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Analysis of the Economic and Social Costs of Suicide in Yucatán, Mexico: An Approach for the Design of Postvention Public Policy

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Suicide is a public health problem that, despite having prevention programs, rates are rising every year in Mexico. But beyond this situation, there is a little studied and analyzed issue: the economic and social costs that are generated after the suicide of a person, and that have repercussions on the family nucleus and society. The expenses associated with this type of death can last for years and considerably reduce the family income and, therefore, the quality of life of the survivors of suicide. The short- and long-term costs destabilize the economy of families and have long-term negative consequences for them, as well as for the business sector and society. The professional interest in this research stems from the current lack of information regarding the aforementioned consequences and the absence of public policies addressing them. This oversight in the political agenda may be attributed to the limited in-depth studies on the practical consequences of suicide within families, as well as in business and social spheres. The continuation of this research has the potential to foster greater recognition of this widespread issue.

Keywords: *suicide, economic costs, survivors*

Introduction

This research addresses the economic and social costs that occur as a consequence of a person's suicide. Suicide is defined as the act of taking one's own life by any means, according to the World Health Organization (WHO), as stated in different documents on its official website. The causes are multifactorial and include biological (age, gender), psychological (mental illness) and environmental (personal conflicts) aspects. According to the WHO, about 800,000 people commit suicide every year. For every suicide, there are many more suicide attempts each year. Among the general population, an unsuccessful suicide attempt is the single most important risk factor.

There are guidelines for suicide prevention, dictated by the aforementioned organization, which have been adopted by some countries as part of their public health policies, although it can be said that these have not had the desired results when official statistics are reviewed and unofficial statistics are known in various regions or countries. On many occasions, these public policies end at the moment when a person commits suicide and becomes part of the statistics, without any follow-up and in-depth study of the effects that take place in the immediate moment, as well as in the medium and long term.

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This research analyzes the consequences of suicide on the family, business, and social spheres to determine the impact that this type of death has on families. There is a wealth of information about the grieving process, the psychological effects that persist over time, and existing programs for its prevention. This paper uses a methodology to analyze the economic consequences and the impact on society in general when a suicide occurs.

And this research was conducted precisely because of the lack of information on the economic and social consequences of this type of death in Mexico, which affects a highly variable number of people. There is no program to address the inherent problems, primarily due to a lack of in-depth studies on the subject. Official figures can be found in government agencies such as the National Institute of Statistics and Geography, but only on the number of deaths and their causes, but not on the lasting consequences over time.

Literature Review

To define economic and social costs, we will first analyze what a cost is, the different types of costs, and some terms used in economics.

In everyday life, economic units carry out various types of transactions, such as the purchase and sale of goods and services. Goods can be basic or luxury consumer products, and services can include healthcare, transportation, or education, among others. Economic units include families and individuals, businesses, and government entities at any level: federal, state, or municipal. Transactions involve costs, which can be of various kinds (Parkin 2020). A cost is the price paid for the goods and services acquired, whether intermediate or final, as well as for the inputs used to produce goods, labor, and technology (Calleja 2013).

In economics, experts equate economic cost with opportunity cost, that is, a situation in which one option is sacrificed to choose another. According to Parkin (2015), cost is something that must be given up, a decision that involves not doing something in order to do something else, something that seems more convenient to the individual. Opportunity cost is a concept derived from subjective behavior.

The rational behavior of an economic unit, whether a person or a company, would then consider the benefits a choice could provide, in addition to, or in contrast to, the monetary gains it could achieve in the short or medium term (Parkin 2020). This rational behavior includes an analysis of all the advantages that the choice made could provide, such as, among others:

1. Improved current quality of life. This indicator can be provided by various variables, such as having access to healthcare and education services, owning a home or car.
2. Future prospects. The decision to have health or life insurance, have savings for unforeseen situations or retirement, or own properties to generate rental income.

3. Consumption expectations. The way a good or service is consumed is also a choice based on rational behavior and can change over time according to changing needs and the abundance or scarcity of resources.

Economic costs are also private costs, as individuals or companies decide to incur them, according to their needs and objectives. However, they also have a social component, as they are immersed in a collective context and the latter is the recipient of the consequences of the decisions of individuals or companies. The social cost falls on third parties; the number may be indeterminate, whether a sector of the population or society as a whole (Bassols 2005).

Social costs can be studied as variables that affect a group of people, businesses, or economic units. They can be difficult to measure, but when related to economic costs, they can be quantified. According to John M. Keynes (cited by Roll 1975), society assumes costs through a macroeconomic analysis of certain variables such as poverty, unemployment, productivity, economic inequality, income, savings, consumption, and investment.

Economic costs are closely linked to social costs. The decisions individuals make to satisfy their needs, regardless of their needs, will incur costs, but the decisions they make can affect all or part of society. The decision to close a business, for example, will have consequences for society; if the business was polluting, the decision to close it will result in a positive externality for its environment. Furthermore, closure can lead to unemployment, loss of human capital and production, and therefore, product shortages and decreased income.

