

# Psychosocial autopsy in cases of suicide in child and adolescent populations: A Systematic review

## Autopsia psicosocial en casos de suicidio en poblacion de niños y adolescentes: Una revisión sistemática

María Laura Vergara-Álvarez<sup>1\*</sup>, María Angelica Vivas Domínguez<sup>2</sup>, Boris Sose Señas Sierra<sup>3</sup>,  
Mónica Liliana Romero Jiménez<sup>4</sup>, Juan Guillermo Macías Sánchez<sup>5</sup>, Pavel Eduardo Rodríguez  
Durango<sup>6</sup>, María Natividad Elvira-Zorzo<sup>7</sup>

### SUMMARY

*The purpose of the study was to develop a systematic review to explore psychosocial autopsy in cases of completed suicide in a population of children and adolescents. The methodology was based on the Preferred Reporting Items for Systematic Reviews (PRISMA) and was supported by a quantitative approach, grounded in the principles of exploratory systematic reviews. The search considered publications*

*in English focusing on the last five years (2020-2025) to compile the most recent studies in this thematic line, of which six investigations were included, identified in the SpringerOpen, Scopus, and Web of Science databases. The results indicate that social networks can be a risk for adolescent suicide by encouraging victimization and imitation, but also provide peer support, which highlights the need for digital literacy and cyberbullying prevention. Also, factors such as depression, family violence, and childhood abuse influence suicidal behavior. In addition, psychosocial autopsy is proposed as a key method to identify factors that can predict suicide and develop more effective intervention strategies in this vulnerable population.*

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ORCID: <https://orcid.org/0000-0001-9600-2956><sup>1</sup>

ORCID: <https://orcid.org/0000-0002-6766-5010><sup>2</sup>

ORCID: <https://orcid.org/0000-0002-5530-6731><sup>3</sup>

ORCID: <https://orcid.org/0000-0001-9193-499X><sup>4</sup>

ORCID: <https://orcid.org/0000-0001-9732-4340><sup>5</sup>

ORCID: <https://orcid.org/0000-0002-4062-9538><sup>6</sup>

ORCID: <https://orcid.org/0000-0003-1070-6093><sup>7</sup>

<sup>1\*</sup> School of Social Sciences, Arts and Humanities, Universidad Nacional Abierta y a Distancia, Corozal (Colombia). E-mail: [maria.vergara@unad.edu.co](mailto:maria.vergara@unad.edu.co)

<sup>2</sup>Vicerrectoría de Inclusión Social para el Desarrollo Regional y la Proyección Comunitaria, Universidad Nacional Abierta y a Distancia, Corozal (Colombia). E-mail: [maria.vivas@unad.edu.co](mailto:maria.vivas@unad.edu.co)

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<sup>3</sup>Escuela De Ciencias Sociales, Artes y Humanidades, Universidad Nacional Abierta y a Distancia, Bogotá (Colombia). E-mail: [boris.senas@unad.edu.co](mailto:boris.senas@unad.edu.co)

<sup>4</sup>School of Social Sciences, Arts and Humanities, Universidad Nacional Abierta y a Distancia, Bogotá (Colombia). E-mail: [monica.romer@unad.edu.co](mailto:monica.romer@unad.edu.co)

<sup>5</sup>School of Social Sciences, Arts and Humanities, Universidad Nacional Abierta y a Distancia, Bogotá (Colombia). E-mail: [juan.marcias@unad.edu.co](mailto:juan.marcias@unad.edu.co)

<sup>6</sup>School of Social Sciences, Arts and Humanities, Universidad Nacional Abierta y a Distancia, Bogotá (Colombia). E-mail: [pavel.rodriguez@unad.edu.co](mailto:pavel.rodriguez@unad.edu.co)

<sup>7</sup>Department of Education and Humanities, Universidad Americana de Europa, Cancun, Mexico. E-mail: [maria.elvira@unade.edu.mx](mailto:maria.elvira@unade.edu.mx)

## RESUMEN

*El propósito de este estudio fue desarrollar una revisión sistemática para explorar la autopsia psicosocial en casos de suicidio consumado en una población de niños y adolescentes. La metodología se basó en los Elementos de Información Preferidos para Revisiones Sistemáticas PRISMA, y se apoyó en un enfoque cuantitativo basado en los principios de la revisión sistemática exploratoria. La búsqueda tuvo en cuenta las publicaciones en inglés centradas en los últimos cinco años (2020 - 2025) para recopilar los estudios más recientes en esta línea temática, de los cuales se incluyeron 6 investigaciones identificadas en las bases de datos SpringerOpen, Scopus y Web of Science. Los resultados indican que las redes sociales pueden ser un riesgo para el suicidio adolescente al fomentar la victimización y la imitación, pero también proporcionan apoyo entre iguales, lo que pone de manifiesto la necesidad de la alfabetización digital y la prevención del ciberacoso. Asimismo, factores como la depresión, la violencia familiar y los malos tratos en la infancia influyen en el comportamiento suicida. Además, se propone la autopsia psicosocial como método clave para identificar los factores que pueden predecir el suicidio y desarrollar estrategias de intervención más eficaces en esta población vulnerable.*

**Palabras clave:** Autopsia, psicosocial, suicidio, niños, adolescentes, PRISMA.

## INTRODUCTION

Suicide is a growing public health problem worldwide and is among the ten leading causes of death in many countries, with more than 700 000 people losing their lives each year due to this phenomenon (1). Its complexity, influenced by psychosocial and psychiatric factors, has made its prevention a constant challenge, being considered a multifactorial phenomenon affected by several variables.

