not a moral act, such as religious youth or those with high spirituality, are more resilient against suicide. Finally, problem-solving skills, a history of coping with stressful situations, and cooperation during psychological treatment are significant resilience factors (Stone et al., 2017).

Suicide Risk Assessment

Suicidal risk assessment is a clinical evaluation that should be conducted systematically. However, it is important to emphasize that suicide cannot be predicted. The professional assessment includes an examination of the adolescent's risk and resilience factors and an evaluation of current suicidal thoughts. In the clinical assessment, the professional should review the various risk and resilience factors of the adolescent and ask empathetically, non-judgmentally, and directly about suicidal thoughts and behaviors or self-harm.

Many people mistakenly believe that asking questions about the desire to die can "plant ideas in someone's head." Research has shown that asking questions about suicidal thoughts does not encourage a non-suicidal person to harm themselves. Conversely, if a person is indeed at suicidal risk, they feel relief from being asked, and their likelihood of seeking help increases (Gould et al., 2005). The risk assessment should include questions such as: "Do you want to die?" or "Would you like to fall asleep and never wake up?" These are passive suicidal thoughts. Active

thoughts should also be inquired about, such as: "Have you thought about committing suicide?" If the adolescent answers positively to these questions, more specific questions should be asked, including methods, for example: "Have you thought about how you might commit suicide?" Following that, the intention to act on these thoughts should be assessed, for example, by asking: "Do you have any intention of acting on these thoughts?" and checking for a defined plan for suicide, such as: "Have you started planning the details of how to commit suicide?" "Do you intend to carry out the plan?" Moreover, it is important to ask about the duration, frequency, and intensity of those suicidal thoughts.

In addition to questions about suicidal thoughts, the risk assessment should include questions about behaviors; that is, one should ask about actions taken with the potential for self-harm that were motivated by a specific desire to die. For example, one might ask: "Have you done anything with the intention of harming yourself?" "Have you done anything dangerous that could have resulted in your death?" In addition to questions about actual suicidal attempts, one should inquire about thwarted suicidal attempts, meaning when someone external stopped the action with the potential for self-harm. The risk assessment should also include questions about abandoned attempts, meaning when the adolescent themselves stopped behavior intended to end their life. Finally, preparatory actions for a suicide attempt should be checked, such as: collecting medications, buying a gun, distributing cherished items, or writing a farewell letter.

The risk assessment is a clinical evaluation. To conduct a comprehensive assessment, questionnaires can also be used, such as the Columbia-Suicide Severity Rating Scale (C-SSRS) (Posner et al., 2008) or the Children Depression Inventory (CDI) (Kovacs, 1992) or the Beck Depression Inventory (BDI) (Beck, Steer, & Brown, 1996). Some of these questionnaires may incur a fee. It is also very important to gather information from parents, schools, welfare agencies, pediatricians, youth counselors, and so on.

Another important step in the risk assessment is developing a safety plan. The goal of the plan is to think together with the adolescent and their parents about strategies that may help them cope during impulses for self-harm, which come in waves. The safety plan is written as a ranked list, guiding the adolescent on which strategy to use if the previous one is found ineffective. The list includes ways to create a safe environment, identify warning signs of suicidal impulses, and internal strategies, such as listening to pleasant music to relax. The plan also includes external strategies, such as seeking help from friends and contacting an adult or professional for assistance. At the end of the plan, there is also an option for emergency room referral in crisis situations. Additionally, a "hope kit" is created with the adolescent, where they write to themselves or express through objects, songs, or pictures their reasons for living—reasons they can cling to during a crisis. It is essential to involve the adolescent's parents in building the safety plan. It is also very important to update the school authorities where the adolescent spends a significant amount of time during the day.

At the end of the risk assessment, the professional should write a report detailing the background information of the adolescent, the reason for referral, past and present suicidal thoughts and behaviors, risk and resilience factors, the safety plan, and recommendations.

Evidence-Based Suicide Prevention

Zalsman et al. (2016) and Hawton found that four key strategies are currently considered the most effective for suicide prevention: limiting access to lethal means, training "gatekeepers" in schools, treating depression with medication or psychotherapy, and maintaining continuity of care. These strategies are part of three levels of suicide prevention: primary, secondary, and tertiary. Primary prevention aims to reduce the number of new suicide cases in the general population by increasing knowledge and awareness about suicide, encouraging seeking

professional help, and enhancing resilience factors. The goal of secondary prevention is to reduce the likelihood of suicide attempts among high-risk populations, such as adolescents suffering from depression, through early identification and appropriate treatment. Tertiary prevention refers to interventions aimed at reducing suicidality among adolescents in active suicidal danger, such as after a suicide attempt. It is crucial for organizations at different levels to work in a coordinated and continuous manner. Continuity of care, similar to medical care, ensures that the adolescent and their family do not "fall through the cracks" during transitions. Additionally, programs must be culturally sensitive when working with diverse populations.