Continuing with what was seen in the previously, the consequences of a suicide on society can be measured by the impact this event causes in terms of social costs. It is worth remembering that social costs are those borne by part or all of society as a result of the particular decisions of certain individuals or groups of people, which affect a sector of the population. Durkheim (1897) explains that there are certain social situations that can lead a person to make this decision. Although this author wrote the book "Suicide: A Study in Sociology" more than 100 years ago, the research he conducted over a long period of time is still relevant today. He analyzed cases from Europe, but the similarities with other countries and other eras are significant, according to various references in the literature that reference this author.

Durkheim identifies several social problems that can lead to the decision to commit suicide, such as poverty, unemployment, family situation, and mental illness, as causes that can disrupt an individual to the point of making such a decision. As other authors point out (Santos and Marcon 2017), it is difficult to attribute the cause of this phenomenon to just one factor. Not all people living in poverty commit suicide, and not all people who become unemployed do so. Similarly, not all people diagnosed with a mental illness commit suicide. Thus, the causes can be multifactorial, and it is not easy to determine a single one, although there may be a trigger that provokes it. However, the social environment affects individuals' decisions to varying degrees.

Durkheim's study of the social context is an analysis of the causes and consequences of suicide in the social context, and will be analyzed below. He establishes the role of the individual as part of a society, creating ties of family,

affection, and convenience, such as work. When analyzing the social context of suicide, it is impossible to ignore the fact that human beings are influenced by their environment, in both negative and positive ways.

Durkheim explains that, although the same conditions may affect a number of people, there is insufficient evidence to affirm that, under equal social and environmental circumstances, the determining factor lies in mental illness, although it may be one of the factors that contribute to the event. He devotes a portion of his study to mental illnesses that may contribute to the causes of suicide. He repeats this statement when he mentions impulsive suicides, that is, those that occur without any apparent mental illness inherent to the individual. However, there are cases in which another type of illness, in a terminal state, may cause the person to hasten the end so as not to burden caregivers or because they are in a state of desolation in the face of certain death. Therefore, to affirm that "healthy" people do not commit suicide would be a mistake, since proving mental health is not a simple process, especially after the act has been committed.

In certain cases, there may be a medical history that could be a reason for psychiatric or psychological study, but this aspect cannot be generalized. A similar conclusion can be drawn for other types of negative collective situations, in addition to the example of war, as mentioned above. Therefore, relying solely on statistical data to establish the causes of suicide may be inaccurate.

It has been widely presupposed that clinician inherently recognize the criticality of conducting thorough assessments for suicidality, potential harm to others, and instances of abuse. Notwithstanding this supposition, or arguably as a consequence of it, there has been a paucity of empirical investigation into efficacious training methodologies for aspiring psychologists and other mental health practitioners in these comprehensive assessment skills, particularly in ways that obviate risk to actual clients—a risk often presents in conventional practicum settings (Osborn and Cash 2021).

Interindividual relationships that are transmitted from generation to generation were also observed by Durkheim, and collective tendencies are no less important than cosmic factors. In these transmitted interindividual relationships, one can observe trends in the prevalence of suicide in a certain area or population, and in which patterns of behavior reinforced by other factors, such as cosmic ones, can be repeated. This refers to the climate, the seasons of the year, or the times in which certain types of work or activities are carried out. He observed a tendency for suicides to occur more frequently at certain times of the year. This could be explained by the fact that these are the times when there is more work and more social interaction than in times when it decreases.

He also observed gender trends, in which suicide occurs more frequently in men than in women. This phenomenon could be attributed to the way men interact in society, with their role as providers and protectors being an accepted fact, which could place a greater burden on them if they fail in that role, if they fail to meet the expectations that family and society de facto attribute to them. Collective power exerts pressure on the individual, and the circumstances that trigger this pressure are taken by the larger social group, shifting its vigilance toward the individual. In Durkheim's words, the individual succumbs to the

collective, adhering to it in an ideology of progress and development. The greater the moral commitment one has to society, the greater the force that society exerts on individual behavior and decisions.

In economics, it is said that social commitment should prevail over individual decisions, thereby generating a common good, but a decision such as suicide does not adhere to this principle, that of seeking the common good above social benefit (Tirole 2016). Thus, the approach to the consequences this act generates in society must also be analyzed from a sociological perspective.

Salari et al. (2020) conducted a study on violence and deaths by homicide and suicide. In reality, research on homicide-suicide links these events to the prevailing violence in any given region or country. There is a very fine line between the thought "I am going to kill someone" and "I am going to kill myself". It is at this juncture that one might speak of a kind of protection towards others by eliminating the threat, which is oneself. This is where public prevention policies begin to fail, and the lack of public postvention policies for suicide becomes evident.

Practical Consequences in the Social Context

This study aims to ascertain the comprehensive economic and social costs attributable to individual suicide. This objective encompasses a quantification of both the direct and indirect financial repercussions, alongside a qualitative and quantitative assessment of the broader societal impacts. The investigation will seek to delineate the measurable losses in productivity, healthcare expenditures, and resource allocation, while also exploring the intangible yet profound social consequences, such as emotional distress within communities, long-term psychological impacts on bereaved individuals, and disruptions to social cohesion.

