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Managing sexual education to prevent maternal morbidity and mortality and achieve well-being

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Abstract: It is essential to manage timely sexual education to prevent diseases and achieve well-being in families. **Objective:** To analyze the causes of maternal deaths (MM), the impact of the family environment and propose preventive strategies. **Methodology:** Mixed, descriptive and transversal approach, included 15 family members affected by MM, 15 health professionals and 20 medical records from San Martín, Peru; during 2022-2023. **Results:** 100% agreed that it affects pregnancy, childbirth and postpartum: Domestic violence, the economic factor, housing, accessibility, basic services and security. Better education will reduce MM. **Conclusion:** The implementation of comprehensive sexual education is key to preventing STDs, cancer and MM. **Contribution:** manage intra-family understanding, advance remunerations or health-socio-economic bonuses; considering to help families reduce risks being better informed
Keywords: Management, Sexual Education, morbidity-mortality, well-being.

Gestión de la educación sexual para prevenir la morbi-mortalidad materna y lograr bienestar

Resumen: Es preponderante gestionar la educación sexual oportuna para prevenir enfermedades y lograr el bienestar en las familias. **Objetivo:** Analizar las causas de la muertes maternas (MM), impacto del entorno familiar y proponer estrategias preventivas. **Metodología:** Enfoque mixto, descriptivo y transversal, incluyó a 15 familiares afectados por MM, 15 profesionales de salud y 20 historias clínicas de San Martín, Perú; durante 2022-2023. **Resultados:** El 100% concordaron que afecta el embarazo, parto y postparto: la Violencia intrafamiliar, el factor económico, vivienda, accesibilidad, servicios básicos y seguridad. La mejor educación reducirá las MM. **Conclusión:** La implementación de una educación sexual integral es clave para prevenir ETS, cáncer y MM. **Aporte:** gestionar la comprensión intrafamiliar, remuneraciones adelantadas o bonos sanitario-socio-económico; considerando para ayudar, a la familias a reducir los riesgos estando mejor informada
Palabras clave: Gestión, Educación Sexual, morbi-mortalidad, bienestar.

Gerejenciando a educação sexual para prevenir a morbidade e a mortalidade maternas e alcançar o bem-estar

Resumo: É fundamental gerenciar a educação sexual oportuna para prevenir doenças e alcançar o bem-estar nas famílias. **Objetivo:** Analisar as causas da morbimortalidade materna (MM), o impacto do ambiente familiar e propor estratégias preventivas. **Metodologia:** Abordagem mista, descritiva e transversal, incluiu 15 familiares afetados por mortes maternas (MM), 15 profissionais de saúde e 20 histórias clínicas de San Martín, Peru, durante 2022-2023. **Resultados:** 100% concordaram que afeta a gravidez, o parto e o pós-parto: Violência intrafamiliar, o fator econômico, moradia, acessibilidade, serviços básicos e segurança. A melhor educação reduzirá a MM. **Conclusão:** A implementação de uma educação sexual integral é fundamental para prevenir ISTs, câncer e MM. **Contribuição:** Gerir a compreensão intrafamiliar, pagamentos antecipados ou bônus saúde-sócio-econômico, considerando a família para ajudar na redução de riscos, estando melhor informada.
Palavras-chave: Gestão, Educação Sexual, Morbimortalidade, Bem-estar.

Gérer l'éducation sexuelle pour prévenir la morbidité et la mortalité maternelles et assurer le bien-être

Résumé : Il est primordial de gérer une éducation sexuelle opportune pour prévenir les maladies et assurer le bien-être des familles. **Objectif :** Analyser les causes de la morbi-mortalité maternelle (MM), l'impact de l'environnement familial et proposer des stratégies préventives. **Méthodologie :** Approche mixte, descriptive et transversale, incluant 15 membres de famille affectés par des décès maternels (MM), 15 professionnels de santé et 20 dossiers médicaux de San Martín, Pérou, pendant 2022-2023. **Résultats :** 100 % ont convenu que la grossesse, l'accouchement et le post-partum sont affectés par : La violence domestique, le facteur économique, le logement, l'accessibilité, les services de base et la sécurité. Une meilleure éducation réduira la MM. **Conclusion :** La mise en œuvre d'une éducation sexuelle complète est essentielle pour prévenir les IST, le cancer et la MM. **Contribution :** Gérer la compréhension intrafamiliale, les paiements anticipés ou les primes sanitaires-socio-économiques, en considérant la famille pour aider à réduire les risques en étant mieux informée.
Mots-clés : Gestion, Éducation sexuelle, Morbi-mortalité, Bien-être.





