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HANDS
HANDLING SUICIDE RISK OF ADOLESCENTS AT SCHOOL

TRANSNATIONAL DESK RESEARCH

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Index

Introduction

Adolescence is the phase of life from childhood to adulthood, i.e. from 10 to 19 years old (1). Adolescence is understood as the intermediate phase between childhood and adulthood of the human being, and coordinates elements of purely biological growth witha transition at the level of social role (2).

During this stage of growth, the adolescent must develop various psychosocial aspects; a certain family independence is acquired, awareness of self-image and body acceptance begins; friendly relationships become important, as well as sexually affective relationships may begin, and the development of self-identity begins (3). This is why adolescence can be a problematic and risky period at a psychosocial level.

It should be added that the rights of adolescents are framed within the Convention on the Rights of the Child, where emphasis is placed on the obligation of states to provide the necessary tools for the correct development of children and adolescents in all their facets; article 24 emphasizes the right of children to receive the necessary care to enjoy health, both in terms of preventive care and medical and rehabilitation services when necessary.

Therefore, it is understood that it is the obligation of our State, since it is a signatory, to take the necessary measures aimed at the protection and correct development of adolescents (4).

Suicide, according to the World Health Organization, is defined as "the deliberate act oftaking one's own life. Its prevalence and the methods used vary according to different countries". The WHO also states that adolescents are particularly vulnerable because they are at this stage of development (5).

In recent years there have been changes in the environments in which adolescents mature, the social world in which they grow up is urbanized, mobile

and globally connected. Social networks keep the world hyper-connected, which encourages adolescents to communicate and establish distinct social and family ties.

The influence of socializing among adolescents has grown exponentially due to the connectivity and amplification of social networks, which can have both a positive and negative impact on adolescents' mental health, depending on the type of experiences towhich they are exposed (6)(7). Adolescent health is the result of these interactions and the social and biological changes that accompany puberty itself, shaped by social determinants, risk and protective factors, which will condition the future health of the individual, as well as family and community support (8)(9).

Thus, factors such as gender, ethnicity, previous mental disorders, religious beliefs, etc., significantly increase the vulnerability of adolescents to suicidal and even suicidal behavior itself. Similarly, social factors, such as exposure to suicidal behavior, stressful life events or poor school performance may also increase adolescents' vulnerability (10).

In recent years, against the backdrop of a COVID-19 pandemic with the relevant confinements, the mental health of adolescents has been affected. The closure of schools and institutes, limitation of physical activities, social distancing, isolation, as well as the other restrictions implemented during the COVID-19 pandemic had a clear impact on their mental health (11). For this reason, it is important to train the professionals closest to adolescents in suicide risk prevention, in order to provide a correct approach to adolescents at risk.

In view of the current scenario regarding adolescent suicide and the importance of good mental health management in order to avoid the development of pathologies that lead tosuicidal behavior, the involvement of the adolescent's reference figures, mainly the school, the family and the reference health environment, is considered vitally important.

The involvement of the primary care nurse is especially important in the early detection of suicide risk, at the level of developing assessment protocols,

developing prevention strategies and, ultimately, providing affected young people and families affected with the necessary follow-up and support (12).

Within the design of prevention strategies, it is especially important to train teaching professionals in suicide risk, which is why the main objective of this work will be the development of specialized training in suicide risk prevention for teaching and primary care professionals. The methodological approach will be based on the choice of a suicide risk scale applicable to adolescents, in the hope of achieving greater preventative training in primary care professionals in the detection of suicide risk.

Conceptual framework

According to the WHO definition, adolescence is the phase of life from childhood to adulthood, i.e., from 10 to 19 years of age. During this stage of growth, adolescents establish behavioral patterns that may protect their health and the health of others with whom they interact or put their current or future well-being at risk (13). In this way, we understand adolescence as the intermediate phase between childhood and adulthood ofthe human being, where purely biological growth elements are coordinated with a transition at the social role level.

Adolescents are in a period of searching for their identity and adapting to what will become their adult identity, which will define the rest of their development. In this physical and mental evolution, adolescents go through a series of changes that alter their emotional balance and cause them to make decisions that are already independent fromthose of their parents. At the level of cognitive and emotional development, new values and concerns, ideals and responsibilities emerge and are forged according to their development and decision-making capacity. Thus, adolescents are at a stage of change and

maturation, and are therefore particularly vulnerable (14).

Suicide is defined as "a *self-destructive act or behavior, the aim of which is to achieve death, with a strong desire to die and with the knowledge, hope and belief that it is possible to achieve this goal by the chosen method"* (15).