Garciandia (2013) explains that, in the face of suicide, a fracture occurs within the family, and the functions that the absent person had within the family context can be sought in a form of replacement, both in their role within the family, for example, as a provider, or as an element that complements the family unit. Therefore, the presence of that member is sought as a way to avoid losing them. Of course, an adolescent does not represent the same thing as a grandparent or a mature person such as a parent, but death by suicide creates a feeling of loss within the family unit that must be filled, since the sum of each member constitutes the total of the family unit, and a restructuring of the family is sought, with new roles and functions that are redistributed in the absence of one. Something similar happens in a broader setting, where role assignment is repeated when a person leaves, whether in a work or social context, and is required to move on to a new situation that fits into the normality (or as close to it as possible) that existed before the suicide.

Durkheim goes further and discusses the impact on society at large, stating that within the social collective, there may not be a clear determination of what is normal and what is not, and how laws operate. Homicide exists in a society, but so do the laws that punish it, so one thing may be considered normal and the other (counterpart) as well. In the case of suicide, what laws would apply? Primarily moral ones. Feelings of melancholy and sadness, for example, observed in groups

labeled as anarchists, revolutionary socialists, or mystics, are accepted by society at large but not necessarily shared by all. A group of people may be enraged by the commission of violent acts by some against others, but the commission of suicide leaves the group with little grounds for imposing punishment, much less society at large.

Since there are no clear guidelines regarding who bears the blame for suicide, as is the case with homicide, the responsibility lies with the suicidal individual and their immediate surroundings. Suicide, then, is a "sad" situation for society, but no further, Durkheim continues, since the collective is unwilling to assume responsibility for an individual decision, whatever the causes. In any case, the primary sources should be addressed from a very early stage, such as education and character development, tasks shared by society and the state. Thus, each generation should improve its educational and social systems to help strengthen people's character and avoid such tragedies, avoiding anomie. This is possible when society establishes a harmony in which individuals can feel part of it, not apart from it, since the family alone, in itself, has not been a factor in preventing deaths by suicide. Job occupations, social ties and networks, and religion (in some cases) all play an important role in the role assumed by each member of society.

In the case of occupations, Berenchtein (2014) gives his opinion on the forms of work in a capitalist system, and how these can produce stress that leads workers to suicide, and at the same time, he analyses the responsibilities of employers to guarantee a work system in which employees feel mentally safe and policies are used to help in the event of a suicidal situation or its ideation.

Durkheim also emphasizes labor issues as part of a political agenda that regulates workers' health care, if not directly, then through legislation on working hours, decent wages, and respectful treatment, as a means of preventing suicide and also of dealing with those who have survived it. The State must regulate working conditions to achieve equality of strength, not only economic but also social, and, in this way, avoid corporate selfishness and provide protection to those who depend on them, thus achieving social justice.

The World Health Organization (WHO), in its document "Suicide Prevention: A Tool at Work" (2006), analyzes various factors that can cause work-related stress due to the conditions under which these activities are carried out. This stress, they explain, can lead to suicidal thoughts and can also be caused by coworkers who commit the act, and they reaffirm the importance of having measures in place to help prevent such situations. The suicide of a coworker, the WHO continues, can result in confusing behavior, and not knowing what to say or how to act could impair work performance, as they find themselves in a state of imbalance created by the work environment.

Social justice, gender equality, education, social cohesion, and job opportunities are issues that provide unity to a group, but they can also be agents of disruption in beliefs, personal crises, and decisions that lead to suicide. The consequences of such an act on society can manifest themselves in various ways, from the immediate environment outward, to a broader environment where it is difficult to establish action policies that do not create conflict in society at large, or to the State as the regulator of political, economic, and social balance.

The historical development of societies has transformed the relationships between individuals, starting from the original nucleus, which is the family, towards the broader components. Therefore, it is not possible to assume that the impact of suicide affects only the family surrounding the person who commits the act. Rather, its repercussions go beyond, to a greater or lesser extent, given the evolution of human beings towards broader groups, which even transcend borders and are not delimited by a marked territory.

Practical Consequences of Suicide

Previously, it was discussed the causes of suicide and the influence that various situations exert on a person's decision, such as economic, family, work, and health circumstances. Various authors have delved into this topic, and there are countless texts in the literature that attempt to explain each of the causes from different perspectives: psychological, social, and cultural. The truth is that the causes can indeed be multifactorial and found in diverse societies, with different socioeconomic situations, and in different contexts and times.

Texts on mental health emphasize mental or psychological illnesses (De Zubiría 2007), such as depression, personality disorders, loneliness, self-depreciation, inability to cope with difficult situations, and other mental health problems. Even the World Health Organization addresses the topic of mental health care and public policies for suicide prevention in numerous articles, as do the governments of many countries.

The argument for causes such as socioeconomic problems arise mainly when there is a macroeconomic crisis, such as mass unemployment, or a microeconomic crisis, such as job loss and, as a result, a decrease in income to support a family or oneself, or debt, for various reasons, which generates a personal crisis when facing the consequences of this. Generally, statistics are presented that correlate an economic crisis with an increase in the prevalence of suicide, with the ratio between men and women being relevant, indicating that men have a suicide rate of 4 to 1 compared to women. This could be explained by the role of men as providers for the household or, in other cases, by the "nature" of men not to seek help when facing difficult events or situations (Durkheim 1897, WHO 2019).