Primary Prevention

One common strategy at the primary prevention level is training "gatekeepers," although it has not been proven to prevent suicides as a standalone strategy. The goal of training gatekeepers is to identify adolescents at risk for depression and suicide and respond to them in a supportive manner that facilitates referral to professional resources. Gatekeepers in schools include educators, parents, administration, and so on. They learn to recognize warning signs and symptoms of psychological distress, such as anxiety, depression, and suicidal thoughts, and to provide an appropriate response to adolescents displaying these signs (Isaac et al., 2009). An example of a gatekeeper training program is Applied Suicide Intervention Skills Training (ASIST). This program is widespread globally and provides training lasting from a few hours to several days, during which participants learn to identify warning signs and ask about suicide.

Researchers examined the effectiveness of the program by sampling 1,410 suicidal individuals who contacted 17 crisis centers over the span of a year. They found that those who spoke with counselors trained in ASIST were significantly more likely to feel less depressed, less suicidal, less overwhelmed, and more hopeful by the end of the conversation than those who spoke with counselors who had not received this

training (Cross et al., 2013). Another example of a gatekeeper training program is the Garrett Lee Smith (GLS) suicide prevention program, which has been implemented in 50 states in the United States. It was found that in states where this program was delivered, the rates of suicide among adolescents one year after the program were significantly lower compared to other states. Researchers concluded that the program prevented nearly 237 suicides among individuals aged 10 to 24 over a three-year period (Walrath et al., 2015).

It is important to note that information provided by an adolescent or their parents on this sensitive topic is not always reliable. In a large study conducted on a representative sample of 980 minors and their mothers, the concordance in interviews regarding the minor's suicidality was below 40%, necessitating separate interviews with the minor and their parents to obtain information even when one party wishes to conceal it (Zalsman et al., 2016).

Another community gatekeeper training program is QPR (Question, Persuade, Refer), which consists of three components: questioning, persuading, and referring. The training includes a short video presenting interviews with individuals who have witnessed cases of suicidality in families, schools, and neighborhoods, and participants are required to engage in role-playing to practice intervention with at-risk individuals. The program is conducted across a wide range of populations and also offers online training. Studies have shown that compared to control groups, QPR training led to increased knowledge of suicidality among gatekeepers, enhanced self-efficacy, and improved abilities to identify warning signs of suicidality, intervene in suicidal situations, and refer individuals for treatment (Matthieu et al., 2011; Cross et al., 2008; Wyman et al., 2008).

Educational programs aimed at increasing awareness of suicide among students themselves have proven to be highly effective. These programs teach students about suicide and its risk factors. They also learn to identify warning signs of peers at high

risk for suicidality, for example, by watching a video showing a suicidal adolescent. The adolescent appears anxious and discusses suicidal thoughts or shares their belongings with friends. Additionally, students learn coping skills for interacting with such adolescents through role-playing. An example of such a program that has received empirical support is the Lifelines program. This program trains a large number of school staff to become gatekeepers, who then teach students to identify peers at risk of suicidality. The program aims to teach students to refer their at-risk friends to trained staff members who can provide appropriate responses (Underwood & Kalafat, 1989).

Another educational program, the Youth Aware of Mental Health Program (YAM), compares various suicide prevention programs in schools across ten countries in Europe, including Israel. YAM aims to raise mental health awareness by teaching about risk and resilience factors for suicidality, including knowledge about depression and anxiety. It also aims to improve skills needed to cope with difficult life events, stress, and suicidal behaviors. The study found that YAM led to a reduction in the number of suicide attempts and a decrease in severe suicidal thoughts among adolescents in schools (Wasserman et al., 2015). Despite the numerous studies demonstrating the positive impact of educational programs on suicide awareness, some past studies have shown that these programs do not have a significant effect on students, and others have even shown harmful effects, such as increased hopelessness and maladaptive coping among adolescents after the program (Ploeg et al., 1996). Therefore, there are still disagreements regarding these educational programs.

In recent years, a pilot program for training gatekeepers among students called "Choosing Life" has been initiated, accompanied by research. The program was developed by the Psychological-Counseling Service in the Ministry of Education as part of the national suicide prevention program and was found by an expert

committee to align with the YAM program. The central importance of the program lies in direct conversations with adolescents about the topic of suicidality. The program topics deal with managing conversations about the adolescent, their family, and friends, various challenges and difficulties, as well as coping strategies for difficult situations that may lead to suicidal risk. These conversations empower individuals, create group cohesion, foster a sense of belonging and mutual responsibility, and contribute to the development of personal resilience. Our recommendation is to conduct a pilot program to work with younger age groups to start discussing the topic as early as preschool, in a developmentally appropriate manner.

