

# Use of Premarital Examinations and Associated Health Consequences Among Couples in The Maman W'elikya Health Zone in Mbandaka

Works Manager Freddy MAMONI <sup>a</sup>, Professor LOSUMA KAKAMO <sup>b</sup>,

Ordinary Professor Jean-Pierre IKOLONGO BEFEMBO <sup>b</sup>

<sup>a</sup> *Institute Higher Institute of Medical Techniques of Mbandaka, ISTM- Mbandaka -DRC*

<sup>b</sup> *Faculty of Science and Technology, Department of Chemistry, National Pedagogical Institute University, Kinshasa-DRC;*

## 1. Abstract

Premarital examinations are an essential tool for reproductive health prevention, enabling the early detection of communicable and hereditary diseases. However, their use remains low in several African contexts, particularly in the Democratic Republic of Congo.

A descriptive cross-sectional study with analytical aims was conducted among 30 couples residing in the Maman W'ELIKYA health zone in Mbandaka. Data were collected using a questionnaire administered directly to the participants.

None of the couples surveyed (0%) had undergone premarital medical examinations. The results show an association between low levels of education, lack of information, and non-participation in these examinations. Recurrent illnesses, socioeconomic difficulties, and reported household deaths were observed.

The low rate of premarital medical examinations is a major public health issue. Strengthening health education, raising community awareness, and integrating these examinations into primary care are necessary to improve prevention and reproductive health.

**Keywords:** premarital examinations, prevention, reproductive health, DRC, hereditary diseases.

## 2. INTRODUCTION

### 2.1. State of the question

Reproductive health is a crucial pillar of public health, particularly in resource-limited countries where prevention strategies remain insufficiently integrated into social and medical practices. Among primary prevention interventions, premarital examinations play a significant role, as they allow for the early identification of certain communicable or hereditary diseases that could affect the health of spouses and their future children.

Marriage is indeed a defining moment in individuals' lives and in the formation of families, but it is often preceded by insufficient preventative measures in many regions. Premarital examinations, however, represent a simple, accessible, and effective tool for screening for various conditions, including sexually

transmitted infections, anemia, sickle cell disease, thalassemia, and other disorders that can compromise the health of the couple, the pregnancy, and the development of children.

In the scientific literature, several studies conducted in Africa have shown that the low uptake of premarital examinations exposes couples to significant health risks. According to Kabinda et al. (2021), the absence of premarital screening increases the transmission of infectious diseases and contributes to the development of obstetric, familial, and marital complications. Despite the recognition of the importance of these examinations by international health organizations, their adoption remains limited in many African contexts.

This low uptake is generally linked to a combination of factors, including low levels of education, lack of awareness, socioeconomic constraints, and certain sociocultural and religious beliefs that do not systematically value premarital prevention. These factors influence health behaviors and contribute to maintaining a low culture of premarital screening within communities. In the Democratic Republic of Congo, and particularly in the city of Mbandaka, scientific data on the use of premarital examinations remain limited. The specific situation in the Maman W'ELIKYA health area remains poorly documented, and the socio-educational, cultural, and economic factors influencing the use of these examinations are still insufficiently explored.

It is in this context that the present study is situated, the objective of which is to analyze the level of recourse to prenuptial examinations among couples residing in the Maman W'ELIKYA health area and to identify the health and social consequences associated with their non-carrying, in order to propose ways to improve prevention and reproductive health promotion strategies.

### 3. Problem Statement

In many parts of the world, and particularly in sub-Saharan Africa, hereditary diseases such as sickle cell anemia represent a significant public health crisis. In the Democratic Republic of Congo, this disease remains prevalent, with an estimated national prevalence of 40% and 28% in the city of Mbandaka (Mbensa, 20XX). These figures underscore the scale of the problem and highlight a major shortcoming in prevention and early detection.