1. Introduction

Comprehensive sexuality education, when properly implemented, not only improves physical and emotional health, but also promotes overall well-being. Through an informed approach, it empowers individuals by providing them with the skills necessary to make healthy decisions about their bodies and sexual health. A crucial benefit of sexuality education is its ability to prevent sexually transmitted diseases (STDs), by allowing individuals to understand the risks of unprotected intercourse and make informed decisions, such as the use of barrier contraception and HPV vaccination.

In emotional terms, sex education promotes healthy sexuality, reducing stress and anxiety related to sexuality. By receiving clear information about their sexual identity and reproductive health, people are less afraid of unplanned pregnancy, disease transmission or violation of their sexual rights, which improves quality of life and relationships. According to WHO (2019), comprehensive sex education reduces STD rates and improves quality of life, promoting attitudes of mutual respect and gender equity.

Sex education should be based on principles of respect, consent and freedom, and should be inclusive and suitable for all ages. It is essential to avoid punitive approaches, promoting a healthy understanding of sexuality. Thus, it not only prevents the transmission of diseases, but also contributes to happiness by reducing anxiety and empowering people, improving their interpersonal relationships and general well-being.

A reproductive culture based on comprehensive education empowers women and effectively prevents diseases. Education about cervical cancer, the use of contraceptives and safe sexual practices reduces associated mortality. In addition, sexual education improves women's emotional health, giving them control over their sexual health and reducing anxiety, as shown by the Ford Foundation (2020). This contributes to higher self-esteem and healthier and more respectful sexual relationships.

Maternal mortality (MM) is mainly concentrated in low-resource countries, with a high incidence in rural areas (PAHO, 2023). Globally, the maternal death rate has decreased from 309,000 in 2016 to 287,000 in 2020, thanks to the United Nations SDGs, although statistics vary by region. In North America and Europe it has increased by 17%, while Central and South Asia have seen declines of up to 35% (PAHO, 2023).

Regarding maternal mortality in different countries, Mexico has a rate of 54%, due to poor medical care and geographic accessibility, while Costa Rica has 34.4 maternal deaths per 100,000 births. In some countries such as Lithuania and Ireland, there are no maternal deaths, thanks to their medical care focused on saving the mother. In Colombia, the rate is 50.7 per 100,000 births due to barriers to care, while in Chile the rate was reduced from 33 to 15 between 2000 and 2020.

The family environment is crucial for the physical and emotional development of individuals (Calderón, 2014). The family influences reproductive health, since the education, culture and idiosyncrasy of the members can impact decision-making on sexual and reproductive health. A low level of education limits access to information on reproductive rights and family planning, which can put the health of pregnant women at risk. In addition, culture and the sociocultural context can hinder timely care in risk situations during pregnancy (WHO, 2016).





MM, although it can be compared to the tip of an iceberg, involves multiple factors such as social sciences, economics and living conditions, including poverty and lack of education. A multidisciplinary intervention is required to thoroughly explore its causes and develop effective strategies that address the various social and health conditions.

The information mentioned is aligned with the objective : Analyze the causes of maternal deaths (MM), the impact of the family environment and propose preventive strategies to reduce maternal mortality and promote the well-being of families.

2. Methodology

This study, designed as an original article, was conducted with a comprehensive approach combining applied and descriptive research, with a mixed, retrospective and cross-sectional design. The sample included 15 relatives of women who died from maternal deaths (MM), 15 health professionals and 20 clinical histories of cases between 2022 and 2023. The objective was to analyze the causes and factors associated with MM, explore the impact of the family environment and propose preventive strategies.

Two semi-structured interviews were conducted with family members and health personnel, focusing on the family environment and maternal mortality. In addition, medical records were reviewed using validated instruments. Data analysis was descriptive and results were presented in tables and graphs to facilitate understanding.

To ensure validity, the instruments were subjected to expert judgment, obtaining an Aiken validity index of 0.97 for "family environment" and 0.96 for "maternal mortality". The reliability analysis with the KR-20 coefficient resulted in values of 0.95 and 0.93, which reinforces the internal consistency of the study.

Compliance with these procedures ensures the quality of the data and the reliability of the results, which can serve as a basis for future interventions in sexual education and health care, with the aim of preventing maternal mortality and improving women's well-being.