In a report by the Pan American Health Organization (PAHO) (2) on violence and health, it stated that in the year 2000 some 815 000 people died from this cause worldwide, representing a global annual mortality rate of 14.5 per 100 000 people, equivalent to 1 death every 40 seconds; however, suicidal behavior varies between countries and even between regions with similar levels of development. Colombia has experienced a significant increase in cases since 1998, from

1.3 to 5.5 events per 100 000 people in 2002. Between 2008 and 2010, the average suicide rate in men was 6.0 per 100 000 people, while in women it ranged from 3.6 to 4.1 per 100 000 people. For 2011, according to preliminary data from the National Institute of Legal Medicine and Forensic Sciences (INMLCF), there were 1 625 cases, representing a rate of 3.5 per 100 000 people.

Among the populations most affected by this phenomenon are children, where it is the second leading cause of death in the 10-14 age group. Boys are approximately four times more likely to die by suicide than girls, who, in turn, are more likely to attempt suicide. At this stage of the life cycle, it is important to note that immature cognitive development affects children's ability to understand complex concepts such as causality, death, and suicide, which hinders their ability to handle stressful situations, make decisions, and solve problems. In addition, behavioral factors such as impulsiveness, coupled with family and environmental influences, play a crucial role in children's suicidal behavior (3,4).

Stressful events can trigger self-destructive actions, with attachment disorders, family discord and abuse being important risk factors. Likewise, family history of suicidal behavior and psychopathological characteristics, such as violence or substance abuse, increase the likelihood of suicide in children.

A widely accepted definition of suicide is that made by the World Health Organization (WHO), that understands it as an intentional action with a lethal outcome, which is carried out by a person with full knowledge or anticipation of this outcome, where biological, genetic, psychological, social and environmental factors interact and make it a complex problem (6). Another way of understanding suicide is from the perspective of Chávez-Hernández et al. (7), who define it as a multidimensional distress that an individual perceives as the best solution to their suffering. This distress is mainly characterized by intolerable psychological pain, originating in unmet psychological needs, and arising from emotions such as hopelessness and helplessness. In addition, it manifests itself in an ambivalent cognitive state that is not necessarily limited to people with psychiatric disorders. It also views

suicidal behavior as a continuum ranging from suicidal ideation to planning, attempts, and completed suicide, including the material and textual traces left by the subject.

However, numerous studies have reported a high prevalence of mental disorders among suicide victims, such as affective disorders, comorbidity with substance abuse and, in some cases, conduct disorders or bipolarity (8-10). However, a considerable percentage of these individuals have not received adequate psychiatric treatment before their death. It is estimated that only 14 % to 50 % of adolescents or young adults who commit suicide have had access to some form of prior treatment (10), highlighting a significant gap in early intervention. Although the identification of mental disorders has been key to understanding suicide, it remains insufficient to predict which individuals are most at risk. The lack of access to adequate psychiatric treatment is evident, especially when comparing suicide victims to psychiatric inpatients. However, since it is a multidimensional phenomenon, it is not possible to estimate specific causes if we only try to understand individual approaches, so it is necessary to propose alternatives for understanding at the psychosocial level, which allow us to analyze social factors and contexts, family, work and community dynamics, as well as sociocultural aspects, such as social support, stressful life events and the economic or community environment of the person, among others. It is understood that the psychological and social condition of the suicidal person is largely due to an inappropriate functioning between interdependence, interrelation and social reorganization (11).

Against this background, the need for innovative approaches to better understand the pathways leading to suicide is evident. In this regard, psychosocial autopsy has emerged as a key tool to investigate the factors that lead people to suicide, allowing for a comprehensive analysis of the risk factors and psychosocial circumstances surrounding the victims.

Continuing this same idea, psychosocial autopsy is an invaluable tool for improving understanding of the factors contributing to suicide and for addressing deficiencies in mental

health systems. It is the most direct and effective technique for retrospectively investigating psychosocial and psychiatric factors influencing suicide (12). Through semi-structured interviews with family, friends, and people close to the victim, this method allows for the reconstruction of the person's living environment, identifying triggering factors, and assessing the utilization of mental health services. Through the detailed collection of retrospective information, this method can provide researchers and public policy makers with concrete data to enable them to formulate more targeted and effective suicide prevention strategies.

From the perspective of authors such as Campaña (13), suicide in Latin America is a phenomenon influenced by social, political and economic conditions. According to this author, factors such as unemployment, hunger, marginalization and socioeconomic changes generate hopelessness and loneliness, interacting with individual and family vulnerabilities to create a complex web that facilitates suicidal behaviors. In this context, psychosocial autopsy emerges as a crucial tool to unravel these complex interactions, as it is not limited to psychological aspects, but also examines the social and structural dynamics that affect individuals.

The value of psychosocial autopsy lies in its ability to detect variables that might be missed in traditional epidemiological or clinical studies. Factors such as personal circumstances, emotional state, untreated mental health problems, and previous suicide attempts can be analyzed in depth to identify patterns of risk. This approach facilitates the formulation of more specific and effective suicide prevention strategies by providing a comprehensive view of the victim's psychosocial and family context (13).

In coherence with the above, in the face of these challenges, although there are antecedents related to psychological autopsy, which have consolidated it as one of the most valuable methodologies for investigating completed suicide, there are limitations inherent to the retrospective nature of this tool, such as the bias of the data collected because, regardless of how many informants provide information on a suicide, it will never be possible to have accurate

data on the categories studied. This is because the most crucial perspective, that of the suicidal person, is not accessible (14).

These limitations do not detract from its application and use, as the study of completed suicide cases remains relevant and significant for the understanding of suicidal behaviors. However, psychosocial autopsy emerges as a key tool for advancing the knowledge of suicide. It not only provides detailed information on psychosocial and psychiatric factors, but also suggests crucial areas of intervention for prevention, such as improving access to psychiatric treatment and addressing less documented factors, such as exposure to suicidal behaviors and lack of early intervention, by determining the personality profile, personal, social, family and contextual motivations, as well as possible symbolic messages, latent in the execution of the suicidal act (9,15).