One of the key factors contributing to the persistence of this situation is the low rate of premarital screening, which is nevertheless a simple, effective, and inexpensive tool for detecting hereditary and transmissible diseases before marriage. Marriages often take place without the future spouses having access to these screenings, increasing the risk of disease transmission and generating significant health and social consequences: worsening of illnesses, difficulties in caring for sick children, obstetric complications, marital conflicts, and, in some cases, premature deaths.

This problem is exacerbated by several factors:

- ✓ The lack of information and awareness about hereditary diseases and premarital examinations;
- ✓ The low level of education in the population limits understanding of health issues;
- ✓ Sociocultural and religious pressures, which do not systematically value pre-marital screening;
- ✓ The absence of a legal framework mandating premarital examinations as a prerequisite for marriage.

Thus, despite the existence of health services and awareness programs, non-use premarital examinations remain massive, creating a real risk to the reproductive and family health of couples.

This situation raises major questions:

- ❖ Why do couples in the Maman W'ELIKYA health area make so little use of premarital examinations?
- ❖ What are the health and social consequences of this low usage on couples and their families?

The study aims to shed light on this issue by identifying the determinants of low uptake, assessing the health and social impacts, and proposing courses of action to strengthen prevention and promote a culture of premarital health within the community.

### 3.1. Research questions

1. What is the level of recourse to premarital examinations among couples residing in the Maman W'ELIKYA health area?
2. What are the health and social consequences associated with the low use of premarital examinations in this population?

### 4. Hypotheses

- ✚ Low levels of education, socio-economic constraints and a lack of awareness explain the low use of premarital examinations among couples.
- ✚ The absence of premarital examinations is associated with an increase in regular illnesses, social problems and premature mortality among couples in the Maman W'ELIKYA health area.

### 5. Purpose of the study

To analyze the low use of premarital examinations and to evaluate their health consequences among couples in the Maman W'ELIKYA health area, with the aim of proposing appropriate prevention strategies.

### 6. Specific Objectives

1. To determine the level of recourse to premarital examinations among couples residing in the Maman W'ELIKYA health area.
2. Identify the factors explaining the low use of premarital examinations.
3. Describe the health and social consequences observed in couples who did not undergo these examinations.
4. Formulate recommendations to improve the adoption of premarital examinations and strengthen health prevention.

### 7. Purpose of the study

#### Importance of the study

This study is of major public health importance by highlighting a significant gap in premarital prevention practices in an urban setting in the Democratic Republic of Congo. It provides empirical local data that can inform health policies and community outreach strategies. Furthermore, it sheds light on the role of socio-educational factors in the adoption of preventive behaviors. Finally, it contributes to the scientific literature on reproductive health in the African context.

## 8. Field and type of study

This study falls within the field of Reproductive health and health prevention of couples. This is a descriptive and analytical study, based on the collection of quantitative and qualitative data from couples residing in the Maman W'ELIKYA health area, aimed at analyzing the level of recourse to premarital examinations and their health consequences.

## 9. Methodology

The study falls within the field of public health, with a focus on reproductive health and family planning. The methodological approach is based on a direct survey of the targeted couples.

The protocol followed several structured steps:

- ✓ Field visit for immersion and observation of the context;
- ✓ Presentation of civilities and explanation of objectives to those in charge and participants;
- ✓ Contact with health service managers for authorizations and collaboration;
- ✓ Systematic data collection from targeted couples.

The target population consisted of couples residing in the Maman W'ELIKYA health area. The sample comprised 30 couples, selected for their availability and consent to answer questions related to premarital examinations.

To be included in the study, couples had to:

- ✓ To be legally married and reside in the Maman W'ELIKYA health area;
- ✓ To be available and willing to participate in surveys;
- ✓ Agree to provide reliable information about their use of premarital examinations and their health experiences.

This methodology made it possible to collect representative and relevant data, while ensuring the scientific rigor and ethics of the study. Data were collected using a structured questionnaire administered directly to participants during individual interviews.