3.Results

To facilitate understanding of the results, the information has been consolidated in tables:

Table 1. Characterization of the family environment by health personnel





Ask	Frequently Asked Questions	Representative Textual Citation	% of highest number of responses
Psychological Dimension			
Accompaniment by a family member or another person to the pregnant woman during prenatal care, is it necessary?	Yes, for the safety and peace of mind of the patient.	"Yes, because it gives you confidence, security and peace of mind."	93.33% (14/15)
How can a pregnant woman who works outside the home influence the care of her mother and the timely attention to warning signs?	Yes, it does have an influence, but pregnancy is not a reason not to have a paid job.	"Stress, fatigue and lack of time can cause you to not adequately comply with your prenatal care"	73.33% (11/15)
Does domestic violence affect the evolution of pregnancy, childbirth or postpartum?	Yes, it is a negative factor	"It is often the cause of maternal and infant morbidity and mortality"	100% (15/15)
Economic dimension			
Do you think the economic factor is important during pregnancy, why?	Yes, it is important for a good diet	"During pregnancy it is important to eat healthy"	100% (15/15)
The housing (accessibility, basic services and security) of the pregnant woman affects her physical and emotional stability. Why?	Of course, it has an impact on well-being	"A suitable space promotes well-being and reduces stress."	100% (15/15)
Are the basic services (electricity, water and drainage) important to preserve the health of the family?	Yes, to give quality of life	"Having access to water, electricity and sewage improves the quality of life for everyone"	100% (15/15)
Educational dimension			
Is the educational level of the pregnant woman and her family important in assessing the risks?	Yes, it allows for better risk assessment.	"The educational level is important, it facilitates the understanding of care and decision making"	86.66% (13/15)
How does family or community culture and idiosyncrasy influence and is it important in the care of pregnant women?	Yes it does, in several ways.	"Sometimes it has a positive influence and sometimes it is the opposite, which is detrimental to timely care"	100% (15/15)

Source: Own elaboration

Interpretation of Table 1: A 100% affirmative consensus was obtained in the results in the responses: Answering affirmatively to the questions: Does domestic violence affect the evolution of pregnancy, childbirth or postpartum?; Do you think the economic factor is important during pregnancy?; Does the housing (accessibility, basic services and security) of the pregnant woman affect physical and emotional stability?; Are basic services (electricity, water and sewage) important to preserve the health of the family?

The following percentage of high value corresponds to the characteristics of the family environment from the interview with the health personnel, in the psychological dimension, during prenatal care (ANC) 93.33% indicate the need for the accompaniment of a family member or another person to the pregnant woman; this would be relevant since it can contribute to better communication within the family environment. As for the pregnant woman who has a job outside the home, 73.33% think that it influences, because it increases stress, fatigue and due to lack of time sometimes she cannot comply





with her prenatal care in a timely manner. In the educational dimension, 86.66% mention that the educational level of mothers and family is an important factor that facilitates the understanding of care and better decision making.

Table 2. Characteristics of maternal mortality from the accounts of family members

Ask	Frequently Asked Questions	Representative Textual Citation	% of responses
Dimension: quality of maternal care			
Do you find it easy to access prenatal care at your nearest health facility?	Yes, there is an appointment	"It's easier at the health center, the problem was when they referred my sister, she couldn't find an appointment quickly."	93.33% (14/15)
How do you evaluate the care that the pregnant woman received at the first health facility where she was treated?	Regular	"It took them a long time to realize that it was wrong"	80% (12/15)
Did you receive information from the health personnel about the evolution of your patient after being treated?	No, they never explained anything	"No, they just told me that he was sick, but they didn't explain exactly what he died of."	66.66% (10/15)
During her prenatal visits, did the patient receive the care she needed, and did they resolve her doubts or questions that she may have had?	Yes, mostly	"I think so, her pregnancy was almost fine, it was at the end when she started to have discomfort, first swelling in her legs and then the headache."	66.66% (10/15)
Did they use any maneuvers during labor or for delivery of the placenta? If the answer is YES, what did they use?	No, she was treated in the hospital.	"At home we only did what they told us at the hospital, as far as I remember no maneuvers were performed"	93.33% (14/15)
How much time elapsed between the onset of the discomfort and the decision to seek care, and what was the reason for the delay?	Hours, we thought the discomfort would pass	"When my wife started to have a fever, we went to the hospital, where they gave her only paracetamol and she took several pills a day at home. After a week, we went and hospitalized her, from there she was referred to Tarapoto, where she was also hospitalized for days. She became complicated after the cesarean section. They said that the infection she had and the amount of paracetamol she took made things worse."	33.33% (5/15)
How long did it take to be seen after arriving at the health facility? What was the reason?	Approximately 20 minutes	"There were other patients, it was on a first-come, first-serve basis, that's what they told us, even though my mother said she was in very bad shape when they referred her, they still made us wait until we had to do the paperwork."	66.66% (10/15)
Dimension: factors associated with maternal mortality			
Is it easy to get to and receive care at the nearest health facility?	Yes, it is easy to get there	"We live nearby, there is no problem getting to the health center"	93.33% (14/15)
Do you think that the family can help, if it is better informed, to prevent maternal deaths?	Yes, sometimes you don't know what to do.	"Yes, it is known that action could have been taken better and thus it could be avoided that it becomes complicated"	100% (15/15)
Can families participate in identifying and reducing risks? Do you think this is important?	Yes, we need to be informed.	"If everyone supported it would be better, so that the pregnant woman would be better cared for"	100% (15/15)