In recent years, very few psychological autopsy or psychosocial autopsy studies have been conducted among children and adolescents, which is not sufficient to determine the factors that indicate this phenomenon. These studies have identified not only mental disorders as a critical factor, but also a series of psychosocial variables, such as problems in family relationships, adverse life events, educational and legal difficulties, and family psychopathology (9,10,12), which justifies the importance of expanding the theoretical and empirical input around this phenomenon.

### **The phenomenon of suicide in children**

The phenomenon of suicide among children in Colombia represents a public health problem that has been on the rise over the last decade, with 2 727 children reported to have committed suicidal acts. This figure corresponds to an average of six cases per week (16). This reflects not only a crisis in child mental health but also shows deficiencies in the structural systems of care and suicide prevention in this population.

The reported statistics are alarming, since during the COVID-19 pandemic, suicide attempts in the country reached a rate of 722 attempts per 100 000 inhabitants, representing an increase of 25 %, of which 39 % involved suicide attempts in minors (17). These data indicate that factors such as social isolation and the interruption of

social and school routines of minors may have contributed to the deterioration of their mental health. Nevertheless, in the post-pandemic period, cases continued to increase considerably in the country, with 145 suicides of children between the ages of 6 and 17 years reported between January and June 2024 (18). Similarly, in 2023, during the first semester, the Attorney General's Office (19), issued a report where 1 540 suicides were recorded in Colombia, of which 1 % corresponded to suicides in early childhood, followed by 9.4 % in adolescents and 31 % in young people, which shows an upward trend towards immediate intervention programs. Given this, the Family Welfare Institute (20,21) highlights the need to focus prevention strategies on the child population, since the reports of Forensics (22) show that 43 % of suicides tend to focus on people between 5 and 25 years of age.

According to the Ministry of Health and Social Protection, between 2019 and 2023, there were 164 400 suicide attempts in the country. Of these, 51 373 were children and adolescents; that is, 31 % of the national total of attempts occurred in the age range of 5 to 17 years. The number of suicide attempts in children and adolescents fluctuated and decreased between 2019 and 2021; however, the most significant change occurred between 2021 and 2022, where a percentage variation of 41 % more is identified for 2022, and between that year and 2023, there was a brief decrease of 111 attempts (23).

According to the Observatorio de la Niñez, the main risk factors for suicide in children, adolescents, and young people are related to mental problems and disorders, marital conflicts, abuse, sexual violence, and socioeconomic difficulties (21). Faced with this problem, several authors have seen the urgent need to study the factors that contribute to the maintenance and increase of this phenomenon. The Save the Children Colombia Foundation (18) mentions some socioeconomic factors such as school bullying, high levels of poverty, social discrimination or lack of access to mental health services. Likewise, factors such as repeated exposure to armed conflict increase the vulnerability of minors.

On the other hand, studies carried out by Gómez-Tabares (24) mention predisposing factors such as the presence of mental disorders



in children, such as anxiety and depression, which are usually represented in impulsive and violent behaviors in minors, as well as low self-esteem and hopelessness, also play a relevant role in the appearance of self-injurious behaviors. On the other hand, Galvis et al. (25) affirm that neurobiological alterations and family psychiatric or suicidal behavioral antecedents are strong predisposing factors in the development of suicidal ideation.

Other factors such as the social and cultural context and the family area have also been studied as possible predisposing factors for suicidal behavior. In this sense, Cañón-Buitrago (26) states that suicidal behavior is determined by difficulties in the family system, such as the presence of sexual abuse, negligent parenting styles and domestic violence, situations that are usually not easily detected due to the absence of adequate tools for the management of frustration and conflict resolution at that specific stage of development. Likewise, the Instituto Colombiano de Bienestar Familiar (ICBF) (20,21) mentions that the cultural and social context also has a significant impact on the appearance of suicidal behaviors in childhood, since the presence of school bullying, social exclusion, and discrimination can generate feelings of hopelessness and isolation behaviors. Exposure to recurrent traumatic events increases the possibility of developing self-injurious behaviors.

This shows the urgent need to recognize the importance of mental health prevention in children as a collective responsibility, since the lack of knowledge of mental health in educational institutions, as well as the barriers to access to professional services in this area, must be addressed urgently (27). Thus, including emotional formation and character strengths in academic institutions is a fundamental factor in the prevention of suicidal behavior in minors.

### **Suicide Phenomenon in Adolescents and Young Adults**

Suicide in adolescents and young adults is a rapidly growing public health problem worldwide. According to the World Health Organization (WHO) (28), suicide in people

between 15 and 29 years of age represents the fourth leading cause of death, with the highest incidence rates in developing countries.

This is a problem that is just beginning to be studied, since, although it shares common factors with adult suicide, it is crucial to approach it from generational particularities. These differences are not only due to developmental aspects. Still, they are framed in the context of social, cultural, economic and technological changes that occur at an accelerated pace and affect the emotional balance of young people. Therefore, it is essential to understand this phenomenon as a public health priority, which necessitates a greater focus and effort on early risk detection (29).

Particularly in Colombia, this problem has shown a worrying increase in recent years, especially among adolescents. In 2023, 187 completed suicides were reported, of which 105 corresponded to males and 82 to females. This figure was surpassed in the first nine months of 2024, with 205 suicides reported, 115 of them in males and 90 in females. This reflects that males have a higher rate of completed suicide than adolescent females, excluding suicide attempts.

In the case of women, unwanted pregnancy in adolescence generates complications that, on certain occasions, can lead to suicide and, of course, to the loss of the pregnancy in process. The patriarchal society and gender stereotypes that reduce women to their reproductive role and motherhood have negative implications for the mental health of women who have infertility problems, who have abortions, or who have postponed motherhood because they have other priorities (30).