Unlike programs aimed at raising awareness of suicide among adolescents, there are programs focused on developing and strengthening resilience skills, which are often lacking in suicidal adolescents. Their goal is to serve as a protective factor against the influence of suicide risk factors. The skills include adaptive coping strategies, problem-solving, cognitive flexibility, emotional regulation, interpersonal conflict resolution, critical thinking, and more. One such program, called Reconnecting Youth (RY), aims to prevent suicidality among adolescents who have dropped out of school. The program has been found in several studies to be effective in reducing suicidal thoughts and behaviors, substance use, stress, depression, anger, hopelessness, and lack of hope (Eggert et al., 2001). However, some studies have found negative effects of the RY program, such as increased anger, increased substance use, and increased connections with at-risk youth. This negative effect may arise from peer contagion effects among groups of at-risk adolescents experiencing similar emotional distress (Kuiper et al., 2019).

In Israel, there is a "Resilience Education" program that has established a broad psycho-educational framework, including various programs for developing and strengthening personal resilience and coping skills for stressful situations. The

programs aim to provide tools for coping with daily stressors as well as trauma and crisis situations, and they are implemented as preventive programs. These are three-year programs, including a year of acquisition, a year of implementation, and a year of expansion. Afterward, the "language of resilience" becomes the language of the educational institution. In the first phase, educational counselors and psychologists in the school are guided by resilience experts, and at the same time, they train the class teachers, who then teach the students. Recently, specific content on suicidality has begun to be integrated into the "Resilience Education" programs. Again, our recommendation is to start at as young an age as possible.

Another strategy for primary prevention among adolescents is proactive screening programs designed to identify suicidal students in schools. A systematic review of the existing literature found no evidence that such screening reduces suicide rates. In these programs, self-report questionnaires assessing suicide risk factors, such as depression, substance use, suicidal thoughts, and suicidal behaviors, are administered to all students at the school. Students identified as at risk according to the questionnaires are asked to undergo a clinical interview with a professional, who refers them for treatment if necessary. An example of a questionnaire is the Ask Suicide-Screening Questions (ASQ), which contains four items about current suicidal thoughts and history of suicide attempts. This questionnaire has been found to have a high sensitivity for predicting suicidal risk among children and adolescents (Ballard et al., 2017). Another frequently used questionnaire for identifying suicidality is the Columbia Suicide Screen (CSS), which includes questions about suicidal thoughts and behaviors and risk factors. In a study where this questionnaire was administered in seven high schools, it was found to identify adolescents at suicidal risk who had been recognized as such by school staff (Scott et al., 2009). Proactive screening programs also exist in colleges in the United States, where students fill out online questionnaires about suicidal thoughts and behaviors and risk

factors. After completing the questionnaires, students identified as at risk receive an email from a clinician inviting them to consider treatment (Garlow et al., 2008). Similar to gatekeeper programs, proactive screening programs require schools to prepare adequately to refer identified students to professional resources.

The most effective and research-backed method for preventing suicide among adolescents is to reduce access to lethal means. Methods of suicide, such as firearms, hanging, choking, or jumping from heights, provide little opportunity for rescue, and therefore the mortality rates in these cases are high (Harrison & Elnour, 2008). Additionally, it has been found that the window between the decision to attempt suicide and the act itself may be short—between five to ten minutes (Simon et al., 2001). Furthermore, people tend not to switch methods of suicide attempt if the method they chose is not accessible to them at that moment (Hawton, 2007). As a result, increasing the time gap between the decision to attempt suicide and the attempt itself, for example, by reducing access to lethal means, may be life-saving. Efforts to prevent suicide in locations where lethal suicide attempts may easily occur include erecting barriers or limiting access to prevent jumping, locking windows, and installing signs and phones to encourage people considering suicide to seek help (Cox et al., 2013). Reducing the number of pills in over-the-counter packages has been found to be very effective and has also been implemented in Israel. Another method to reduce access to lethal means is the safe storage of medications, firearms, hazardous chemicals, and other household products. Storing these items in a locked and secured place may reduce the risk of impulsive suicide among adolescents (Runyan et al., 2016). All the strategies presented to reduce access to lethal means are, of course, also recommended in schools to ensure a safe environment for students at suicidal risk.

Another means of preventing suicidality is the use of "hotlines" during a mental health crisis. These are telephone lines or websites that provide immediate assistance

to children and adolescents in need. These lines are typically open 24 hours a day, and the response is provided free of charge. Generally, children or adolescents turn to hotlines because they feel they cannot receive help in other settings or because the anonymity of the call allows for greater openness. They are also provided with information about mental health and assistance regarding referrals to treatment providers. The main advantages of hotlines are that they can respond to adolescents calling during the night, just before a suicidal act, and that the staff answering is usually trained to handle suicidal crises. Although calls to hotlines are confidential, in cases of high suicidal risk, there are options for locating the suicidal individual to save their life. In a study that followed suicidal callers who contacted a hotline in the United States, there was a significant reduction in their emotional pain, hopelessness, and suicidal intent weeks after the phone call (Gould et al., 2007).

In Israel, the organization ERAN provides a telephone and online mental health first aid service. Additionally, immediate online assistance can be obtained from the organization Sahar and from the Yelem website, which belongs to the Atid organization (an organization for at-risk youth).