Source: Own elaboration

Interpretation of Table 2: A 100% affirmative consensus was obtained in the results in the responses: Answering affirmatively to the questions:

Do you think that the family can help, if it is better informed, to prevent maternal deaths?

Can families participate in identifying and reducing risks? Do you think this is important?

For 93.3% the following responses were obtained:

Is it easy to get to and receive care at the nearest health facility?

Do you find it easy to access prenatal care at your nearest health facility?

Did they use any maneuvers during labor or for delivery of the placenta? If the answer is YES, what did they use?

Furthermore, 100% consider that every pregnancy carries a risk situation in some way. The answer of one interviewee, daughter of a mother who died from severe preeclampsia plus HELLP syndrome, is quoted: "I believe that every woman is at risk when she gets pregnant, that is why I am afraid of having children with everything that happened to my mother."

Given this situation, we can say that human reproduction can happen in a better way with favorable results if quality and warm care is provided. As agents of change, we must guarantee an optimal result of this entire process, without endangering the life of the mother and the newborn. It is the duty of the State to protect the health of people as a fundamental right, which includes the well-being of the family and community, ensuring healthy and freely chosen motherhood.

The percentages that follow in relevance refer to the evaluation of health personnel, 80% evaluate the care received in the first EESS where they were treated as regular, a relative says: "It took them a long time to realize that I was ill." Likewise, 60% mention that, in the emergency area, to be treated they have to carry out several procedures to then receive the care they need; 66.66% say that they did not receive information from health personnel about the evolution of their patient, in most cases they were only informed that the patient died, this reflects that there is still much work to be done in interpersonal relationships, to raise empathic relationships between users and health providers.

4. Discussions

In the San Martín region of Peru, an increase in maternal mortality (MM) cases was observed between 2022 and 2024. In 2022, 8 deaths were reported, in 2023 there were 14, and in 2024 (until November) 11 cases were recorded (Minsa, 2024). The most affected provinces are Rioja, San Martín, and Mariscal Cáceres (CDC-Minsa, 2024). The loss of the mother leaves the family vulnerable, affecting education, health, and economy, and triggering family disintegration. Children face an uncertain future, exposed to sexual rights violations, labor exploitation, school dropouts, and poverty, which perpetuates the cycle of poverty.

45% of MM cases have a low educational level, which limits the understanding of women's care in the reproductive process. In addition, 100% of the victims were housewives, reflecting a high economic dependence. Domestic violence was 26.66%. The lack of education and resources in the family





environment makes it difficult to detect complications and make timely decisions. It is recommended to implement educational interventions to reduce maternal mortality. The lack of an adequate reproductive and sexual culture remains a crucial challenge for public health, especially in women. Comprehensive sexual education not only prevents sexually transmitted diseases, but also empowers women and improves their quality of life.

4.1. Some studies related to reproductive and family health education

Mendizábal (2022) points out that the pandemic negatively affected the psychomotor development of children and adults, increasing mental health problems. He underlines the importance of integrating psychomotor interventions into educational health programs. Barreto Espinoza (2022) highlights the work overload of health personnel and the need for public policies that protect workers and improve the quality of care. Espinoza Vásquez (2022) points out that a positive organizational environment in hospitals improves user satisfaction and the quality of care. Seminario Unzueta (2022) highlights the relevance of university physical activity to reduce stress and encourage responsible sexual behavior. Chávez Taípe (2022) and Sánchez Sánchez (2022) analyze how recreational activities and communication management in hospitals contribute to the motivation of educational personnel and the improvement of the patient experience. Avila-Jaquez (2019) emphasizes the importance of empowering women in the recognition of their rights and self-care, while Ministerial Resolution No. 184-2024-MINSA (2024-2030) emphasizes maternal mortality, proposing a multidisciplinary approach. Calderón (2014) points out the importance of intervening in the family environment, since it influences the creation of personality.

Dafroyati et al. (2024) and Dorantes et al. (2024) suggest that addressing psychological factors and increasing maternal involvement in prenatal care can significantly reduce maternal mortality. Law No. 32000 (2024) recognizes the family environment as essential in gestation and proposes intervention strategies in homes to improve the quality of life of families.