The factors that influence suicide among men are closely associated with economic and financial situations, among which the following stand out: i) frustrations and negative emotions derived from the inability to occupy more remunerated positions; ii) conflicts with parents over the distribution of land; and iii) lack of money to cover the family's needs (30).

According to Turecki and Brent (31), adolescent suicide is a multifactorial phenomenon influenced by various factors, including psychological, biological, environmental and sociocultural factors. From a psychobiological perspective,

studies such as that of Arensman (32) have identified alterations in serotonin and dopamine levels, which are considered predisposing factors to suicidal behavior. However, other studies, such as that of Brent and Melhem (9), mention the relevant role of genetic predisposition in the onset of suicidal behavior, since the presence of a family history of suicide increases vulnerability in adolescents.

Likewise, anxiety and depression have been directly related to youth suicide. According to the American Psychiatric Association (34), 90 % of adolescents who commit suicidal behavior have a history of mental disorders associated with depression and anxiety. In this regard, Esposito et al. (34) highlights the significant role of psychoactive substance use as a risk factor, since it reduces inhibition and increases impulsive behavior, facilitating the commission of self-injurious and suicidal behaviors.

However, there are other factors such as environmental and sociocultural factors, since constant exposure to adverse events such as physical and emotional abuse significantly increases the risk of suicidal behavior. Similarly, the history of school bullying and cyberbullying has recently become a relevant variable, increasing the risk of attempting suicide by up to three times compared to those who have not experienced such situations. In addition, social inequalities and lack of access to mental health services could be increasing the vulnerability of adolescents and young people to commit suicide (2), which aggravates the situation because early detection and timely treatment of mental disorders in this population is not contemplated.

On the other hand, the influence of the media and social networks on youth suicide has also been extensively studied. Phenomena such as the

“Werther effect”, where sensationalist coverage of suicides in mass media can induce suicidal behaviors in vulnerable populations, have been studied by authors such as Stack (35,36). In contrast, the implementation of the “Papageno effect”, which promotes the dissemination of narratives of coping with emotional crises, has shown promising results in suicide prevention (37).

Finally, in terms of prevention strategies, school-based mental health programs, restricting access to lethal methods, and training teachers and health professionals to detect warning signs are effective interventions. The promotion of protective environments, the creation of support networks, and the strengthening of content regulation in social networks have also been key strategies to reduce the incidence of suicide in adolescents and young adults (38).

## METHODS

The methodology and findings of this systematic review were reported according to the Preferred Reporting Items for Systematic Reviews (PRISMA) guidelines. Additionally, it employed a quantitative approach, grounded in the elements of an exploratory systematic review. Boolean algorithms were implemented for the exploration and structuring of the research paper.

A systematic search of relevant articles was conducted across various databases, including Springer Open, Web of Science, and Scopus. The search string used in this systematic review included the application of Boolean operators, together with keywords and search criteria (Table 1).

Table 1. Logical operators

Equations
"Psychological autopsy" and "Suicide" or = "Children" not = "Older adult" "Psychosocial autopsy" and "Adolescents" or "Suicides" not = "Disability" "Self-injury" and "Minors" or "Mental autopsy" not " Cognitive impairment" "Psychological autopsy" and "Suicide" or = "Children" not = "Older adult" "Psychosocial autopsy" and "Adolescents" or "Suicides" not = "Disability" "Self-injury" and "Minors" or "Mental autopsy" not " Cognitive impairment"

### Inclusion and exclusion criteria

The plan applied for this purpose was based on specific criteria, such as the nature of the studies analyzed, the relevance of the topic, the period considered, and the variables linked to the research (39). This methodology increases the chances of obtaining results with greater validity, thus reducing possible biases and risks in the process. We also reviewed the reference lists of the systematic reviews most relevant to the research. Eligible publications were those limited to reporting on psychological autopsy or psychosocial autopsy in cases of completed suicide. The search included publications in English, Spanish, and Portuguese, focusing on the last five years (2020-2025) to collect the most recent research in this thematic line.

Articles published in recent years with a multicenter approach were included in the review, as well as studies in several languages, due to their prevalence in scientific publications and their ability to provide relevant information for the development of science in this area. The review of these studies can be seen in Tables 2 and 3.

Similarly, all articles taken from indexed journals were downloaded, those that were a duplicate or did not meet the criteria initially established were eliminated and priority was given to publications with full text and abstracts and research notes were excluded, key information was extracted from the articles such as: year, databases, reference, type of document, name in original, country, objective, central study variables, population/sample, methodology, measurement instruments used, analysis of information implemented, description of the main results, recommendations and theoretical gaps, to elaborate a background matrix. This approach ensured that the most recent and comprehensive research was incorporated into the study, thereby contributing to an in-depth understanding of the topic.

In the search carried out, a series of research was obtained in each of the selected databases, which contributed to the consolidation of this review. From this, the exact texts chosen were transferred to the flowchart to make the filters according to the information of interest for the study.

Table 2. Cross-referencing of search terms in databases

Search	Databases	Final results			
"Psychological autopsy" and "Suicide" or = "Children" not =	Springer Open	880	524	1 320	2 724
"Older adult""Psychosocial autopsy" and "Adolescents" or "Suicides" not = "Disability" "Self-injury" and "Minors" or "Mental autopsy" not "CognitiveImpairment"	Web of Science	900	625	1 125	2 650
"Psychological autopsy" and "Suicide" or = "Children" not = "Older adult""Psychosocial autopsy" and "Adolescents" or "Suicides" not = "Disability" "Self-injury" and "Minors" or "Mental autopsy" not "Cognitive impairment"	Scopus	1120	800	1 420	3 340
	Total	2 900	1949	3 865	8 714

Table 3. Final research results by database

Database	Final Results
Springer Open	2 724
Web of Science	2 650
Scopus	3 340

### Selection of research

In this process, the selection was initially based on the last five years, considering the variables studied in this research. Likewise, direct access databases and open access databases were

reviewed, and scientific texts were excluded if they were duplicated, did not meet the established criteria, or only displayed abstracts or author notes (Table 4). This process is demonstrated in Figure 1, which shows the flowchart of the text selection process.