Family problems also appear as a determining factor in a teenager's decision to commit suicide. These problems can range from a poor relationship with parents, intra- or extra-familial conflicts, to separation from a partner, the end of a romantic relationship, and divorce. These situations trigger an imbalance in the person's psyche, making them unable to cope with this new state, in which rules and roles are redefined.

The use and abuse of legal and illegal substances and drugs has also been associated as one of the triggering factors for suicide. However, as mentioned before, because this phenomenon is multifactorial, there are not enough studies to attribute suicide to a single cause. This is only possible through the analysis of individual cases and when follow-up has been conducted by health specialists

or other specialists, allowing us to determine, with a certain degree of probability, the causes of suicide.

One could go on and on about the factors that can lead a person, of any age, to take their own life and succeed. Scientists who have studied this topic have written articles and books elucidating the causes that generate it. Politicians place the issue on their agenda with public policies that address suicide prevention through campaigns, sometimes directed at adult parents, sometimes at adolescents, and sometimes at society in general, through helplines, subtle advertising, and others. These measures could be compared to prevention programs for diabetes, obesity, and some types of cancer, such as maintaining a balanced and healthy diet, exercising, and receiving regular medical checkups. But, unlike programs for these aforementioned diseases, suicide prevention becomes somewhat confusing, as the causes cannot be clearly determined.

The benefits of these public policies should be reflected in the statistics presented annually, generally by public agencies. These benefits would be a reduction in the suicide rate in the medium and long term. If not, then one might think that these programs are not producing positive results, but this is also a difficult point to study because many variables change in short periods of time, such as: population size, the socioeconomic situation at the micro and macro levels, migration, social and political conflicts, and others. Thus, in addition to the statistics and their relationship to a specific era and a specific social, political, and economic situation, the data we can obtain relate precisely to that: finding a correlation or ruling it out. But what happens next? In other words, the question involves analyzing the practical consequences for the family and social environment of the person who commits suicide.

According to Garciandia (2013), the family environment is severely affected immediately. The role played by the individual (suicidal) must be redefined; the family unit tends to present it through the accommodation of new roles. If the individual is the breadwinner, another family member must assume that role, temporarily or long-term, with the consequences of facing a labor market that may present disadvantages, such as lack of experience, prolonged absence from the labor market, or lack of training. This situation varies, as it largely depends on the number of financial dependents, as well as the family's financial situation, the type of relationship between members, and the overall economic situation at the macro level.

The economic situation can change abruptly after a suicide when the individual is the sole or primary provider, or has a supplemental income, as mentioned above. Widow's pensions or life insurance may sometimes be invalid for this cause of death; this varies according to the legislation of the country and the coverage of each insurance company. And other questions arise, such as: How many people have life insurance that also covers death by suicide? Paying for insurance can be burdensome for families, and many don't. How many people have financial assets that wouldn't be affected by the death of a breadwinner? The number also varies greatly. So, at this point, the approach will be based on the assumption that there isn't enough savings to ensure that, financially, the breadwinner's suicide wouldn't affect the family or household's finances.

Given the situation described, survival options would be weighed by family members or by the person left in charge. The macroeconomic situation is a determining factor in this regard: unemployment, inflation, current interest rates if one is paying off a mortgage or a car, to name a few. Regarding unemployment, or the employment rate, it can make it more or less difficult to find a job that suits the skills of the person who will assume the support of the household. From another perspective, the person who is entering the labor market will have to adapt to the demands of the labor market (Parkin 2015).

Entering the workforce after a period of inactivity, or after never having been in it, presents advantages and disadvantages. On the one hand, this would be the way to recover lost or decreased income, provided that job openings are available and the required qualifications are met. On the other hand, this radical change could entail additional effort coupled with a change in roles within the household. This presents other situations to address: if there are children of early school age or adults to care for, the search for a caregiver and the associated expenses would further reduce the income of the person left responsible for their support.

One option, in the immediate term, would be self-consumption, along with the development of activities such as the small-scale production of goods such as food, natural resources, and handicrafts, made in the same home, or on the plot of land, if available, for retail sale, which would achieve the goal of survival in the face of the drastic decrease in income, especially for the poorest families. Entry into the informal labor market would tend to increase, at least immediately, to earn enough daily income to compensate for the decrease in income. Social inequalities would lead to the use of various family strategies to improve and maintain economic gains that provide for the lost income (Arguello 1980).

These strategies are based on rational behavior within the household, which is compounded by the emotional situations that the breadwinner's suicide entails, to varying degrees. In this context, help from people close to the household may or may not occur, also at various levels, depending on the social and family networks available. This also depends on the geographic location, that is, the proximity to people who could assume, at a specific time, the necessary financial support, which in turn depends on the financial capacity of these networks. Survival strategies, then, contain a number of variables that may be unique to each household facing this situation.

There are other factors that can influence a family's wealth given the circumstances being studied in this research, such as those mentioned below.