Thus, what is indispensable in the definition of suicide is the intention on the part of the person to cause death to himself, i.e., the element of intentionality and voluntariness, also present in Durkheim's definition of suicide: "*any case of death resulting directly or indirectly from a positive or negative act, carried out by the victim himself who knew that it was going to produce that result, is called suicide"* (16).

We find, then, a decision-action-result through which the person has a clear intention to end his or her life. However, we must visualize suicidal behavior as a reality made up of various components: the conception, the gesture, the planning, the attempt and finally the completed suicide. The action follows through these components without being linear but is a process of continuous progress and regression (17).

Thus, the act of suicide is preceded by both suicidal conception and the attempt itself, with suicidal conception being cognitions ranging from fleeting thoughts about not wanting to live, through self-destructive fantasies, and even to explicit and meditated suicide planning (18).

Suicide

Both suicide and attempted suicide can have very variable causes, which can be highly influenced by the environment (stress, unfavorable economic, social, or family situations...), as well as causes inherent to the individual (mental disorders, substance abuse...) (19).

The *Diagnostic and Statistical Manual of Mental Disorders* V, better known

as DSM V, the reference manual of Psychiatry and work of the American Psychiatric Association, classified the term "Suicidal Behavioral Disorder" for the first time in 2013, postulating that this is manifested fundamentally by a suicide attempt, this being a behavior that the individual carries out with the intention of taking their own life (whether or not this end is achieved). However, for this diagnosis, the manual indicates that suicidal—conception is not considered and, on the other hand, considers that further studies are required to include behavior derived from a state of delirium or confusion, as well as for religious purposes. It also highlights the nuance of excluding from the above diagnosis "non- suicidal self-harm", which can sometimes be confused with suicidal behavior, but actually corresponds to superficial injuries to alleviate a negative feeling. This term is excluded from "suicidal behavior" because the purpose of these actions, even if the manifestation is to physically harm oneself, is not to end one's own life.

According to the Columbia Classification Algorithm of Suicide Assessment (C-CASA), anumber of terms around suicide must be differentiated:

- Suicidal conception: thoughts in reference to suicide, often the starting point of suicidal behavior. Some authors differentiate between passive and active conception:
  - Active suicidal conception: refers to concrete and conscious thoughts abouttaking one's own life.
  - Passive suicidal conception: refers to thoughts about wanting to be dead, without a concrete desire to take one's own life.
- Non-suicidal self-harming behavior: self-harming inflection towards oneself that does not involve the intention to take one's own life, often to relieve stress. Examples are cuts, scratches or burns on the most superficial layers of the skin.
- Suicide planning: thoughts related to the planning of the suicidal act.
- Preparatory acts: Preparation for an imminent suicide. May include verbalization of intent, as well as preparation of the actual method,

such as stockpiling pills or getting a rope. Writing a suicide note is also included in this classification.

- Suicide attempt: A self-inflicted act by an individual with the intention of causing his or her own death. This act may or may not result in death. Externally, it is associated with a high probability that the person has committed the act with the intention of committing suicide. Examples are jumping out of a window, intoxication by taking large amounts of medication, etc.
- Suicidal behavior: Deliberate behavior in which self-injurious acts are committed towards oneself. We have explicit or implicit evidence that the individual has attempted to take his or her own life.
- Suicide: Death caused by self-inflicted suicide.

The most reliable predictor with which suicidal behavior has been correlated is the presence of mental illness, although suicidal behavior is the result of a melting pot of factors at different levels that converge in the same individual. The most frequent comorbidities with this disorder, according to the DSM V are: major depressive disorder, schizophrenia, schizoaffective disorder, anxiety disorders, substance use disorders, borderline personality disorder, antisocial personality disorder, eating disorders and maladaptive disorders. In fact, according to psychiatrists from the Community of Madrid, it is estimated that 90% of people who present suicidal behavior have some kind of mental illness. On the other hand, a series of behaviors have been identified that may give rise to suspicion of suicidal behavior, such as the purchase of a weapon, accumulation of medication, depressive mood or with very abrupt changes, detecting a certain fixation with death (through conversations, drawings, music, visits to websites related to death, signs of elaborate planning...).

Although it has been mentioned that major depression is a pathology that carries a high risk of suicide, it is important to detect a patient with possible depression. To do so, special attention should be paid to the presence of 5 or

more of the following signs and symptoms for at least 2 weeks:

- Depressed mood
- Disinterest in pleasurable activities
- Decreased or increased appetite leading to weight loss or weight gain
- Insomnia or hypersomnia
- Psychomotor agitation or retardation
- Fatigue or loss of energy
- Excessive or inappropriate feelings of worthlessness or guilt.
- Inability to think or concentrate or make decisions.
- Recurrent thoughts of death, with or without a specific plan.
- Somatic complaints (headaches, abdominal pain...)