Table 4. Process of identification, elimination, and selection of items.

Boleanos No Articles in the Language	Spanish	AND, OR and NOT 3000 5714	English	
Databases	SpringerOpen	Web of Science	Scopus	Total
No Filter	2 724	2 650	3 340	8 714
No Access	1 324	1 500	1 840	4 664
R/ Incomplete/ Duplicates	1 350	1 050	1 100	3 500
Do Not Meet Criteria	48	98	398	543
Election	2	2	2	6

## RESULTS

In the review of studies on child and adolescent suicide and psychological autopsies, several papers were found that provide valuable information on risk factors, interventions and trends in the context of adolescent mental health. The most relevant findings of the studies analyzed are described below in Table 5.

### Social network use and adolescent suicide

One of the most recent studies, *Social media use of adolescents who died by suicide: lessons*

*from a psychological autopsy study* (39), focused on the impact of social media use on adolescents who died by suicide in the Netherlands. Through psychological autopsies of 35 cases, the researchers identified both negative and positive effects of social networking. Risks noted included dependency, imitation of suicidal behavior, victimization, and the creation of an identity around suffering. However, benefits were also highlighted, such as peer support and access to recovery stories. This study highlights the need to improve digital literacy among parents, educators, and health professionals to promote safe and conscious use of social networks. In addition, it is recommended to strengthen cyberbullying prevention and the implementation of digital



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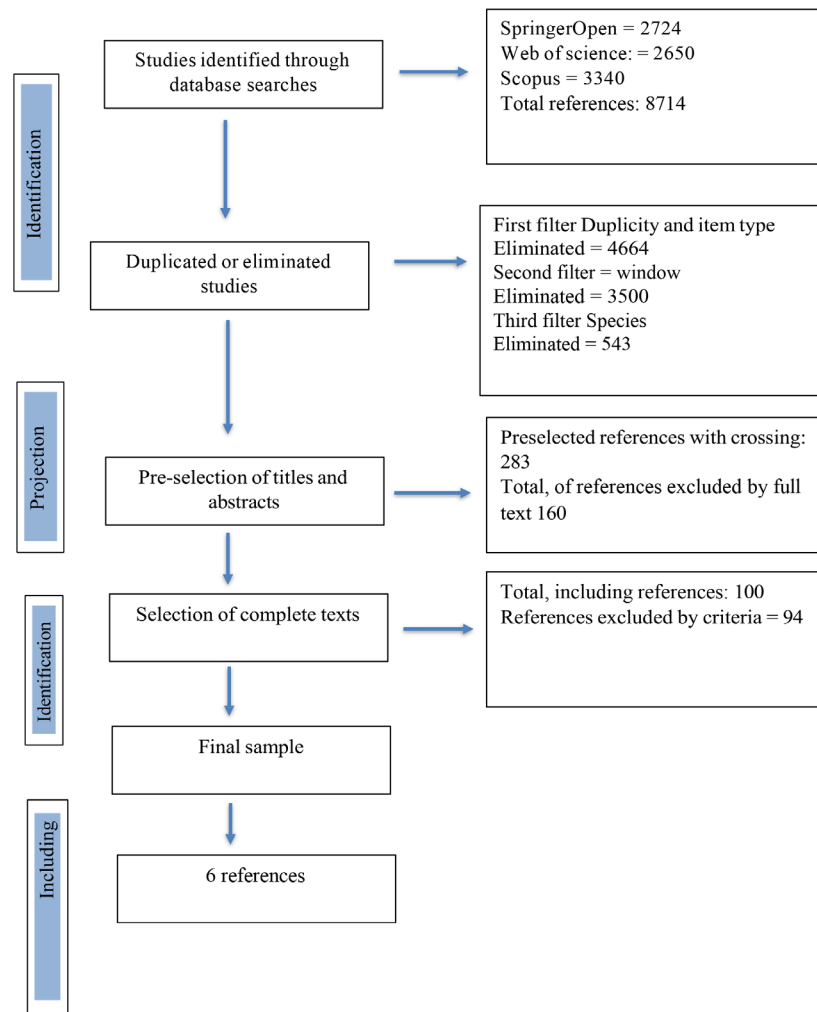


Figure 1. Flow chart of the study selection process.

interventions that encourage peer support and the promotion of positive online role models. It was noted that adolescent girls are particularly vulnerable to the adverse effects of social networks, which require specific attention.

### Value of peer informants in psychological autopsy studies

Another relevant study, *Additional Value of Peer Informants in Psychological Autopsy Studies of Youth Suicides* (40), analyzed the inclusion of peer informants in psychological autopsies

of youth suicides in the Netherlands. This work compared interviews with peers and parents of 16 cases of youth suicide and found that peers provided key information about aspects of social relationships, bullying, school experiences, social network use, and family dynamics, which parents were not always aware of or minimized. In addition, peers revealed precipitating factors such as substance use, academic pressure, and school stress. This study highlights the importance of including peers as informants in psychological autopsy studies, as their perspective can provide a deeper understanding of the risk factors and conditions that contribute to youth suicides.

Table 5. Results.