1. In the case where the individual (person who committed suicide) is the primary or secondary provider:

- As previously mentioned, the sudden decrease or loss of income. Realignment of the roles of the household to achieve the recovery of income, requiring decisions such as who will provide that income, how, how many hours per day, whether there are other family members who must provide care, where, and for how long.

- The financial situation prior to the event. Whether the household has property, bank accounts, and assets that can be immediately converted into cash to cover expenses, and to what extent these can be used, keeping in mind that financial convertibility also varies. An example would be owning a property that is for sale; the transaction may take days, weeks, or months. If the above is not available, the aforementioned survival strategies would have to be resorted to.
- Grief over the loss may lead to the need to seek health therapies to mitigate suffering. Whether or not the family has the financial resources to do so, decisions must be made that do not affect the food security of family members, or they must choose between the costs of treatment and the daily costs of support.
- Continuing with the previous point, the grieving process may include moving house or moving to a new home, especially if the death occurred in the home, they live in. In this case, a decision must also be made that does not affect their food security.

2. When the person who commits suicide is not the primary or secondary provider, income would not be affected abruptly or directly, but it could be affected indirectly, such as the costs and expenses incurred as a result of the loss of a family member. These could include the following:

- Grief therapy for members of the household, assuming they are financially able to do so. This could lead to a reduction in problems associated with the event, such as depression and anxiety, which, if left untreated, could later lead to other problems, which could, in turn, lead to irremediable visits to specialists, with the resulting costs.
- Moving and relocation, if the event occurred in the family home. Also, as noted above, depending on the individual's financial means.

3. In either case, expenses may also include the following variables:

- Funeral expenses and procedures that were not contemplated or scheduled.
- Expenses inherent to the burial of the body in the cemetery, such as rent or purchase of the grave.
- Medical treatment (with antidepressants and anti-anxiety medications, to name a few), which depends on the family's financial means.
- Beginning (or increasing) use of substances such as alcohol or legal and illegal substances, whether or not the family has the financial means to do so.
- Loss (of dependents) of rights to healthcare institutions or health insurance, if they had one.

The aforementioned costs and expenses can also vary in duration, so their quantification would also vary. For example, therapy can last for months or years, depending on the progress made in achieving emotional stability and the family's financial situation, always considering that these decisions are made taking into account the priorities of survival and consumption.

The broader impact can directly and indirectly affect a portion of society.

4. As a result of the reshuffling of roles when the individual is the primary provider, the inclusion of another family member in the workforce, whether formally or informally, entails variable consequences, depending on the individual's age, ability, skills, educational level, among others. Work productivity may be affected by the trauma experienced; that is, the performance of income-earning activities could be influenced by the reasons that motivated the sudden entry into the workforce. The same can occur even if other family members were already working at the time of the event. Work productivity could decrease due to the following factors, impacting income for the worker and for the company due to the losses incurred when the employee does not perform their job properly:

- Lack of concentration due to the trauma.
- Feelings of sadness that prevent the employee from performing work activities conscientiously.
- Depression, which requires absence from work.
- Therapy, like the previous point, can lead to absence from work.

5. It can be concluded that if work productivity decreases for the aforementioned reasons, the consequences could be directly reflected in the company, its clients, and its suppliers. Institutions, public or private, of any size, do not always have manuals, procedures, and policies that contemplate support and treatment for these types of situations. Currently, in Mexico, workplace stress monitoring has been formalized, but the surveys conducted by some companies are mainly aimed at detecting stress linked to the organizational environment, such as work hours and workload, as well as relationships with superior hierarchies, but not family situations (Government of Mexico 2019). NOM 035[1] states that the following will be addressed: “Psychosocial Risk Factors: Those that can cause non-organic anxiety disorders of the sleep-wake cycle and severe stress and adjustment, derived from the nature of the job duties, the type of work schedule, and exposure to severe traumatic events or acts of workplace violence against the worker due to the work performed”.

In relation to other members of the household, such as siblings, parents, and children, the aforementioned costs can lead to various problematic situations, such as:

[1]The Official Mexican Standard (NOM for Spanish) Nom-035-Stps-2018, talks about Psychosocial Risk Factors at Work. It is a Mexican standard regulating psychosocial risk factors in the workplace, aiming to identify, analyze, and prevent them to promote a favorable organizational environment. It was published in the Official Journal of the Federation in its web site: https://www.dof.gob.mx/nota_detalle.php?codigo=5541828&fecha=23/10/2018#gsc.tab=0.

- Dropping out of school, which would result in various expenses such as finding another school, or even completely abandoning studies, resulting, in some cases, in a loss of human capital in the future, but not absolutely.
- Even with sufficient resources to pay for medical or alternative treatments as a form of therapy, there is often shame about the family member's act, as well as stigmatization by society. This would lead to a refusal to seek such treatment, ultimately delaying a possible return to normalcy or emotional stability for work or school activities. This could occur, especially in sectors where suicide is considered illegal, as it threatens one's life, or due to religious beliefs. The consequences could lead to difficulties in effectively reintegrating into society and the labor market.
- Suicidal thoughts that survivors may experience. Faced with the loss suffered, some members of the family or household may imitate the act in an attempt to escape reality, sadness, depression, and grief. This, in turn, implies that the attention of those in charge is required to achieve the goal of recovery, which entails time off work or school, and the outcomes analyzed above.