There is also talk of so-called "suicide contagion", which is a phenomenon in which a suicide that occurs in one community (town, school, etc.) may lead to another suicide in the same community. This seems to be due to the fact that humans have a tendency to repeat behaviors imitatively among ourselves. Thus, in a community where suicide has occurred, vulnerable individuals *per se* see their risk markedly increased.

Epidemiology of suicide

Suicide is considered a universal, timeless phenomenon with diverse cultural and socio-political conceptions (21), as well as a global and universal public health problem, affecting all population groups and social strata. According to the World Health Organization (WHO), the practice has increased by 60% in the last 45 years (22) and, according to recent figures, about 703,000 people take their own lives annually worldwide.

According to INE data, suicide is the leading cause of death in Spain among young people aged between 15 and 29. On the other hand, according to

the WHO, suicide is the second leading cause of death among young people in the world (after traffic accidents), leading to a decrease in life expectancy in this population group.

In Europe, according to recent studies, the highest suicide rates are found in Latvia, Lithuania and Montenegro, with more than 20 suicides per 100,000 inhabitants. Albania, on the other hand, is the European country with the lowest rate, with 4.3 casesper 100,000 inhabitants.

In terms of classification by sex, several studies agree that self-harm attempts are more frequent in the female population, while completed suicides are more frequent in the male population (21). Data provided by the Telephone of Hope show that 65% of the calls they receive from people at risk of suicidal behavior are from women, compared to 35% from men, which may suggest that the female population adopts a more reflective attitude and is more aware of the need for help. This trend is maintained in all age groups, although in children under 13 years of age suicidal thoughts are more recurrent in boys, according to Save The Children. According to the same source, it is from the age of 13 that the turning point in terms of gender occurs, as well as a tripling of the number of cases. It is most common for the first thoughts to occur in early adolescence, and the risk of suicide increases with age. This is why it is considered essential to detect and acton the first signs of suicidal thoughts.

About 3,000 people commit suicide every day worldwide, which represents about 16 people per 100,000 inhabitants, and a total of 1,000,000 suicides per year, giving an average of one death every 40 seconds.

For every suicide there are 20 people who attempt self-harm. Suicide is the leading cause of death in many countries around the world and one of the leading causes of death in the adolescent population. With increasing age, the risk of suicide increases fivefold, which means that suicide accounts for 2% of the global burden of disease, in addition to the suffering it causes in the family environment.

Epidemiology of adolescent suicide

According to the WHO, an adolescent is an individual between the ages of 10 and 19. Adolescence is a period of life in which important physical, cognitive, social and psychological changes take place. These changes make the individual susceptible to a series of crises, which can be resolved physiologically as well as pathologically. It is in the latter where the psychological and psychiatric problems of adolescence come in, themost fatal of which is suicidal behavior (21).

There are studies that highlight certain risks to which an adolescent may be exposed, which make them particularly vulnerable, such as an unfavorable complex domestic- family situation, bullying, social problems, mental illness... We would be talking about an adolescent at risk. On the other hand, there are events or situations that are called "triggers" or *triggers*, which, with their appearance, end up triggering suicidal behavior,such as the loss of a loved one, a sudden change of environment, etc. (23). Save The Children points out that children who live in a vulnerable socio-economic situation (family with low income/low resources) are at greater risk of developing mental illnesses, which makes them more susceptible to committing suicidal behavior.

It has been shown that, especially among the younger population, an increase in coping and problem-solving difficulties, among others, is being established, which is believed tohave an important influence on this increase in suicidal behavior (20).

For example, since the onset of the recent Covid-19 pandemic, an increase in self-harmattempts and suicides was observed in patients of all ages, especially adolescents. It was a time characterized by a climate of uncertainty, fear and caused a discontinuity in people's usual activities (21).

Suicide is one of the leading causes of death in adolescents, and help-seeking for suicidal behavior in this population group is low. According to the

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WHO (51), suicide inthe adolescent population in Europe has one of the highest rates in the world.