Suicidality among adolescents can also be prevented through identification by doctors in primary care clinics. An important finding is that more than half of individuals who committed suicide had visited a doctor within a month prior to their suicide (Andersen et al., 2000). However, mental disorders that constitute suicide risk factors, such as depression, are often not identified by primary care physicians. Training programs for doctors have been found to be effective in identifying depression, and if the doctor prescribes medication for depression, they have even led to a reduction in suicidal behaviors (Mann et al., 2005; Zalsman et al., 2016).

Finally, a suicide prevention strategy suitable for today's technological age is identifying suicidality through social media. Studies indicate that adolescents and young adults frequently use social media to express suicidal thoughts and intentions.

Machine learning techniques are capable of identifying individuals at high risk for suicidality by automatically analyzing text written in various forums (Cash et al., 2013; Hostle & Desmet, 2018). Further research is needed to validate these online prevention methods.

Secondary Prevention

The goal of secondary prevention is to provide early intervention for adolescents in at-risk groups to prevent suicidal behaviors that may develop later. An example of an at-risk group is adolescents suffering from depression; therefore, secondary prevention will include pharmacological treatment and psychological therapy for these adolescents. Below, we present recommendations for pharmacological intervention and two research-based psychological interventions aimed at this at-risk group.

Antidepressant Medications:

Selective serotonin reuptake inhibitors (SSRIs) are the most commonly used pharmacological treatment for depression in children and adolescents and help prevent suicidality (Brent & Zalsman, 2006). Numerous studies have demonstrated their effectiveness and safety among children and adolescents, both in combination with cognitive-behavioral therapy (CBT) and alone. It is important to remember that the placebo response rate in children can reach 50%-70%. In a large, multi-center, double-blind study (TADS), 439 adolescents aged 12-17 suffering from major depression were divided by researchers into four groups receiving different treatments: fluoxetine (Prozac) at a dose of 10-40 mg per day, CBT, a combination of both, and a placebo. Fluoxetine alone was superior to CBT alone and the placebo, with a response rate of 60.6% according to a depression questionnaire for children, compared to 34.8% with the placebo. The combination of CBT and fluoxetine was superior to any treatment alone, with a response rate of 70%.

A common misconception is that adolescents should be treated with half the dose typically given to adults. In fact, young individuals metabolize and eliminate these medications more quickly than adults, and they may sometimes require a dose equivalent to that of an adult or even double. For this reason, it is recommended to start, for example, with a dose of 10 mg of fluoxetine (Prozac, Prizma) or equivalent doses of other SSRIs, and in the absence of side effects, to increase to 20 mg. If there is no therapeutic response, it is recommended to increase to 40 mg or even 60 mg in two divided doses, due to the shorter half-life of these medications in adolescents compared to adults. However, it is essential to monitor suicidality at the beginning of medication and during dose increases for the reasons discussed below.

SSRIs and Suicidal Risk:

In December 2003, the UK Medicines and Healthcare products Regulatory Agency (MHRA) issued a warning against prescribing SSRIs to children under 18 due to evidence that these medications may increase the risk of suicidality in young people by 1.8 times. In July 2003, the FDA warned against the use of paroxetine in adolescents due to this risk. Following significant public pressure, the FDA held hearings and extensive discussions on the matter, resulting in an October 2004 "black box" warning stating: "Antidepressants increase the risk of suicidal thoughts and behavior in children and adolescents with depression and other psychiatric disorders. The use of these medications in children and adolescents requires careful consideration of the balance between increased suicidality and clinical need." Patients already on these medications require close monitoring for worsening conditions, increased suicidality, and behavioral changes. Families and caregivers should monitor changes in condition and maintain contact with the prescribing physician.

Despite the warning, many researchers, including the American Academy of Child and Adolescent Psychiatry, oppose this stance, arguing that the FDA warning poses

a real danger of undertreatment and increasing suicide rates among untreated depressed adolescents. An examination of the data underlying the decision reveals that under the definition of "suicidality," various behaviors are reported, not all of which would be classified as suicidal by experts in suicidality. Additionally, in published studies comparing SSRIs to placebo, the difference in the rate of suicidality (thoughts, self-harm, and suicide attempts) is not statistically significant, with 2% in the placebo group compared to 4% in the medication group. Among the 1,717 participants in all these studies, not a single suicide was recorded. Olfson and colleagues examined the rate of SSRI prescriptions and suicide rates in various regions of the United States and showed that SSRIs actually reduced suicide rates due to effective and safe treatment of depression. For every 1% increase in SSRI prescriptions for adolescents, there was a decrease of 0.23 per 100,000 adolescents who committed suicide (Olfson et al., 2003).

The TADS study showed that significant suicidal thoughts present in 29% of the sample at the beginning of the study (before treatment) decreased significantly across the four groups studied (fluoxetine, CBT, combination, and placebo), particularly in the combined group, with seven suicide attempts recorded over 12 weeks (March, 2007). It is important to note that this initially involves a population where the risk of suicidality is part of the disorder's definition and is particularly prevalent at the start of treatment and during recovery from the depressive state. Therefore, caution is warranted, but not at the expense of effective treatment for the primary disorder. In conclusion, there is a risk of side effects related to suicidal behavior, but it is small and should be viewed in the context of improvements in depression and suicidality due to pharmacological treatment and epidemiological evidence that treatment reduces the rate of suicidality in the population. Additionally, given the FDA warning, it is advisable that treatment with SSRIs for a depressed adolescent be

conducted by a child and adolescent psychiatry specialist rather than a primary care physician (Zalsman et al., 2006).

