

**Research Article**

## Overview of Women's Reproductive Health Problems among Foreign Tourists in Health Services in Bali

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### Abstract

**Objective:** To describe the profile of women's reproductive health problems among foreign tourists receiving care in Bali in 2022–2023.

**Methods:** This study employed a descriptive cross-sectional design. A total of 103 participants were selected using purposive sampling. Data were analyzed univariately using SPSS version 27. The study was conducted in two private hospitals in Bali.

**Results:** Among foreign tourists presenting with reproductive health problems, the majority were aged 20–35 years, accounting for 31 cases (60.8%) in 2022 and 34 cases (65.4%) in 2023. The most common diagnosis was prolonged labor, reported in 20 cases (39.2%) in 2022 and 11 cases (21.2%) in 2023. The most frequent presenting complaint was abdominal pain, reported by 30 patients (58.8%) in 2022 and 19 patients (36.5%) in 2023. Non-pharmacological interventions were the most commonly administered treatments, with 34 cases (66.7%) in 2022 and 31 cases (59.6%) in 2023.

**Conclusion:** The findings indicate that reproductive health problems among foreign female tourists seeking care in two health facilities in Bali during 2022–2023 were predominantly reported by individuals aged 20–35 years. Prolonged labor was the most frequent diagnosis, lower abdominal pain was the most common complaint, and non-pharmacological treatment methods were used most often.

**Keywords:** non-pharmacological treatment, prolonged labor, women's reproductive health.

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### INTRODUCTION

In 2022, Indonesia recorded 5.4 million international tourist arrivals, of which 2.1 million (39%) visited Bali Province. This reflects a substantial increase compared with the previous year, when only 51 foreign tourists arrived due to the impacts of the COVID-19 pandemic<sup>1</sup>. The surge in tourist arrivals, particularly in Bali, has important implications for the demand for adequate healthcare services in this major tourism destination. Illness during travel remains a key concern for travelers, as it may limit or even disrupt their planned activities<sup>2</sup>. International travel is associated with multiple potential health risks, and women travelers, in particular, experience a range of reproductive health problems<sup>3</sup>. This suggests that foreign tourists

visiting Bali may also be affected by such issues<sup>4</sup>.

Globally, reproductive health disorders represent a major burden among women of reproductive age. Global Burden of Disease (GBD) Study 2021, there were approximately 1.21 billion cases of gynecological conditions worldwide, with an age-standardized prevalence rate of 62,091.73 per 100,000 women (GBD 2021). These conditions include menstrual disorders, Polycystic Ovary Syndrome (PCOS), infertility, and other gynecological morbidities. Despite their high global prevalence, the implications of these conditions for women traveling internationally remain understudied. Addressing this gap is essential for understanding how reproductive health vulnerabilities may affect foreign female tourists visiting destinations such as Bali<sup>5</sup>.

Multiple factors related to travel may contribute to reproductive health risks among women. These include changes in diet, sexual activity, humidity, temperature, and environmental adaptation<sup>6</sup>. In addition, individual characteristics of travelers such as age, medical history, and social background may further influence their susceptibility to reproductive health problems<sup>6</sup>. Although travel may entail risks such as stressors, lack of continuity of care, and delays in seeking treatment, Bali now offers a rapidly expanding healthcare system, including internationally oriented hospitals and traveler-focused clinics, which may help mitigate these challenges. Nevertheless, empirical data on how reproductive health issues specifically manifest among foreign female tourists in Bali remain scarce.

The presence of various travel-related risk factors can lead to several reproductive health problems among women. The most common conditions reported globally include menstrual disorders, sexually transmitted infections, ectopic pregnancy, abortion, ovarian cysts, and cervical cancer<sup>7</sup>. Such health issues can significantly affect tourists' quality of life, causing psychological distress, physiological discomfort, anxiety, and limitations in sexual activity<sup>8</sup>.

To date, no previous studies have analyzed reproductive health problems among foreign female tourists in Bali. Considering the increasing number of international visitors and the absence of systematic assessments in this area, the present study aims to provide an "Overview of Women's Reproductive Health Problems among Foreign Tourists in Health Services in Bali, 2022–2023." This research serves as a baseline for strengthening reproductive health services tailored to the needs of tourists.

## METHODS

This study was a descriptive investigation employing a cross-sectional design with secondary data extracted from medical records. The research was conducted at two private hospitals in Bali from May to June 2024. Using a purposive sampling approach, complete medical records of foreign patients who presented with women's reproductive health issues at the study sites during 2022–2023 were included. The exclusion criterion was incomplete medical records.

The minimum required sample size for this cross-sectional study was determined to be 100 participants. The variables assessed included age, insurance ownership, diagnosis, chief complaints, and treatment. Data collection was performed by retrieving relevant information from patient medical records and entering it into a structured data collection form designed for this research.