Suicide deaths - standardized death rate, 2015

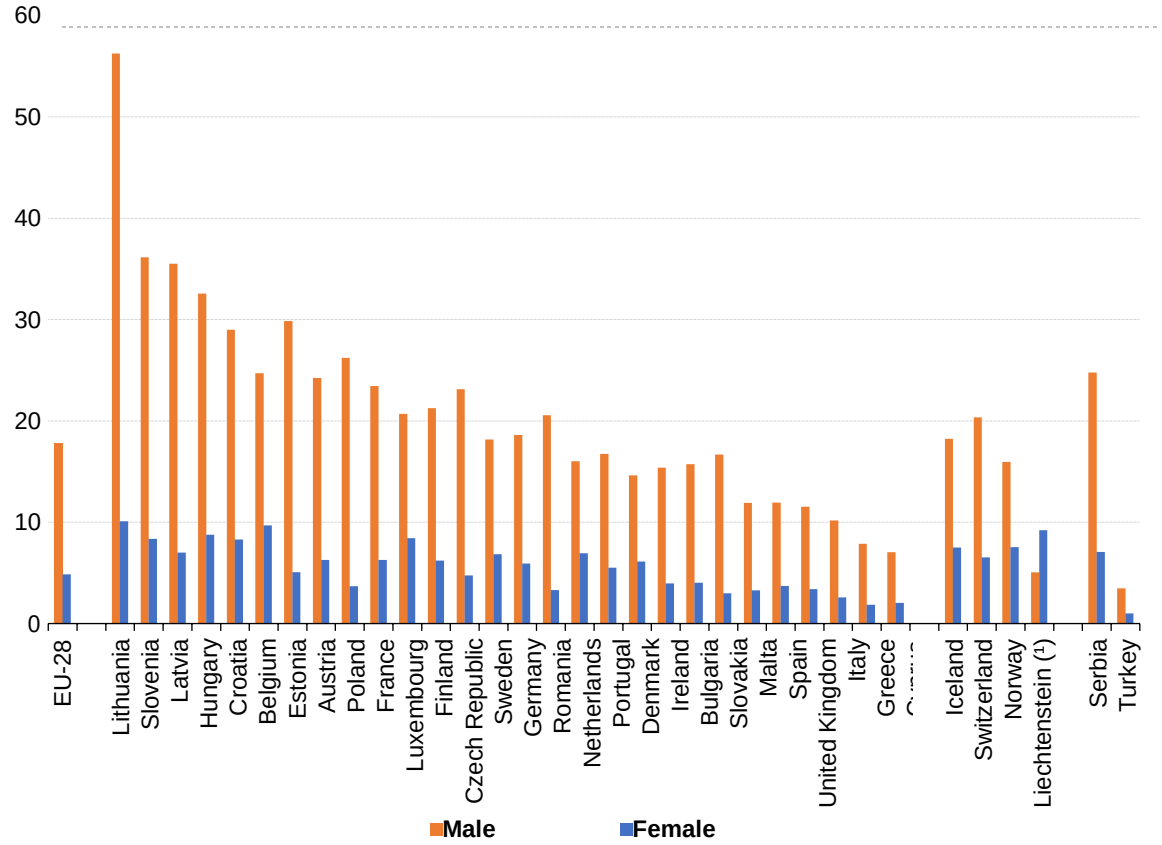
(per 100 000 inhabitants)

	Men	Women	Total
EU-28	17,9	4,9	10,9
Lithuania	56,3	10,1	30,3
Slovenia	36,2	8,4	20,7
Latvia	35,5	7,0	19,3
Hungary	32,6	8,8	19,0
Croatia	29,0	8,3	17,3
Belgium	24,7	9,7	16,9
Estonia	29,9	5,1	15,9
Austria	24,2	6,3	14,5
Poland	26,2	3,7	14,2
France	23,4	6,3	14,1
Luxembourg	20,7	8,4	13,9
Finland	21,3	6,2	13,5
Czech Republic	23,1	4,8	13,2
Sweden	18,2	6,9	12,3
Germany	18,6	5,9	11,7
Romania	20,6	3,3	11,4
Netherlands	16,0	6,9	11,3
Portugal	16,8	5,5	10,4
Denmark	14,6	6,1	10,2
Ireland	15.4	4,0	9,6
Bulgaria	15,7	4,0	9,3
Slovakia	16,7	3,0	9,2
Malta	11,9	3,3	7,6
Spain	11,9	3,7	7,5
United Kingdom	11,5	3,4	7,4
Italy	10,2	2,6	6,1