N	Title	Authors	Country	Language	DOI	Variable/ Keyword crosses	Methodology	Results and findings	Trends	Recommendations and theoretical gaps	Journal
1	Social media use of adolescents who died by suicide: lessons from a psychological autopsy	Balt et al. (2023)	Netherlands	English	<a href="https://doi.org/10.1186/s13034-023-00597-9">https://doi.org/10.1186/s13034-023-00597-9</a>	Social media, Suicide, Mental health, Adolescents, Psychological	The research used a qualitative psychological autopsy design, with semi-structured interviews with 35 adolescents who died by suicide. Interpretative Phenomenological Analysis was used in 55 interviews with family members and peers.	The study analyzed 35 psychological autopsies of adolescents in the Netherlands and found that social networks can be both harmful and beneficial. Risks include dependence, suicide mimicry, victimization, and grief-based identity, while Benefits include peer support and access to recovery stories.	The study highlights the impact of social networks on Dutch teenagers who died by suicide, the safe use of social networks. Digital intervention and peer support are recommended, with emotional support. special attention to vulnerable adolescents.	It is crucial to strengthen digital literacy and cyberbullying prevention to ensure the safe use of social networks. Digital intervention and peer support are recommended, with emotional support. special attention to vulnerable adolescents.	Child and Adolescent Psychiatry and Mental Health
2	Additional Value of Peer Informants in Psychological Autopsy Studies of Youth Suicides	Looijman et al. (2024)	Netherlands	English	<a href="https://doi.org/10.1177/10497323211022316">https://doi.org/10.1177/10497323211022316</a>	Suicide; adolescents; youth; young adults; mental health; research methods; prevention; illnesses and diseases; qualitative; psychological autopsy;	The research focused on understanding youth suicide through a psychological autopsy method. For this purpose, semi-structured interviews were conducted with 16 young people who had committed suicide. The Information provided by their friends and parents was compared, using a detailed and consistent analysis.	The study compared interviews with parents in 16 psychological autopsies of youth suicides in the Netherlands, highlighting that peers provided key information on relationships, bullying, stress, substance abuse, and academic pressure	The study highlights the importance of including friends in psychological autopsies of youth suicide, highlighting the influence of social networks, academic, stress, and substance use. It recommends their participation in prevention and mental health education	The study highlights the value of psychological autopsy peers in understanding youth suicide. It highlights theoretical gaps, such as the lack of systematic studies and the limited representation of migrant youth.	Qualitative Health

Continued in pag. 862...

...continuation Table 5. Results.

N	Title	Authors	Country	Language	DOI	Variable/ Keyword crosses	Methodology	Results and findings	Trends	Recommendations and theoretical gaps	Journal
3	Pandemic-related emergency psychiatric presentations for self-harm of children and adolescents in 10 countries (PREP-kids): a retrospective international cohort	Ougrin, et al. (2022)	England, Scotland, Ireland, Austria, Italy, Hungary, Serbia, Turkey, Oman, and the United Arab Emirates	English	<a href="https://doi.org/10.1007/s00787-021-01741-6">https://doi.org/10.1007/s00787-021-01741-6</a>	Self-harm - COVID-19 - Pandemic - Emergency presentation - Children - Adolescents	The study was based on a retrospective cohort design, examining emergency psychiatric patient records in 23 hospitals in 10 countries. Data on psychiatric emergencies for self-harm between 2019 and 2020 were compared to assess possible changes in the patterns of these cases.	The study examined emergency psychiatric consultations for self-harm in children and adolescents during the pandemic in 10 countries. Although overall decreased by 33%, those for self-harm increased by 7%, with more emotional disorders.	The study reveals that, during the pandemic, hospitalizations for self-harm in young people increased while access to psychiatric services decreased. It is recommended to strengthen community mental health, prioritizing early intervention and follow-up.	It is concluded that health services should prioritize the strengthening of community care to address psychiatric crises in young people during health emergencies.	European Child & Adolescent
4	Suicidal Ideation, Depression, and Insomnia in Parent Survivors of Suicide: Based on Korean Psychological Autopsy of Adolescent Suicides	Jung Lee et al. (2023).	South Korea	English	<a href="https://doi.org/10.3346/jkms.2023.38.e39">https://doi.org/10.3346/jkms.2023.38.e39</a>	Korea; Suicide Survivors; Suicidal Ideation; Depression; Sleep Wake Disorders	The study was conducted by psychological autopsy, conducting semi-structured interviews with 42 adolescents who died by suicide in Korea. In addition, standardized questionnaires were used to assess suicidal ideation, depression, and insomnia in these cases.	The examination incorporates suicidal ideation, depression, and insomnia in parents of adolescents who have died by suicide in South Korea, using psychological autopsies for this purpose. Forty-two parents of 35 deceased adolescents participated in this study. The results show that 75.6% of the parents had suicidal ideation, 73.2% had	The study analyzed the mental health of parents in South Korea after the suicide of their teenage children, showing high levels of depression, insomnia, and suicidal thoughts. Further psychological support and long-term studies are recommended.	It is concluded that surviving parents require specialized psychological support, and that future studies should include larger samples and long-term follow-up.	

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...continuation Table 5. Results.

N	Title	Authors	Country	Language	DOI	Variable/ Keyword crosses	Methodology	Results and findings	Trends	Recommendations and theoretical gaps	Journal
5	A multi-method psychological autopsy study On youth suicides in the Netherlands in 2017: Feasibility, main outcomes, and recommendations	Merelle et al. (2020)	Netherlands	English	<a href="https://doi.org/10.1371/journal.pone.0238031">https://doi.org/10.1371/journal.pone.0238031</a>	Korea; Suicide Survivors; Suicidal Ideation; Depression; Sleep Wake Disorders	The study used a multi-method psychological autopsy approach in the Netherlands, combining qualitative interviews with 66 parents, friends, and teachers, together with questionnaires administered to 43 parents and professionals. The data were analyzed using both qualitative and quantitative techniques to obtain a more complete picture of the phenomenon.	The study examines youth suicide in the Netherlands in 2017 through psychological autopsies using a multimethod approach. For this purpose, 66 interviews were conducted with parents, peers, and teachers (of 35 deceased adolescent individuals. The following risks (or risk factors) were found: bullying and cyberbullying, complex mental disorder, childhood adversity, and social networks. And two patterns were found: adolescents with h	It highlights patterns of vulnerability in perfectionist girls and boys with developmental disorders, in addition to the contagion effect in social networks. It is recommended to strengthen prevention, monitor digital content, and improve mental health care.	It is recommended to improve prevention, monitor the use of social networks, and strengthen early detection of mental health problems in adolescents.	PLoS One

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...continuation Table 5. Results.