In general, the practical consequences of suicide are variable, significant, and significant for the immediate environment and for the social group, or for a part of it. In addition to the financial expenses of coping with a painful, unexpected, and violent situation, the emotional costs generate further expenditures for the family, schools, and workplaces. Even when the trauma is not a direct relative, but rather an external relationship, trauma can affect people beyond the direct relationship in various ways. Immersion in society is unavoidable from birth, and the relationships that are forged over time, to varying degrees, will generate empathy or a sense of guilt that generates costs, expenses, and wear and tear. Possibly, but not always, this will likely result in greater or lesser suicide size in different societies, with diverse organizations, and in unequal socioeconomic situations.

The costs to society will also depend on the time and the macroeconomic situation (crisis, unemployment, shortages), since the costs are not borne exclusively by members of the household, but also by those who make up society, such as educational, work, and health centers. Currently, public suicide prevention policies address exactly that: prevention; with various programs and campaigns, from promoting better family communication to prohibiting the use of illegal substances. However, state intervention ends when suicide occurs.

For Oswald (2020), the search for peace and security is a constant amid recurring economic crises, armed conflicts, insecurity, and government malfunctions. When applying these concepts to suicide, one cannot ignore the specific study of the practical consequences of such an event amid the structural complexities of society in all its aspects. The goal of achieving peace and security in the face of suicide generates costs. To what extent? These costs could be quantified, and in this way, it would be possible to create programs that, in addition to suicide prevention, focus on the goal of individual, family, and social recovery. The aim is not to seek the normalization of suicide, but rather to understand reality and find solutions that minimize the economic and social costs of suicide, complementing prevention programs by analyzing

these costs and their effect on the economy of the individual, family, and collective environment, and society.

Methodology

This research has a mixed exploratory/descriptive nature, combining data collection to obtain quantitative and qualitative results. In the present study, which, as mentioned, is mixed research because it contains quantitative and qualitative analysis, all aspects were included in the information collection to determine, through a quantitative analysis, the pertinent data that respond to the purpose of the research, as well as those that require a qualitative analysis to complement the study according to the data specified in chapter one.

From a quantitative perspective, all data corresponding to the economic costs families face following the suicide of one of their members were included, including income, expenses, medical or life insurance, before, during, and after the incident. This allowed us to quantify the economic costs of suicide, the impact on the finances of the families surveyed, and the economic situation they face.

From a qualitative perspective, questions were incorporated into the research instrument that represented the ages of the individuals who committed suicide, whether or not they were the breadwinners for the family, as well as aspects related to school and job dropouts, integrating all relevant topics to determine the economic and social costs of suicide.

It is important to emphasize the relevance of conducting research that brings together both quantitative and qualitative analysis, because in addition to determining the economic and social costs, the quality of life that prevails after an event such as the one mentioned and the subsequent repercussions can continue even when a period of time has passed and, although the research instrument was applied in a time frame, the implications indicate that the results obtained continue to be dynamic in some cases, and are not limited to a single moment.

To obtain the data outlined in the objectives, a survey technique was used, using a questionnaire containing a number of questions that address the stated objectives. This technique allows us to obtain information on the variables of interest to this research, with specific questions directed at the study subjects.

To carry out the sampling, the so-called Snowball method was used, which, according to Hueso and Cascant (2012), "is indicated for studies of minority, excluded or invisible populations, such as undocumented immigrants, street children, people with certain illnesses, etc. It consists of identifying the subjects of the sample as the interviews are conducted. Thus, we start with a few individuals from the population who can be accessed, and through them we can contact other subjects with similar characteristics, and so on." It is a type of non-random sampling that in this case was the way to reach people who meet the characteristics described for the study subjects, which are: being direct relatives or people very close to someone who committed suicide between the years 2016 to 2019, before the pandemic. This time range was determined because in the pilot study that was carried out, people willing to answer the survey did so when

a year or more had passed after their relative committed suicide, a stage at which they were able to answer the questionnaire questions more objectively.

The questions were divided into categories to be operational, that is, measurable and quantifiable. Thus, they were classified into different categories or dimensions to determine which ones could be grouped together to measure their impact and determine their relevance to this research.

The categories were grouped into five: first, what were the costs they incurred immediately following the suicide of their family member; second, how much did these costs amount to? Third, how much did these costs decrease family income? fourth, how did they cover these expenses? And fifth, what is their current situation regarding the event?

Additionally, semi-structured interviews were conducted with doctors from two companies who shared their experience with the suicide of employees or their family members and what the consequences have been.

Research Analysis Categories

After implementing and administering the questionnaire to the respondents, the questions were categorized.

Category 1. Income. In this section, respondents were asked how much their family income changed after the death of their family member. Questions were asked regarding: "How much did family income change as a result of the suicide of their family member?"

Category 2. Short-term expenses. This category collected data on expenses incurred by families at the time of the suicide. All costs and expenses incurred by family members were taken into account, such as administrative and bureaucratic procedures, funeral expenses, purchase or rental of a grave, inheritance processing expenses, moving, school, or work, immediate or immediate therapy expenses, and others.