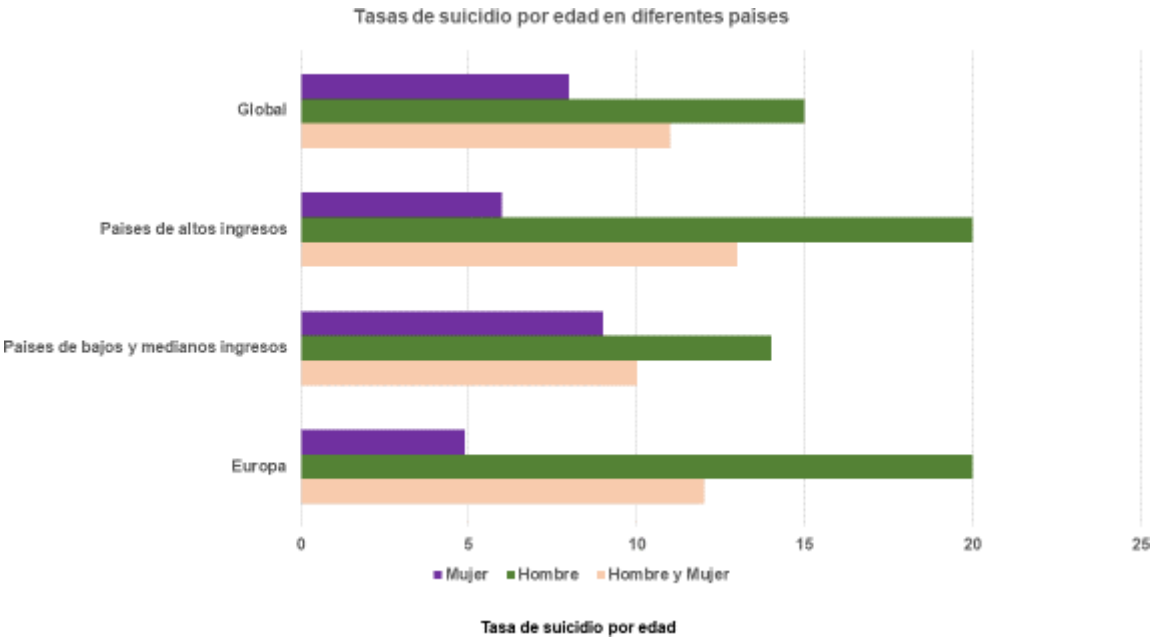
Greece	7,9	1,8	4,7
Cyprus	7,1	2,0	4,5
Iceland	18,2	7,5	13,1
Switzerland	20,3	6,5	13,0
Norway	16,0	7,5	11,7
Liechtenstein (1)	5.1	9,2	2,5
Serbia	24,8	7,1	15,0
Turkey	3,5	1,0	2,2

Source: Eurostat (online data code: hlth_cd_asdr2)

Suicide deaths - standardized rate of deaths, 2015
(per 100 000 inhabitants)



Suicide rates by age are lower in people under 15 years and higher in people over 70 years, with no gender difference anywhere in the world, although suicide rates by gender between the ages of 15 and 70 years are different in the countries analyzed in the WHO study (51).



The same study analyses the proportions of suicides by age and shows that globally, suicide accounts for 8.5 % of all deaths among 15-29 year olds, and is considered the second leading cause of death (after road traffic accidents).

It is striking to find that in high-income countries, suicide accounts for 17.6% of all deaths among young adults aged 15-29, ranking as the leading cause of death in both genders.

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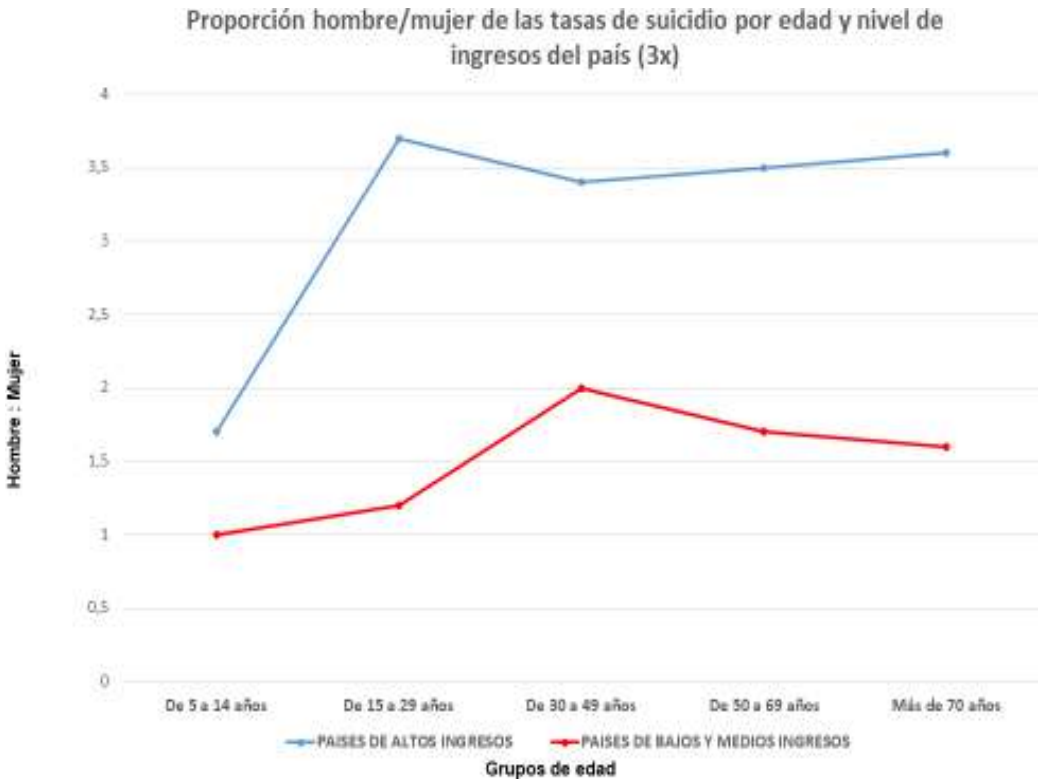