Cognitive Behavioral Therapy (CBT):

Cognitive-behavioral therapy (CBT) is based on the assumption that depression is caused or maintained by cognitive processes through which the adolescent perceives various situations and events. The basic principle of CBT is that there are interactions between thoughts, feelings, and behaviors. CBT for depression posits that reducing depressive symptoms is possible through interventions that reshape distorted thinking patterns and maladaptive emotions and behaviors. Several meta-analyses have shown that CBT is effective for adolescents suffering from depression (Klein & Jacobs, 2007).

The cognitive components of second-generation CBT include identifying automatic thoughts and cognitive distortions and creating more adaptive thoughts. Automatic thoughts of a depressed adolescent may include negative thoughts about themselves, the future, and the world (the "cognitive triad"). For example, despairing thoughts like "There's no point in trying; I'm not going to succeed anyway," or feelings of worthlessness such as "I'm worth nothing." Maladaptive thoughts of depressed adolescents may also include "black or white" thinking, such as "I failed the test; I'm terrible at everything," or catastrophic thinking: "If she doesn't want to go out with me on a date, I'll be single for life." In CBT, the patient learns to recognize the emotional impact of these thoughts and their behavioral consequences. Through cognitive restructuring, the therapist attempts to challenge these maladaptive thoughts. Additionally, the patient receives homework to find more adaptive alternative thoughts in contrast to the negative thoughts that arise during the week, and to write down the emotional and behavioral changes that follow the cognitive shift. The goal is to make the thinking patterns of adolescents with depression more flexible, adaptive, and varied.

The behavioral components of CBT include behavioral activation, meaning increasing participation in activities overall, and particularly in enjoyable activities that the patient has stopped engaging in since becoming depressed. As homework, the patient is asked to track their activities daily. In therapy sessions, the therapist and patient set clear, achievable goals and add positive-value activities to the schedule, such as participating in social gatherings and sports activities. The emotional components of CBT involve identifying, applying, and monitoring various emotions and their intensity. Additionally, CBT teaches emotional regulation techniques. In the third wave of CBT, work focuses on accepting negative emotions and thoughts as part of the human emotional and cognitive experience that comes and goes. It is crucial that the therapy is tailored to the patient.

In CBT for depression among adolescents, sessions with parents are also included. Families receive psychoeducation about depression and its treatment. The therapist also identifies key family factors that negatively impact the adolescent's depression and works on them in family sessions. These sessions typically include work on emotional communication, problem-solving within the family, and increasing the number of enjoyable family activities (Compton et al., 2004).

There is also a group intervention of CBT that has been found effective for adolescents suffering from depression, called the Coping with Stress Course (Dobson et al., 2010). This consists of 15 sessions, with about 15 adolescents with depression participating. In these sessions, patients learn cognitive tools to identify negative and irrational thoughts contributing to depression and are encouraged to confront them. Additionally, they acquire behavioral tools, such as adding enjoyable activities to their schedules (Clarke et al., 1995).

Interpersonal Psychotherapy for Adolescents (IPT-A):

Interpersonal Psychotherapy for Depressed Adolescents (IPT-A) is a treatment designed for adolescents suffering from depression, which has been shown to be effective in research (Mufson et al., 2004). The goal of the treatment is to reduce depressive symptoms among adolescents, improve their interpersonal functioning, and teach them and their families about the relationship between depression and interpersonal relationships. The rationale behind this treatment is that depression occurs in an interpersonal context; therefore, treatment should also include changes in the patient's interpersonal relationships with significant figures in their lives. The treatment lasts for 12 sessions and includes active participation from parents, divided into three phases.

In the first phase, the therapist assesses the symptoms of depression and evaluates suicidality. They also provide psychoeducation to the patient and parents about depression and the rationale for IPT-A. The therapist uses the "limited sick role" technique, which means explaining to the patient and their parents that the depression the adolescent is experiencing is an illness and, like any other illness, affects their daily functioning. Along with lowering expectations of the adolescent during the depressive period, the therapist emphasizes to the parents that they should encourage their child to participate in routine activities, such as attending school and participating in family activities. Additionally, in the initial phase of treatment, the patient builds "closeness circles" with the therapist, placing the closest and most significant people for them in the innermost circle. The therapist then conducts an interpersonal inventory with the patient to understand the significant relationships, such as the frequency and content of these relationships, the patient's expectations of them, and their positive and negative aspects. In this inventory, the therapist attempts to connect the difficulties in the patient's interpersonal relationships to their depression. At the end of the first phase, they try to identify and conceptualize the

main problem areas that led to the depression and that will be worked on throughout the treatment. IPT-A includes treatment for four main problem areas: pathological grief, interpersonal conflicts in significant relationships, significant life changes (e.g., transitions between school settings, parental divorce, and the birth of a sibling), and deficiencies in interpersonal skills, such as social withdrawal and difficulties in forming or maintaining relationships.