Category 3. Long-term expenses. This section included data on family members who had to face expenses related to consequences that did not occur immediately following the family member's suicide. These included moving, changing jobs, changing schools, seeing specialists, purchasing medications, and others.

Category 4. Labor market entry of surviving family members. In this case, depending on their contribution to family income, data were collected for the situation before and after the event. If the person who committed suicide contributed a percentage to the family income, respondents were asked whether, as a result of this event, they had to enter the labor market, either formal or informal, as a way to cover the expenses incurred by reduced income, depending on the age group.

Category 5. Changes experienced in family dynamics after the suicide, including dropping out of school in the case of student relatives; job withdrawal in the case of working relatives; and illnesses related to the family member's suicide.

Results

Of the individuals who committed suicide during the study period, 25 percent were the primary breadwinners, and 75 percent were not, but did contribute to some extent to supplement the family income, as will be seen later in this section.

Of the 25 percent who were the primary breadwinners, the number of people who depended on the person was considered, thus encompassing the immediate impact the death had on the family's income.

In the case of the financial compensation received, only one case included a life insurance premium. It should be noted that since the cause of death was suicide, some insurance companies allow for the time elapsed since the insurance was purchased in their clauses, and in many cases, this is not considered a reason for life insurance coverage.

In the short term, all costs inherent to the period following the person's suicide are included, such as bureaucratic procedures, the purchase or rental of a cemetery space, medical consultations, the purchase of medications, and moving.

The following data were obtained: Virtually all of the people surveyed had expenses in the immediate aftermath of their relative's death, mainly related to procedures related to the death of the relative and medical consultations arising from this event, mainly grief or depression therapies, according to the people.

Among the immediate costs incurred by family members, the main ones were funeral expenses, administrative procedures inherent to the death, the purchase or rental of a cemetery space, and other directly related expenses.

In the long term, it is included costs incurred over a period of six months or more, such as medical consultations, therapies, medication purchases, job changes, school changes, and changes of residence.

This variable was included because research prior to the pilot study found a high percentage of families who left their homes, whether owned, rented, or borrowed, because a suicide had occurred there. Continued residence in the home contributed to an increase in depression, anxiety, and doctor visits, in addition to prolonging the grieving process. This decision entails moving costs, which include all expenses associated with changing homes. Of the people surveyed, 53.3 percent did not move house as, and 48.7.

Entry into the Labor Market

This variable was included to verify whether, as a result of the sudden death of a family member, any surviving relatives had to enter the formal or informal labor market, and whether the deceased person was the primary or supplementary provider of family income, and whether their income could have been reduced or diminished due to this event.

Of those surveyed, 26.6 percent have had to enter the formal or informal labor market to supplement the income reduced by the death of a family member. The decision to choose formal or informal work was based on the availability of available jobs and the hours they needed to dedicate to a job, according to the

respondents themselves. 61.7 percent did not have to enter the labor market because their deceased family member was not the primary provider or because they had adjusted to the decrease in income. 8.3 percent were unable to enter the labor market, becoming discouraged and becoming unemployed, and another 3.4 percent did not seek to enter the labor market to supplement their income.

In interviews with company occupational physicians, they were asked about the impact on productivity, absenteeism for various reasons related to stress, and time off for medical appointments and psychological therapy, as well as the frequency of requests for time off, as well as the reasons for it.

The results are presented below in three categories.

Category 1. Decreased productivity.

At this point, both interviewees commented that when a stressful situation arises, whether due to events at the plant, workload, or family or interpersonal problems, they are assessed to determine whether they should be referred to an outpatient clinic or can continue with help within the company. When asked whether these individuals can continue working normally, both responded that concentration decreases, productivity decreases, and sometimes, even when workers have not requested permission to seek outpatient care from the company, they are monitored for a review of their work performance.

Category 2. Workplace absenteeism.

As a result of visits to the company doctor's office for emotional disorders that sometimes lead to physical or psychosomatic illnesses, employees sometimes call in sick, request leave, which is always granted upon presentation of a medical certificate, or simply fail to show up.

Category 3. Economic Situation of Workers.

En las entrevistas, se les preguntó sobre la situación económica que enfrentan los trabajadores ante las ausencias, permisos o el decremento en la productividad y en las fallas al cumplir con las metas de trabajo. Employees' concerns are the negative economic impact of unpaid leave requests and the anxiety generated by the expenses they face after the death of a family member.

As discussed, the impacts experienced by employees have economic repercussions that can, in turn, lead to increased stress, decreased concentration at work, and decreased productivity.

Discussion

The main objective of this research was to determine the economic and social costs of suicide in México. Its importance lies in the fact that there is very little information about the economic consequences faced by the families of a person who dies by suicide. There is literature on the psychological consequences, emotional impacts, and the grieving process following this type of event, but

very little information about the expenses and costs faced by families and, as a result, the short- and long-term impacts.