Biopsychosocial model of suicidal behavior

Martín Pérez, member of the Psychological Intervention in Emergencies Group of Castilla y León, determines that the act of suicide is the final result of a series of factorsthat converge in an individual.

On the one hand, there is the individual, who must be conceived as a unique entity, as well as the circumstances surrounding him/her and his/her interactions with the environment at a given time and place, making it difficult to generalize. However, different variables can be described that could explain certain behaviors or tendencies.

Negative thoughts (ineffectiveness, inability, guilt, etc.) and adverse external stimuli (family/sentimental problems, job dismissal, etc.) may converge

in an individual, which will lead to the appearance of threatening thoughts (lack of alternatives, unfeasibility of solutions, etc.), leading to high levels of anxiety and distress. In the first phase, the subject may visualize suicide as an escape from this suffering, i.e., a relief from the aversion.

Subsequently, the second phase begins, in which the subject plans the suicidal act (time, method, place, etc.) and prepares to carry it out.

Risk factors at the molecular level

Studies postulate that while everyone is more or less susceptible to suicide, there are a number of factors that may increase the risk:

- Genetic and epigenetic factors: certain genetic variants increase the predisposition to suicidal behavior, which is an individual psychiatric condition. It is not surprising that, in many cases, a patient with suicidal behavior has a family history of such behavior.
- Neurotransmitters: a decrease in serotonin is associated with depressive states and therefore more prone to suicide, and a dysregulation of glutamate metabolism may correlate with suicidal behavior.
- Hormonal factors: dysregulation of the hypothalamic-pituitary-adrenal axis, as well as the polyamine system, has been observed in individuals who have been suicidal.

Risk factors for suicidal behavior in adolescents

When we talk about risk factors in adolescents, the first thing to keep in mind is that suicidal behavior is usually multifactorial (22). Thus, there are a multitude of factors that should be taken into account when assessing the risk of suicidal behavior in adolescents.

The first factor to consider in terms of risk factors is undoubtedly previous psychiatric disorders. In a US study, it was found that the likelihood of suicide attempts increased by almost 250% with each additional psychiatric disorder; the disorder most associated with suicide attempts according to this particular study was depression, present in almost90% of cases of suicide attempts (23).

Likewise, some comorbidity with anxiety disorder is also found, although there is some difficulty in proving the relationship between anxiety and suicidal risk in adolescents as a causal factor, it is clear that anxiety is a risk marker for suicide-related behaviors (24).

Another factor to be considered in terms of the risk of suicidal behavior is undoubtedly the use of drugs and alcohol (25).

Excluding tobacco, alcohol and cannabinoid-based substances are the most commonly abused drugs. For both, a correlation has been demonstrated between their use and increased risk of suicidal behavior in adolescents, and even with increased lethality in suicide attempts; in this field, temporary patterns of abuse may appear long before the onset of suicidal behavior, and different patterns of abuse can be found (26).

Another factor to be considered with regard to suicide risk is undoubtedly previous suicide attempts as a risk factor, both in terms of the repetition of the attempt and the methods used, lower or higher lethality (27).

One of the most important areas in which adolescents grow up is undoubtedly school. This is why this aspect also has a place in the problem of adolescent suicide; in fact, there is literature that links school difficulties, such as

academic failure, with an increased risk of mental disorders, substance abuse and suicide (28).

With regard to the school environment, another aspect to take into account is bullying. There is ample literature demonstrating the relationship between bullying, self-harm, and even suicidal behavior, both at the level of victims and aggressors in relation to unexposed adolescents (29)(30).

With regard to this problem, one aspect to take into account, given the current relationship of adolescents with social networks, is cyberbullying. Victims of cyberbullying have a higher risk of presenting both self-harming and suicidal behavior; in parallel, bullies also suffer from a higher risk of suicidal behavior compared to people who are not involved in cyberbullying (31).