4.2. Educational management to prevent cancer

Ratcliff et al. (2021) highlight the role of digital health in sexual education. Digital platforms are key to preventing maternal and neonatal morbidity and mortality by providing accessible information on reproductive and prenatal health. Chou et al. (2021) emphasize the use of social media to educate about disease prevention. Morgan et al. (2021) analyze how social media during the pandemic helped to disseminate health information, which is crucial for educational management in sexual and reproductive health.

4.3. Educational management in the family environment

In 2022 and 2023, delays in specialized medical care were identified due to a lack of adequate health facilities for obstetric emergencies. In addition, there is a shortage of qualified personnel and necessary medical equipment. Poor health infrastructure and low educational levels in rural areas make it difficult to detect risks during pregnancy.

An educational intervention is proposed in the family environment, respecting local culture and strengthening women's rights in sexual and reproductive health. This strategy seeks to improve





quality of life, promote health, reduce inequalities in maternal care and protect family well-being. The aim is to strengthen the health system, improve infrastructure and equipment, and increase primary care coverage, all with the aim of reducing maternal mortality.

The fundamental principles of the educational proposal in the family environment are:

- **Universality** : Ensure access to quality health for all families, with a focus on reproductive health from the preconception stage.
- **Comprehensiveness** : Consider social, cultural, and health factors when providing medical care, adapted to the needs of each family.
- **Efficiency** : Achieve outstanding results with available resources, improving efficiency and satisfaction in care.
- **Strengthening the health system** : Improve infrastructure and staff allocation to handle obstetric and neonatal emergencies.
- **Health education** : Reduce social barriers and improve understanding of reproductive risks through health education, empowering families.
- **Interinstitutional coordination** : Promote collaboration between political and operational entities to reduce maternal and perinatal morbidity and mortality.
- **Citizen participation** : Involve the community in identifying risks and designing solutions to improve family health and well-being.

4.4. Proposal for educational management in the context of public health

Public health education management should include key components that guarantee the prevention of sexually transmitted diseases, the improvement of sexual and reproductive health, and the reduction of maternal mortality and gynecological cancers. Educational proposals should:

- 4.4.1. **Implement Comprehensive Sexual Education (CSE) programs** : These programs should cover aspects such as self-care, responsible decision-making regarding sexual and reproductive health, respect for women's sexual rights, and the promotion of gender equality.
- 4.4.2 **Promote access to sexual and reproductive health services** : Ensure that all women, regardless of their socioeconomic status, have access to health services, including early cancer detection tests, HPV vaccination and contraception.
- 4.4.3 **Develop campaigns for prevention and early detection of cancer** : Include information on breast self-examination, regular mammograms and gynecological examinations, with the aim of reducing mortality from breast cancer and cervical cancer.
- 4.4.4 **The importance of education and timely measures to prevent diseases is essential**, not only to improve individual and collective health, but also to avoid unnecessary and tripled expenditures in health systems. Investing in preventive sexual education from childhood is





one of the most effective strategies, as it allows people to know from an early age the risks associated with a lack of information and how to prevent sexually transmitted diseases (STDs), unwanted pregnancies and other reproductive health problems.

- 4.4.5 On the other hand, educating children about sexual prevention and reproductive health allows people to acquire skills to make informed decisions, improving their quality of life, physical and emotional health, and reducing the burden of preventable diseases. Investing in timely sexual education programs not only reduces medical costs, but also fosters a more comprehensive and sustainable well-being for future generations. By giving people the tools to take care of their health and prevent problems before they occur, the need for costly interventions is reduced and collective well-being is improved.

5. Conclusions

Maternal mortality represents a critical indicator of the quality of the health system in any country and is influenced by social, economic, cultural and educational factors. In the context of the San Martín region (Peru), where maternal mortality remains a public health challenge, educational interventions in the family environment play a fundamental role in its reduction. This article examines how reproductive education, aimed at disease prevention, including cancer, can contribute to reducing maternal mortality.

Strengthening educational services on reproductive and sexual health should be a priority to reduce maternal mortality rates and improve the physical and emotional well-being of women; appropriate measures are relevant.

contributions: Since there was an affirmative consensus in the results of the responses on: Domestic violence, economic factor and housing; then it will be possible to manage so that mothers have certain advance remunerations for their services or health-socio-economic security bonuses; considering that the family can help, if it is better informed, and participate in the identification and reduction of risks to avoid MM.

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Margoth Sánchez Sánchez: Writing – original draft, Writing – review and editing

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