N	Title	Authors	Country	Language	DOI	Variable/ Keyword crosses	Methodology	Results and findings	Trends	Recommendations and theoretical gaps	Journal
6	Comparison of Suicide Attempts and Suicide Deaths by Jumping from a High Place in Korean Children and Adolescents	Song et al. (2021)	South Korea	English	<a href="https://doi.org/10.3390/ijerph18189513">https://doi.org/10.3390/ijerph18189513</a>	Suicide; attempts; deaths; jumping; children; adolescents	The study Conducted a comparative analysis of suicide attempts and completed suicides by jumping among children and adolescents in Korea. It was based on reports provided by teachers and official data from the Korean Ministry of Education.	high self-demand and psychological problems, adolescents with developmental disorders, and with a feeling of being rejected.	The study compares attempted and completed suicides by jumping among South Korean youths Highlighting that the first attempt tends to be more lethal. Those who die show better school performance and fewer previous signs. It is recommended to restrict access, improve early detection, and strengthen prevention.	It is concluded that those who commit suicide may not show obvious signs of family or school problems, highlighting the need for more effective preventive strategies in educational and family settings.	International Journal of Environmental Research and Public Health



### Self-injury during the COVID-19 Pandemic

In a global context, the *Pandemic-related emergency psychiatric presentations for self-harm of children and adolescents in 10 countries (PREP-kids)* study (41) addressed emergency psychiatric consultations for self-harm in children and adolescents during the COVID-19 pandemic in 10 countries. Although overall consultations decreased by 33 % compared with 2019, cases of self-harm increased by 7 %, indicating an increase in emotional disorders in young people. This study underscores the importance of strengthening community psychiatric care services and prioritizing youth mental health during global health crises. The findings indicate that emotional disorders, such as anxiety and depression, intensified during the pandemic, suggesting that public health emergencies negatively affect the psychological well-being of adolescents.

### Impact of suicide loss on surviving parents

Another study focusing on parents surviving the loss of a child to suicide, *Suicidal Ideation, Depression, and Insomnia in Parent Survivors of Suicide* (42), examined the effects of loss on parents of adolescent suicide survivors in South Korea. The results showed that a high percentage of parents had suicidal ideation (75.6 %), depression (73.2 %), and sleep disturbances (42.9 %). In addition, the severity of depression and sleep disorders was correlated with the traumatic events experienced by the adolescents before their death. This study underscores the urgent need for specialized psychological support for surviving parents. It suggests that future studies should expand the sample and conduct long-term follow-ups to understand better the emotional consequences of suicide loss on family members.

### Juvenile suicides and risk factors in the Netherlands

A *multi-method psychological autopsy study on youth suicides in the Netherlands in 2017* (43) analyzed youth suicides in the Netherlands in 2017 through a multi-method approach involving interviews with parents, peers and teachers of 35 deceased adolescents. Risk factors

such as bullying (including cyberbullying), complex mental disorders, adverse childhood experiences, and the negative influence of social networks were identified. The results indicated two patterns: young people with high self-demand and psychological problems, and those with developmental disorders who felt rejected. This study recommends improving youth suicide prevention by monitoring the use of social networks and early detection of mental health problems in adolescents, especially in the school environment.

### Comparison of suicide attempts and completed suicides by high jump in South Korea

Finally, the study *Comparison of Suicide Attempts and Suicide Deaths by Jumping from a High Place in Korean Children and Adolescents* (44) compared suicide attempts and completed suicides by jumping from a *high place* in South Korean children and adolescents. The results showed significant differences in educational stage, suicide location, presence of suicide notes, and history of previous attempts. In addition, interrupted suicide attempts were found to be more related to emotional and behavioral difficulties. This study highlights the importance of developing more effective preventive strategies in educational and family settings, as those who commit suicide often do not show obvious signs of family or school problems.

In summary, the studies offer a comprehensive view of the risk factors associated with youth suicide, the importance of early intervention, and the value of considering different perspectives, such as that of peers, in psychological autopsy studies. They also highlight the relevance of improving prevention and support for affected families, as well as the use of social networks and mental health during crises, such as the COVID-19 pandemic.

## DISCUSSION AND CONCLUSIONS

In the selected studies, psychological autopsy is used as a fundamental tool to understand the circumstances and precipitating factors surrounding suicides in children and adolescents,

exploring the perceptions of the people closest to the deceased, including family members and peers, to obtain more precise information on the antecedents of the suicide. In addition, it made it possible to identify aspects such as suicidal ideation, depression, and insomnia in surviving parents, as well as to delve into the emotional states and traumatic experiences of adolescents before their death. This facilitated the identification of risk factors and pathways leading to suicide, providing a more complete understanding of previous events.

This tool is key to identifying risk factors in suicides that may not be detected in traditional approaches. Examining personal, emotional, mental health, and history of previous attempts allows for a more complete understanding of the context. This comprehensive approach facilitates the development of more effective and personalized prevention strategies aimed at addressing the underlying causes of suicide more precisely.

Among the populations most affected by this phenomenon are children, who are the second leading cause of death in the 10-14 age group. Boys are approximately four times more likely to die by suicide than girls, who, in turn, are more likely to attempt suicide. At this stage of the life cycle, it is important to note that immature cognitive development affects children's ability to understand complex concepts such as causality, death, and suicide, which hinders their ability to handle stressful situations, make decisions, and solve problems.