Regarding family history of suicidal behavior as a risk factor, there is literature showing that there is an important factor at the genetic level, associating certain genes with a higher probability of mental health disorders and even suicidal behavior (32).

Another aspect that certainly needs to be developed in this framework is the situation of LGTBIQ+ adolescents. A national study in England that developed the determinants of suicidality and self-harm in LGTBIQ+ young people found that those affected by homophobia, biphobia, or transphobia, together with distress about hiding their identity and feeling excluded or unable to talk about it, were more likely to engage in suicidal behavior. In addition, those who identified as transgender were almost twice as likely to engage in self-harm and 1.5 times more likely to plan or attempt suicide than other study participants (33).

As described in the introduction, the adolescent's maturation process is a product of the social interactions that he or she generates with his or her environment; therefore, certain aspects of family relationships can undoubtedly be considered a significant factor in the risk of suicidal behavior in adolescents. Stressful life events, dysfunctional relationships with family members, stress or feelings of loneliness are aspects to be taken into accountas risk factors (34).

Thus, a hostile family environment, dysfunctional relationships between different family members or the adolescent's perception of a lack of family support may be a factor to betaken into account with regard to suicidal behavior in adolescents. (35)(36). In short, we can affirm that young people with low levels of family support have a higher risk of suicidal conception. Specifically, perceived parental support appears to be a marker for suicide risk (37).

Suicide bereavement is also a risk to consider; adolescents who experience a death bysuicide in a close family member are more likely to engage in drug or alcohol use, violentbehavior and suicidal conception or behavior (38).

Another aspect that is important to note with regard to adolescents is the socio-economicconditions of the country in which they reside. Suicidal behavior and suicide attempts and conception are a major public health problem in low-income countries, such as Africa or the Western Pacific. (39).

It is evident that adolescents in disadvantaged countries are vulnerable to circumstancespredisposing them to compromised physical and mental health and develop without having their basic needs met. It is also noted that cultural differences or adaptive difficulties in young migrants, leading to different values and even racist attitudes of the host society, can lead to desperate measures being sought in children and adolescentswho have difficulties (40).

Protective factors for suicidal behavior among adolescents

In the same way that the risk factors developed above exist, there are also factors that are considered to be protective for suicidal behavior in adolescents.

Matel-Anderson et al. list affective connections with others, trust/faith, the ability to express stressful feelings or thoughts, and having plans for the future as protective factors for suicidal behavior, as seen by nurses in psychiatric institutions (41).

However, in other literature consulted, other more specific potential protective factors are noted; some of the risk factors mentioned above become protective factors if they are developed in a way that benefits the adolescent rather than being a stress factor. A clear example of this premise is school performance. The literature suggests that hard work and achievement, i.e., school success, is a protective factor in the same way that poor school performance can be related to suicide risk (42).

Thus, at the school level, the satisfaction of adolescent psychological needs (i.e., autonomy, feeling competent, and relating to others) is vital as a protective factor for adolescent well-being (43).

Specifically, high life satisfaction may be considered a protective factor along with adequate self-esteem, as feeling affirmed about one's self-worth and acceptance by one's environment may help adolescents to see their problems as temporary or solvable. Likewise, family support and bonding may also be considered protective factors, perhaps because adolescents who perceive greater parental or family support will feel more connected to their family unit (44).

Thus, it can be considered that the greatest protective factors in terms of the development of suicidal conception and behavior are the satisfaction of the adolescent's basic psychological needs, both at family and school level. Myths and realities of teenage suicide.

When it comes to the reality of suicidal behavior, especially in adolescents, there are irrational and profound misconceptions about suicide. These are misconceptions that need to be removed from the social discourse in order to provide the necessary tools for the prevention of this public health problem. According to Castellvi-Obiols et al. (45)the main ideas to work on are the following:

1. "Once a person has had a suicide attempt, they will always be suicidal". As noted above, both suicidal conception and suicidal behavior do not stem from a single cause, but derive from multifactorial situations, it is a

complex situation and, as such, should not be reduced to a stigma (9).

2. "Talking about suicide is a bad idea as it can trigger more suicides". This statement is half false. When dealing with suicide in the media, only 4.5% of the content is related to the prevention of these behaviors, compared to 95.5% which are risk factors. In other words, this topic is dealt with as a current news item, without considering the informative aspect with contents referring to helplines, available resources, psychological aspects, and explanation of risk behavior (46).

   From this we understand that, although the sensationalism and cumbrousness of certain media are harmful, dealing with information from an informative point of view in the media can be positive, especially at the public level from an informative point of view, with a view to raising visibility.