In the middle phase of interpersonal psychotherapy, work is done on the identified areas using various therapeutic techniques. Learning the skills occurs through role-playing and interpersonal experiences between sessions. One of the therapeutic techniques in IPT-A is analyzing communication patterns by examining a conversation the adolescent had with a relative that led to conflict. The patient is encouraged to identify maladaptive communication patterns to begin practicing more adaptive and healthier patterns. The goal is to teach the adolescent to express their difficulties and needs in a more adaptive, direct, clear, and regulated manner.

In the final phase of treatment, the therapist summarizes the skills learned and discusses ways to use these skills in the future (Mufson et al., 2004). There is also an empirically supported group intervention for preventing depression called Interpersonal Psychotherapy-Adolescent Skills Training (IPT-AST), which is an adaptation of IPT for a group of adolescents experiencing isolated symptoms of depression. In this group, participants learn about the symptoms of depression, discuss the connection between emotions and interpersonal relationships, and learn various communication methods and interpersonal strategies that can be applied in their close relationships (Mufson et al., 2010).

Tertiary Prevention

At the tertiary prevention level, interventions are aimed at adolescents who have already engaged in suicidal behavior, such as following a suicide attempt. It is

important to emphasize that in any case of immediate risk, adolescents and their families should be referred to emergency care. Recent findings indicate that treatment with ketamine and its derivative, esketamine, via nasal spray can improve depressive states within minutes and reduce suicidal behavior even in the absence of depression. This drug was approved this year for controlled use in Israel's drug basket for adults. Currently, a global multi-center study is examining the effects of this drug in suicidal adolescents.

Tertiary prevention includes interventions in communities, institutions, organizations, and families where a suicide has occurred to prevent contagion (postvention). There are now protocols for suicide prevention in settings after a suicide, which should be followed with necessary adaptations to the specific organization and evaluation of the intervention's effectiveness from the start. For example, the unit for dealing with crisis situations, emergencies, and suicidality in the psychological counseling service of the Ministry of Education (Shafi) has developed operational procedures aimed at preventing contagion within the educational setting.

In psychological interventions focused on suicide prevention, the first phase is acute treatment, aimed at saving lives and preventing another suicide attempt. At this stage, it is important for the therapist to be empathetic to the patient's wish for death and the immense emotional pain the suicidal adolescent is experiencing (Or-Bach, 2001), while also working with the adolescent and their parents to build a safety plan to protect their lives. After the adolescent is no longer in immediate suicidal danger, treatment will focus on developing skills to prevent recurrence of depression and suicidal thoughts or behaviors. There are guidelines for all suicide prevention treatments: creating a good therapeutic alliance between the therapist and the patient, a non-judgmental approach from the therapist, increasing motivation for change, and maximum availability of the therapist, even beyond treatment hours if necessary.

Additionally, the therapist should seek professional support and not work alone with a suicidal adolescent. Furthermore, working with parents and the school is essential to promote the treatment of an at-risk adolescent. The interventions presented below are empirically supported and based on protocols. However, they can also be integrated into dynamic therapy.

Dialectical Behavior Therapy for Adolescents (DBT-A):

DBT was originally developed for adult women suffering from borderline personality disorders, and DBT-A is its adaptation for adolescents. Research has shown that this treatment significantly reduces suicidal thoughts and behaviors, general psychiatric symptoms, and symptoms of borderline personality disorder. DBT-A is inspired by dialectical and Zen-Buddhist concepts and incorporates cognitive-behavioral elements. The treatment is based on the repeated validation of the patient's challenging experiences that led them to cope with intense emotional distress. However, the treatment also emphasizes encouraging the adolescent to create changes in their cognitive, emotional, interpersonal, and behavioral patterns, thus placing significant responsibility on the patient as an agent of change.

The treatment includes individual sessions with the adolescent, group therapy, family skills training groups, and consultation groups for therapists. The consultation group provides emotional and professional support, which is essential when working with this challenging population.

In individual sessions, the therapist primarily focuses on reducing life-threatening behaviors, such as suicidal behaviors and self-harm, while establishing a clear therapeutic framework. To track suicidal behaviors and self-injury, the patient is required to document these behaviors in a diary, and once a week, the patient and therapist review the diary to analyze what led the patient to harm themselves and what reinforcing outcomes resulted from these undesirable behaviors. If the patient

feels unable to control their impulses to harm themselves between sessions, they know they can call their therapist. Once the patient is no longer in active suicidal risk, individual sessions address treatment difficulties as well as the patient's daily challenges.