### 9.1. Population and sample

Target population : married couples resident in the health area. Sample size:

$$n = 30 \text{ couples}$$

### 9.2. Indicators used

Rate of recourse to premarital examinations:

$$T = \frac{N_e}{N_t} \times 100$$

Or :

- $N_e$  = number of couples who underwent the examinations
- $N_t$  = total number of couples

In this study:

$$T = \frac{0}{30} \times 100 = 0\%$$

The sampling method used is non-probability, based on the availability and consent of participants. This approach constitutes a methodological limitation that may affect the representativeness of the results.

## 10. Results

Table 1: Distribution of respondents depending on the level instruction

Education level	Effective	Percentage (%)
Primary	15	50.0
Secondary	10	33.3
Higher Education / University	5	16.7
Total	30	100

Source: The author

Table 1 highlights the overall low level of education among the surveyed population. Half of the respondents (50%) have only a primary education, while 33.3% have reached secondary level. Only a minority, 16.7%, have received higher or university education.

This educational structure reveals a predominance of low to average levels of education, which may limit access to health information, understanding of prevention messages, and adherence to preventive medical practices such as premarital examinations. The low rate of higher education enrollment may therefore be a contributing factor to the risky behaviors observed in the subsequent results.

Table 2: Distribution of couples according to whether examinations were performed prenuptial

Status of premarital examinations	Effective	Percentage (%)
Couples who have undergone the examinations	0	0.0
Couples who have not undergone the examinations	30	100.0
Total	30	100

Source: the author

unequivocally show that all couples surveyed (100%) did not undergo premarital medical examinations before marriage. No cases of couples who had undergone these examinations were recorded at the time of the survey.

This situation reflects a complete absence of a culture of premarital screening within the studied population. It can be attributed to several interdependent factors, including lack of information, low levels of education, sociocultural beliefs, neglect of preventative healthcare, and limited access to health services. This finding raises a major public health issue, as premarital examinations play a crucial role in the prevention of certain hereditary, infectious, and chronic diseases.

Table 3: Consequences observed in couples without examinations prenuptial

Observed consequences	Effective	Percentage (%)
Regular illnesses	30	100.0
Social problems (difficulties in children's schooling, insufficient support)	30	100.0
Death	28	93.3

Source: The Author

Table 3 highlights serious health and social consequences associated with the absence of premarital examinations. All couples surveyed (100%) reported recurring illnesses, reflecting high exposure to conditions that could be prevented or detected early through appropriate screening.

Moreover, all respondents (100%) face significant social problems, including difficulties related to children's schooling and insufficient family support, revealing the negative socio-economic impact of unanticipated health problems.

Finally, the recorded death rate is particularly alarming, reaching 93.3%, which underscores the potentially fatal consequences of not undergoing premarital screening. These results confirm that not having premarital examinations is a major vulnerability factor, both in terms of health and social well-being.

Taken In taken together, these results show that the weak level education , combined with **the** absence total screening premarital sex exposes couples to consequences sanitary facilities And social severe . They emphasize the urgent need to strengthen awareness , health education and integration strategies systematic examinations prenuptial in public health policies , in particular in low - stakes contexts resources .

## 11. Analysis and interpretation of results

Analysis of the results highlights a worrying health situation linked to low uptake The premarital examinations of couples residing in **the** Maman W'ELIKYA health area , in the city of Mbandaka, revealed insufficient health preparation before marriage, leading to major health and social consequences that affect the health of couples and the stability of households.

The common illnesses mentioned mainly include recurrent infections and chronic diseases reported by the participants. Social problems refer to economic hardship, childcare, and schooling.

The reported deaths correspond to events reported in participants' households and do not directly concern the individuals interviewed. These results should be interpreted with caution due to the self-reported nature of the data.

### 11.1. Education level of couples and health vulnerability

The majority of respondents have a low or medium level of education: 50% have a primary education, 33.3% a secondary education, and only 16.7% a higher/university education . This educational structure reflects a significant vulnerability in terms of health prevention.