3. "Only people with mental disorders manifest suicidal behavior or all peoplewho commit suicide are depressed".

   As explored above with regard to suicidal risk factors, although mental disorders are a risk factor for suicidal conception and behavior, under no circumstances can we claim that suicide is exclusively the domain of people with psychiatric disorders.

4. "The person who commits suicide wants to die or is determined to die". According to Castillo-Ledo et al (47)we cannot consider adolescent suicidal behavior as an act simply towards the goal of dying. He states that the suicide attempt belongs to an internal debate between the desire to stop suffering and the desire to live.

5. "People who talk about suicide don't mean they want to do it, or, in other words, people who threaten suicide never commit suicide".

   As Villar-Cabeza's book "Dying before suicide" puts it: "only those who have communicated their intentions to take their own life and receive the help they ask for are at less risk of suicide. If they do not receive it, they are exposed to a greater risk than those who have not expressed their

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suicidal intentions" (48).

Other ideas related to the previous ones that it is important to eradicate in order to overcome the barriers and obstacles that exist at a social level in order to be able to tackle this problem, according to Asean (49). According to Asean (49), there is an erroneous belief that there are very few people who commit suicide, which is why it can be considered a minor problem in terms of public health.

This statement is simply disproved by the first part of the theoretical framework of this thesis, the statistics and epidemiology mentioned above do not speak at all of a minority or minor problem.

The same author also mentions that suicide can also be seen as inevitable. This is a completely erroneous statement, since, according to UNICEF, 100% of suicides are considered to be preventable (50).

Methods of suicide in adolescents

With regard to the methods of suicide used by adolescents, there is literature that shows significant differences in the method used according to the age, gender, or origin of the adolescent in question. The most frequent method of suicide globally, for both genders, is hanging, followed in the case of females by pesticide poisoning and in the case of males by suicide by firearm. Thus, these methods are the most prevalent globally (51).

Despite some differences observed in gender studies, most Eastern European countries, as well as Commonwealth countries and some South American countries, are part of a group of countries where hanging predominates; however, pesticides were the predominant method in Central America, some South American countries, and in Sri Lanka and Fiji, particularly among young women compared to men. However, it should be noted in this

area that the use of this method is likely to be underestimated, as pesticide and pesticide poisoning is high in low-income countries. In parallel, there is a group of countries and territories that have a more diverse range of suicide methods. For example, in some countries, suicide by firearm has been found to be the second most prevalent method of suicide in men, followed by pesticide use; Israel and the USA are the countries with the highest prevalence of firearm suicide in young men.

In another group of countries, also with regard to men, a predominant method in this group, together with hanging, is jumping from a high place, or jumping in front of a moving object. This group includes southern and central Europe, and some Asian countries.

Similar to the case of men, there is a group of countries where women also had hanging as the most prevalent method, although there was a similar prevalence of poisoning by pesticides, drugs and jumping from a high place. This group of countries includes most of Central Europe, but also Central American countries, as well as some South American and Asian countries. In addition, also with regard to women, there is a small group of countries (including South Korea, Spain and Italy) where jumping from a high place is the predominant method. It should also be noted that it is difficult to assess suicide methods globally, as there are countries that do not report data to the WHO, and there are adolescent suicides assessed as accidental in some countries (52).

It is important to address the issue of access to firearms in particular, as this is an area where suicide prevention is of particular importance, and given the current freedom of access, restricting the purchase of firearms is especially urgent. The results of several studies in the USA suggest the need to expand suicide prevention initiatives in those countries in particular, especially among adolescents from disadvantaged backgrounds(53).

Another variable to consider is the importance of the age of the first suicide attempt, as well as the importance of receiving treatment after a first

attempt to differentiate multiple attempts versus adolescents who make a single attempt. Although the method and lethality of this first attempt are associated with intentionality, these characteristics may not be as important as other characteristics of the first attempt in question. The importance of early detection, psychoeducation and linkage to mental health services is also highlighted (54).

Regarding the differences between suicide attempts between adolescents and adults, adolescents had a longer history of suicide attempts than adults. They also used more non-lethal methods, such as poisoning with non-prescription drugs, and had a 5 times higher odds ratio for suicide attempts with painkillers. Suicide attempt intent in adolescents is comparatively less severe and less lethal compared to adults (55).

Thus, suicide attempts among adolescents show differences from attempts made by adults, both in method, motivation and even intent. If we consider the characteristics of suicide attempts in adolescence, it is necessary to understand the circumstances of the adolescents who make these attempts and to develop the necessary programs and interventions to prevent the situations among these groups.

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