When considering, first, how much family income decreased, 48,3 percent of families responded that it did not decrease because the person who committed suicide was not the primary or secondary economic provider, and the rest stated that family income did decrease as a result of the suicide. The percentage of almost half of families who did not see their income affected as a direct consequence may be determined by the age of the people, some between 16 and 24 years old, who had not yet entered the labor market, or by other reasons, to mention some, mental illnesses such as depression.

Even so, the remaining percentage whose income was affected to varying degrees because the family member was the primary economic provider faced situations such as searching for work, sometimes without finding one, or not always with a salary that could effectively compensate for the lost income. And although family income was measured as an independent variable, in general, real income is reduced due to the economic costs that subsequently occurred, both short and long term. Initially, these are the expenses inherent to death, such as administrative procedures, funerals, the purchase or rental of a cemetery space, and other costs that must be covered immediately and were not anticipated when the death occurs suddenly. There is no preparation time like there would be, for example, when a person is evicted, and even when health specialists can predict, with a certain margin of error, how much life a person with an illness has left.

Furthermore, these expenses can continue to be incurred in the medium and long term. This was demonstrated in the results of the corresponding category, where the survey found that, even after several years, one or more family members continue to attend therapy, purchase medications, or perform rituals, and they now factor these costs into their monthly spending budget. This represents a real decrease in their income, even if it has not decreased nominally. The prices of the services and goods they consume increase as inflation increases. During the surveys, some people stated that they "are used to these expenses".

These economic effects can be felt for many years by several family members, who may experience symptoms related to stress and depression for a long time, as well as suicide attempts or school failure. This generates other costs for the family when the years of schooling are extended, or when a person drops out temporarily or permanently and changes schools.

Suicide attempts among family members of a person who committed suicide were mentioned by some respondents, increasing the expenses they incurred for treatment and even taking time off work to "monitor" their family member, for fear of suicide. This monitoring, in turn, causes a greater economic burden when it comes to people who do not have a fixed salary, but rather one based on actual work hours, or those who do but must take time off for this and other reasons related to their family member's suicide.

For companies, the fact that some employees experience absenteeism, request psychological help, and external care through time off represents a problem, impacting work productivity, lack of concentration, and poor work performance.

This situation, although stemming from a family event, can lead to actual economic losses for companies and, ultimately, a social problem when they leave the labor market, resulting in the loss of human capital, represented by experience, years of service, and skills acquired over time.

Conclusions

Public suicide prevention policies have not proven effective, as suicide rates increase each year, and after a person dies from this cause, support from prevention programs ends immediately. However, as explained in this research, the economic and social consequences continue, and there is no program or plan, much less a public policy, to assist families financially or with clinical treatments, which include transfers, time off from work, and others. Thus, the economic costs are borne by the families themselves, if they have the resources or means to obtain them, or they are simply not able to afford them.

One of the few studies available internationally that has approximated the economic and social costs of suicide is the Center for Suicide Prevention, part of the United States Department of Health. This study also focuses on the costs of therapies, medical treatments for depression, decreased work productivity, and the consequences not only for the family environment, but also for society in general and for the nation. In the case of México, these costs have not been officially quantified, to delve deeper into the prevailing situation, which affects not only the family nucleus, but directly about six people, and indirectly 135[2]. As explained, the repercussions can affect a large portion of society, and the entire country, when it comes to redistributing national income in social spending and assistance programs, as well as in the public health budget.

Finally, it is important to highlight that, even though the costs can extend for several years, and in worse scenarios, for a lifetime, no family surveyed or interviewed reported not using a portion of their income to continue treating the aforementioned conditions. And, with these expenses lasting for extended periods of time, the economic and social costs of suicide also persist for a long time, diminishing the quality of life for those affected, as well as for their extended families and, in many cases, even friends and coworkers who face this type of event suddenly, with increasing mortality rates from this cause.

Currently, a discernible gap exists in public policy frameworks, with no evident initiatives on governmental agendas aimed at addressing the postvention needs of individuals and communities impacted by suicide, including families, colleagues, and friends.

[2]According to the WHO, on its website.

Recommendations for Further Studies

In a research project such as this one, improvements and continuity are always sought and required to further explore the objectives, expand the number of study subjects, and compare results over a subsequent period to determine existing trends.

Expanding the research to a larger number of individuals and families of those who have committed suicide will expand the information on the variables studied and provide a greater understanding of the economic and social costs that arise as a result of an event such as the one mentioned. This may be possible by establishing a broader network of inquiry, based on what has been achieved with this study. A probability random sampling method may be difficult to obtain due to the sensitivity of the topic addressed. As demonstrated in the pilot study and the survey, many people are reluctant to participate due to the pain caused by the memory, but the resulting economic and social damage is evident.

Conducting more extensive research could also open the political agenda for the creation of public policies based on the collected and validated data, since current public policies focus solely on suicide prevention, not postvention, and no state or federal policy agenda addresses the economic impact on families, businesses, and society.

Replicating this research methodology in other states across the country could lead to a unification of study methods to determine the economic and social costs and their impact on the economy over different time periods, both in the short, medium, and long term, if the analysis goes back at least five years and examines their present and future effects.

The main recommendation is to advance this research to propose public policies that contribute to improving the quality of life of family members who survived suicide.

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