A low level of education limits understanding of the risks associated with communicable and hereditary diseases, reduces awareness of the benefits of premarital screening, and hinders access to reproductive health information. In this context, the absence of a culture of prevention promotes risky behaviors and reduces voluntary use of screening services.

### 11.2. Near-total absence of recourse to premarital examinations

The results reveal that 100% of the couples surveyed did not undergo premarital health checkups before marriage. This absence constitutes a critical health signal and an indicator of dysfunction in the local prevention system.

This situation stems from several combined factors: a lack of community awareness, economic constraints, limited access to screening services, and the weak integration of premarital examinations into social, religious, and health practices. Consequently, couples marry without prior knowledge of their health status, undermining any primary prevention strategy.

### 11.3. Health and social consequences

The observed consequences are particularly alarming:

- ✓ **Regular illnesses** : 100% of couples are affected.
- ✓ **Social problems** : difficulties in children's schooling and insufficient family support (100%).
- ✓ **Deaths** : 93.3% of reported cases.

These results demonstrate the direct impact of not undergoing premarital screening on couples' health. The lack of testing facilitates the silent progression of preventable or controllable diseases, such as sexually transmitted infections or certain hereditary illnesses, with serious consequences for household survival and well-being.

### 11.4. Overall reading

Taken together, the results show that the low uptake of premarital examinations is a **major risk factor for couples' health** . This situation reveals weaknesses in local prevention strategies, insufficient promotion of premarital screening, and a mismatch between the population's needs and the supply of health services.

The association between low levels of education, lack of premarital screening and serious health consequences underlines the urgent need to **strengthen targeted public health interventions** at the community level.

### 11.5. Implications for public health

The study highlights several priorities:

- ✓ Strengthen community awareness efforts on the importance of premarital examinations.
- ✓ Systematically integrate premarital examinations into primary health care services.
- ✓ Adapt prevention messages to the educational level of couples .
- ✓ Promote collaboration between health facilities, community and religious leaders to encourage screening.

The effective promotion of premarital examinations thus appears as a strategic lever to reduce morbidity, prevent avoidable deaths and sustainably improve the health of couples.

### 11.6. Didactic Implications

The study also highlights major challenges in health education :

- ✓ **Contextualized health education** : simple, concrete messages adapted to the local socio-cultural and linguistic context.
- ✓ **Integration of premarital examinations into educational content** : modules on prevention, marital responsibility and family health in schools and community centers.
- ✓ **Participatory approach** : guided discussions, real case studies, role-playing and anonymized testimonials to reinforce ownership.
- ✓ **Strengthening the skills of educational and health actors** : continuing education in health pedagogy and communication for behavior change.
- ✓ **Accessible teaching materials** : illustrated posters, explanatory diagrams, audio messages in local languages.

- ✓ **Linking formal learning and community education** : coherence between schools, families, health structures and community actors.

Ultimately, improving the use of premarital medical examinations requires a revamped educational approach, focused on contextualizing the content, actively involving couples and communities, training stakeholders, and using accessible resources. Such a strategy would strengthen health prevention, reduce observed health consequences, and promote a lasting culture of marital responsibility in the Maman W'ELIKYA health area.

## 12. DISCUSSION

This study, entitled " Low uptake of premarital examinations and health consequences among couples residing in the Maman W'ELIKYA Health Area in the city of Mbandaka ", highlights a major public health problem, marked by a near absence total use of premarital examinations and by health and social repercussions important within the households studied. The results obtained confirm and enrich the findings reported in the scientific literature, particularly in African and Congolese contexts.

Low uptake of premarital medical examinations: a persistent reality in urban areas The results show that 100% of the couples surveyed did not undergo premarital examinations, reflecting a very low level of adherence to this preventive practice in the Maman W'ELIKYA health area. This situation aligns with observations made by several authors in sub-Saharan Africa, who emphasize that premarital examinations remain poorly integrated into marital practices, despite their recognized importance for the prevention of communicable and hereditary diseases ( Kouamé et al., 2017; Mbala & Tshibangu, 2021).