During adolescence, additional vulnerability factors emerge, such as unwanted pregnancy, which can trigger serious consequences, including physical and emotional complications, in some cases leading to suicide or pregnancy loss. Social pressure imposed by a patriarchal society and gender stereotypes that limit women to their reproductive role aggravate mental health problems. For this reason, comprehensive support is required to protect the well-being and quality of life of those who face such situations.

The findings obtained in this systematic review highlight the fundamental role of psychosocial autopsy in understanding the risk factors associated with suicide in child and adolescent populations. Consistently, the studies reviewed

have identified the presence of mental disorders, the influence of social networks, dysfunctional family conditions, and a history of trauma as factors of great relevance in suicidal behavior in this population (40,41,43). These results coincide with previous studies that have pointed out that suicide in minors is a multifactorial phenomenon, determined by psychological, social, and environmental variables (24).

The studies reviewed reveal a recurrent pattern in socially insecure young people who find in social networks a positive reinforcement online, thus distorting the perception of their own mental health. Although no direct link was identified between the excessive use of these platforms and suicide, it is recognized as a triggering factor that intensifies negative thoughts and behaviors, encourages sedentary lifestyles, increases feelings of anxiety and loneliness, reduces face-to-face interactions, affects sleep quality, and generates academic difficulties. In addition, the impact of social networks and exposure to suicidal content was identified as triggering detrimental effects such as dependence, excessive use, social comparison, and the contagion effect.

Thus, one of the most prominent aspects in the studies reviewed is the impact of social networks on suicidal ideation and behavior in adolescents. The review by Balt et al. (39) points out that excessive use of digital platforms, together with exposure to suicide-related content, can intensify depressive symptomatology and foster suicidal thoughts in vulnerable youth. This finding is consistent with previous research that has documented the "Werther effect," where exposure to suicide cases on social networks can generate a copycat effect in psychologically predisposed adolescents (35). In contrast, the "Papageno effect" has also been identified, suggesting that exposure to coping stories may have a protective effect against suicidal behavior (37).

Another relevant aspect identified is the relationship between mental disorders and child and adolescent suicide. Studies (42,43) highlight that pathologies such as depression and anxiety are strongly correlated with suicidal risk in minors, and the presence of sleep disorders, such as insomnia, has also been identified as a relevant factor in suicidal ideation, given its impact on emotional regulation and the coping capacity of

young people (34). These findings are consistent with previous studies conducted by the American Psychological Association (APA) (33), which indicate that 90 % of adolescents with suicidal behavior have a history of diagnosed psychiatric disorders.

From a social and family perspective, Looijman et al. (40) highlights the importance of the information provided by peers in the psychosocial autopsy, which allows understanding the child's support networks and social interactions before suicide. Factors such as child abuse, intrafamilial violence, and lack of parental support have been identified as significantly increasing vulnerability to suicide (25). The review also reaffirms that the presence of a family history of suicide may act as an additional risk factor, suggesting both an environmental and genetic influence on adolescent suicidal behavior (9).

Another identified behavioral risk factor is impulsivity, which, together with family and environmental influences, plays a crucial role in suicidal behavior in children. In this sense, stressful events can trigger self-destructive actions, with attachment disorders, family discord and abuse being important risk factors. Likewise, family history of suicidal behavior and psychopathological characteristics, such as violence or substance abuse, increase the likelihood of suicide in children.

On the other hand, in terms of preventive strategies, the studies reviewed emphasize the need to strengthen mental health programs in the educational and community settings. Ougrin et al. (41) emphasize that the COVID-19 pandemic exacerbated the mental health crisis in minors, which underscores the urgency of implementing early intervention programs and timely access to psychological services. Likewise, the World Health Organization (28) suggests that strategies such as restricting access to lethal methods, training teachers in early detection and strengthening support networks have proven to be effective in reducing suicide risk in young people.

Through this approach, it has been possible to identify various elements that precede suicide, such as mental disorders, traumatic experiences, family influences and the impact of social networks. Psychological autopsy provides a more accurate picture of the circumstances surrounding

suicides, revealing aspects that might otherwise have gone unnoticed in traditional studies. It is essential to emphasize that, although emotional and psychological disorders are common factors in suicidal behavior, social and family variables, such as abuse, violence, and lack of support, also play a role in increasing the vulnerability of young people. In this sense, the importance of designing preventive strategies based on a comprehensive vision of mental health, including the regulation of the use of social networks, early intervention, and the strengthening of social support networks is emphasized (45).

These prevention strategies also include strengthening social support for at-risk adolescents, training teachers and parents in digital literacy, and early identification of warning signs. They also emphasize the importance of fostering emotional communication in children and adolescents, enhancing the ability to ask for help, and promoting the responsible use of social networks, as well as preventing cyberbullying and implementing policies that regulate content on these platforms. These actions coincide with those proposed by Campaña (13), who emphasizes that one of the main advantages of psychological autopsies is the possibility of formulating specific and comprehensive prevention strategies.

Finally, despite the findings identified in the present review, which reinforce the essential role of psychological autopsy as a tool for understanding the factors contributing to suicide in children and adolescents, it is crucial to make known the limitations inherent to the concept of psychosocial autopsy as a research method. In this sense, the information obtained from family members and friends may be subject to biases in the recovery of information and perception of the event, which would considerably affect the objectivity of the data collected. It also highlights the need to employ mixed methodologies, incorporating analysis of information from tertiary sources such as medical records and structured interviews, to contribute to a multidimensional understanding of the suicide phenomenon in the studied population. This systematic review not only reaffirms the usefulness of psychosocial autopsy as a research method in the study of child and adolescent suicide but also allows for the identification of key areas for intervention. Prevention strategies should focus on a comprehensive approach

to the identified risk factors—psychological, social, familial, and digital—and prioritize the development of public policies that are sensitive to the emotional needs of children and youth. Advances in this direction are essential to protect the lives and well-being of future generations.

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