In the family skills training group, participants learn mindfulness techniques, which involve focusing attention on present experiences in a non-judgmental manner. Developing mindfulness allows the suicidal adolescent to stay with their painful feelings without translating them into behavior, and they also learn to accept themselves without judgment. They learn resilience skills for coping with distressing situations, meaning that patients learn to handle difficult situations without reacting impulsively or destructively. Additionally, patients learn emotional regulation techniques to manage intense emotions, such as anger and frustration. Finally, they also learn skills for dealing with interpersonal conflicts, which often lead them to significant distress and destructive behaviors (Miller & Rathus, 2014).

Cognitive-Behavioral Therapy for Suicide Prevention (CBT-SP):

CBT-SP is a cognitive-behavioral therapy with empirical evidence for its effectiveness, aimed at adolescents at risk of suicide. This treatment is typically conducted individually with the adolescent but involves significant participation from parents. The program is generally structured in three phases:

- **Acute Phase:** In this phase, the therapist assesses suicidal intent or behavior and collaborates with the patient to develop a safety plan. The therapist also conducts a chain analysis to analyze the factors that led to the suicide attempt. The patient is asked to detail their thoughts, feelings, and behaviors before and after the event, as well as the reactions of those around them. This chain analysis enables the therapist to understand which skills the patient lacks and to work on them in therapy to prevent future suicidal behavior.

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- **Skills Development Phase:** In this phase, the therapist and patient decide together to work on developing emotional, social, behavioral, and cognitive skills that the patient lacks. This work is carried out using role-playing and homework assignments between sessions in areas such as increasing enjoyable activities, cognitive restructuring, emotional regulation, problem-solving, social skills, and adaptive communication.
 - **Relapse Prevention Phase:** In this final phase, the therapist conducts guided imagery exercises with the patient, aimed at helping the patient re-experience the events that led to the suicide attempt. The patient is encouraged to articulate how they would cope with those events today, to assess whether they have internalized the strategies learned in therapy. The therapist also discusses with the patient how they would handle similar scenarios in the future that might lead to suicidal impulses. At the end of the treatment, risk assessments and evaluations of depression levels are conducted, and a summary of the treatment is made (Brent & Goldstein, 2011).

Attachment-Based Family Therapy (ABFT):

ABFT is a family therapy designed for adolescents suffering from depression and suicidality. It is based on a semi-structured protocol and has been shown to significantly reduce symptoms of depression and suicidal thoughts among adolescents (Diamond et al., 2010). The theoretical foundation of the therapy is attachment theories, which posit that significant caregiver figures who provide a safe and supportive base can lead to the development of emotional regulation skills and problem-solving, thus reducing mental distress such as depression and suicidal thoughts. The goal of the therapy is to restore the adolescent's trust in those around them, repair interpersonal rifts within the family, and strengthen the bond with parents.

ABFT consists of five central therapeutic tasks. The first task involves reanalyzing the difficulty, shifting the perspective from viewing the adolescent as problematic and in need of "fixing" to recognizing the need for improving family relationships. This cognitive shift reduces blame and criticism directed at the adolescent, focuses treatment on family strengths, and shifts responsibility for change to all family members.

The second task is conducted individually with the adolescent, aiming to establish a connection between the therapist and the adolescent, identify and examine family conflicts that have harmed trust between the adolescent and their parents, and prepare the adolescent to discuss these issues with their parents.

The third task is conducted solely with the parents, aiming to explore current stressors and their history of difficulties in attachment. This part of the treatment allows parents to develop empathy for the adolescent and to be more open to learning the behavioral and emotional skills needed to improve family relationships.

Another task is "re-attaching," which involves the adolescent and the parents. In this part, the adolescent expresses anger they have not been able to voice previously, discusses conflicts with their parents, feelings of abandonment and betrayal, and experiences of abuse. When parents respond empathetically and express remorse, the adolescent can reveal more vulnerable feelings, such as sadness and disappointment, and forgive their parents. These emotionally charged conversations help reduce tension, increase mutual respect, and improve conflict resolution and emotional regulation skills.

The final task promotes the adolescent's sense of capability to develop relationships and thrive outside the home, such as at school, within peer groups, and in the workplace. Exploring the adolescent's autonomy is facilitated by the safe base established with the parents during treatment (Diamond et al., 2002).

Zero Suicide Model

We conclude this article with the Zero Suicide Model, which is increasingly based on empirical findings and outlines the ten steps that every therapist should take when working with an adolescent at risk of suicide. The model does not assume that zero suicides can be achieved but sets this goal as an ideal to strive for. The ten steps are divided into three parts: assessment, intervention, and monitoring.

- Assessment: This part includes direct questions about past and present suicidal thoughts and behaviors, identifying risk factors, and ensuring the immediate safety of the patient.
- Intervention: This includes creating a safety plan, reducing access to lethal means, teaching strategies for coping with suicidal impulses (such as emotional regulation strategies), and implementing focused suicide interventions like CBT-SP.
- Monitoring: This final part includes the therapist's availability between sessions, especially during stressful times, working with the patient's family, and providing support for the therapist from peers (Brodsky et al., 2018).