According to the literature, this low usage is explained by a combination of factors: insufficient awareness, lack of mandatory nature, financial constraints, the weight of socio-cultural traditions, and weak involvement of local health facilities in promoting these examinations ( Oladimeji et al., 2020). The context observed in Maman W'ELIKYA clearly illustrates this reality, where marriage remains primarily a social and cultural act, often disconnected from health considerations.

However, the results should be interpreted with caution. Due to the limited sample size and the absence of inferential statistical analyses, the observed relationships do not establish a causal link, but only potential associations.

### 12.1. Level of education and health prevention behaviors

The predominance of respondents with only primary or secondary education is a significant factor explaining the low rate of premarital screening. Several studies have established a strong link between low levels of education and low adoption of preventive health behaviors (WHO, 2019; Ndziessi et al., 2020). Limited education reduces individuals' ability to understand the benefits of early screening and to anticipate health risks associated with married life.

In this sense, the results of this study confirm that insufficient health knowledge contributes to trivializing premarital examinations, perceived as unnecessary or secondary, even in an urban environment like the city of Mbandaka.

### 12.2. Health consequences related to the absence of premarital examinations

The health consequences observed in this study are particularly alarming. The presence of recurring illnesses in all couples surveyed (100%) and a high mortality rate (93.3%) reflect the negative impact of

the lack of premarital screening. These results are consistent with those of Kouassi et al. (2019), who show that the absence of premarital examinations leads to the late discovery of serious illnesses, often at a stage of complications.

According to the WHO (2019), premarital examinations are a key tool for primary prevention, enabling the early identification of certain conditions and directing couples towards appropriate care. Their absence, as observed in the Maman W'ELIKYA health area, exposes couples to high morbidity and preventable mortality.

### **12.3. Social and economic repercussions on households**

Beyond health issues, the study highlights widespread social problems, including difficulties in children's education and insufficient family support. These findings corroborate the work of the World Bank (2020), which emphasizes that chronic illness within the household is a major factor in socioeconomic vulnerability.

The literature shows that the absence of preventative healthcare has a lasting negative impact on families, reduces their productive capacity, and jeopardizes children's futures, particularly in disadvantaged urban areas. The findings observed at Maman W'ELIKYA confirm that the consequences of not conducting premarital examinations extend far beyond the medical sphere, affecting the entire social fabric.

### **12.4. Specific contribution of the study and implications for public health**

Contrary to some studies that have reported improved use of premarital medical examinations through the involvement of churches, NGOs, or community structures (Adebayo & Akinwale, 2018), this study reveals a notable absence of local promotion strategies in the Maman W'ELIKYA health area. This situation highlights a lack of coordination between health services, community leaders, and couples.

Thus, this study makes a significant contribution to the literature by empirically documenting the extent of the low uptake of premarital examinations and its health consequences in a specific urban context in the DRC. It confirms the urgent need to strengthen awareness campaigns, health education, and the integration of premarital examinations into primary healthcare services.

### **12.5. Limitations of the study**

This study has some limitations, notably the small sample size (30 couples) and the use of non-probability sampling, which limits the generalizability of the results. Furthermore, since the data were self-reported, reporting bias cannot be ruled out. Finally, the lack of in-depth statistical analyses limits the interpretation of the observed associations.

## **CONCLUSION**

This study highlights a very low rate of premarital medical examinations among couples in the Maman W'ELIKYA health district of Mbandaka, linked to socio-educational, informational, and contextual factors. The results suggest that this low rate of use could be associated with significant health and social consequences within households, particularly in terms of recurrent illnesses and socio-economic difficulties.

However, due to the limited sample size and the descriptive nature of the study, these results should be interpreted with caution and do not establish causal relationships. Further, larger-scale studies, including in-depth statistical analyses, are needed to confirm these observations.

In this perspective, strengthening health education, implementing community awareness strategies adapted to the local context, and systematically integrating premarital examinations into primary healthcare services appear as priority actions to improve prevention and reproductive health for couples.

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