Innovative Technologies for Treating Suicide:

Vagus Nerve Stimulation (VNS) for Severe Depression and Suicide:

In the past year, an additional treatment option has become available in Israel for patients suffering from severe and complex depression, as well as those with a history of suicide attempts.

Overview of VNS Technology:

- What is VNS? Vagus Nerve Stimulation (VNS) involves implanting a device that sends electrical impulses to the vagus nerve, which can help regulate mood and alleviate symptoms of depression.

- Expert Opinions: According to psychiatric experts in Israel and worldwide, VNS is considered a safe, evidence-based, and accepted treatment with proven clinical efficacy. It represents a last hope for many patients and their families.

Future Considerations:

- Health Basket Committee Discussion: The Health Basket Committee is set to discuss the possibility of including VNS treatment in Israel's health basket this year, which could improve access for many patients in need.
- How Does the Innovative Treatment Work? Vagus Nerve Stimulation (VNS) involves stimulating the left vagus nerve in the neck area. The vagus nerve is one of the main communication pathways between the body and the brain.

Mechanism of VNS:

- Stimulation Process: The stimulation is achieved using a small generator (pacemaker) implanted subcutaneously in the chest area. It is connected via a thin electrode to the vagus nerve, sending electrical impulses according to a standard protocol.
- Neurotransmitter Activity: The stimulation affects the activity of neurotransmitters (chemical messengers) in the brain. The changes in brain chemistry can significantly reduce symptoms of depression.

Surgical Procedure:

- Surgery Details: The surgical procedure is short and safe, performed under local anesthesia, typically lasting about an hour. Most patients are discharged on the same day or the following day.

National Recognition:

- National Council for the Prevention of Suicide: A few months ago, the National Council for the Prevention of Suicide in Israel defined VNS technology as "a

technology intended for severe patients who have been treated with medications and ECT and has been proven to reduce suicide cases."

- The committee emphasized the importance of including it in the health basket, as this group is at the highest risk for suicide.

Long-term Treatment:

- Chronic Treatment: VNS is a long-term chronic treatment. The efficacy of technology in improving depression symptoms is maintained and even increases over the years.

Approval and Experience:

- Regulatory Approvals: VNS technology for depression has been approved in Europe (CE) and the United States (FDA) since 2005 and is registered and approved in 56 countries for treatment of treatment-resistant depression, including Israel.
- Global Experience: There is over 25 years of experience with this technology worldwide, with more than 200,000 VNS pacemaker implantation procedures performed.

VNS and Treatment-Resistant Depression and Suicide:

Recently, several patients with treatment-resistant depression and suicidal tendencies have reported improvements in their condition following Vagus Nerve Stimulation (VNS) therapy.

Impact of the COVID-19 Pandemic:

- Increase in Depression and Suicidal Tendencies: Since the onset of the COVID-19 crisis, there has been a rise in depression and related illnesses, with a 30% deterioration in the mental health of the general population over the age of 21.

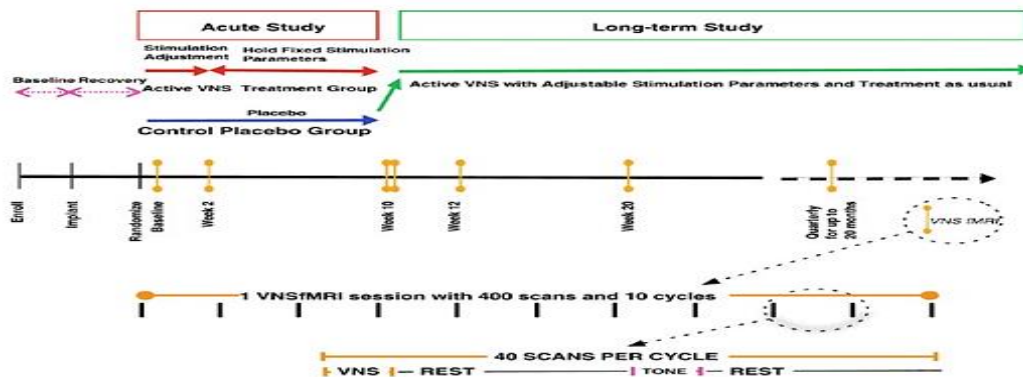
- Expert Perspectives: Many experts believe that VNS therapy offers new hope and a tangible solution for many chronic depression sufferers in Israel.

Target Patient Group:

- Severe and Resistant Cases: The patients targeted by this treatment are those who have exhausted all available therapeutic options, both pharmacological and non-pharmacological.

Significance of VNS Treatment:

- Life-Saving Potential: VNS therapy presents a significant advantage for these difficult cases, serving as an important and meaningful hope for life-saving interventions and improving their quality of life.



Conclusion

The main conclusion of this article is that suicidality among adolescents is preventable, but it is important to understand the topic before starting to work and to continue learning during the process, as the literature is constantly being updated and expanded. Systems and organizations should ensure that the issue of suicide prevention is on their agenda, and that their professionals are familiar with the research in the field and develop important skills for working in suicide prevention, as well as professional competence in risk assessment and treatment of depression.

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