All recorded data were subsequently processed and analyzed descriptively using SPSS version 27. Univariate analysis was conducted to summarize the characteristics of each variable, including age, country of origin, chief complaints, treatment, and diagnosis. The study findings were presented using frequency distributions and percentages in both narrative and tabular formats.

## RESULTS

A total of 103 samples met the inclusion and exclusion criteria for this study, consisting of 51 samples from 2022 and 52 from 2023. The profile overview of the research subjects is presented in the following tables. The data show that in 2022, of the 51 patients, 31 individuals (60.8%) were in the 20–35-year age group, while 20 individuals (39.2%) were aged above 35 years. In 2023, among 52 patients, the number of individuals aged 20–35 years increased to 34 (65.4%), whereas those aged above 35 years decreased to 18 (34.6%). This year-to-year comparison indicates a demographic shift toward a younger age group, with a rising proportion of patients aged 20–35 years and a relative decline in those above 35 years. The data indicate that the majority of tourists experiencing women's reproductive health problems were in the 20–35-year age group, with 31 cases (60.8%) reported in 2022 and 34 cases (65.4%) in 2023.

**Table 1.** Distribution of Patients Based on Diagnosis

Diagnosis	N (%)	
	2022 (n=51)	2023 (n=52)
Prolonged labor	20 (39.2)	11 (21.2)
Post-operative uterine wound	7 (13.7)	8 (15.4)
Premature rupture of membranes	5 (9.8)	8 (15.4)
Transverse and oblique fetal positions	3 (5.9)	8 (15.4)
Leiomyoma	5 (9.8)	4 (7.7)
Ectopic pregnancy	3 (5.9)	2 (3.8)
Female pelvic inflammatory disease	1 (2)	2 (3.8)
Uterovaginal prolapse	2 (3.9)	0 (0)
Intrauterine fetal death (IUD)	1 (2)	1 (1.9)
Oligohydramnios	1 (2)	1 (1.9)
Cervical incompetence	0 (0)	2 (3.8)
Cystocele	0 (0)	2 (3.8)
Adenomyosis	0 (0)	2 (3.8)
Ovarian cyst	1 (2)	0 (0)
Pelvic peritonitis	1 (2)	0 (0)
Uterine polyp	1 (2)	0 (0)
Infertility	0 (0)	1 (1.9)

Based on Table 1, in 2022, prolonged labor was the most common reproductive health issue, accounting for 20 cases (39.2%), followed by post-operative uterine wounds with 7 cases (13.7%), leiomyoma with 5 cases (9.8%), and premature rupture of membranes with 5 cases (9.8%). In 2023, prolonged labor again represented the

most frequent diagnosis with 11 cases (21.2%), followed by premature rupture of membranes with 8 cases (15.4%). Additionally, transverse and oblique fetal positions each accounted for 8 cases (15.4%), while post-operative uterine wounds were also recorded in 8 cases (15.4%).

**Table 2.** Distribution of Patients Based on Complaints

Complaints	N (%)	
	2022 (n=51)	2023 (n=52)
Lower abdominal pain	30 (58.8)	19 (36.5)
No complaints	5 (9.8)	14 (26.9)
Vaginal discharge without abdominal pain	5 (9.8)	8 (15.4)
Abdominal pain with menstrual disorders	5 (9.8)	4 (7.7)
Decreased fetal movement	2 (3.9)	2 (3.8)
Protrusion from the vagina	2 (3.9)	2 (3.8)
Menstrual pain & lower abdominal pain	0 (0)	2 (3.8)
Menstrual cycle disorders	1 (2)	0 (0)
Bleeding outside the menstrual cycle	1 (2)	0 (0)
Not pregnant, married for more than 1 year	0 (0)	1 (1.9)

Based on Table 2, the complaints experienced by foreign patients with reproductive health issues varied across both years. In 2022, lower abdominal pain was the most common complaint, reported by 30 patients (58.8%), accompanied by various diagnoses. In 2023, lower abdominal pain remained the most frequent complaint, although the number decreased to 19 cases (36.5%). Among the reported complaints, a subset of patients experienced no complaints at all 5 patients (9.8%) in 2022 and 14 patients (26.9%) in 2023 making this the second most common

category. In 2023, this group included patients who were not pregnant despite being married for more than one year. Regarding treatment, non-pharmacological methods were the most commonly utilized for foreign tourists with women's reproductive health problems. In 2022, 34 patients (66.7%) received non-pharmacological treatment, which slightly decreased to 31 patients (59.6%) in 2023. Pharmacological treatment was given to 16 patients (31.4%) in 2022, increasing to 20 patients (38.5%) in 2023. A combination of pharmacological and non-pharmacological

treatment was administered to only one patient (2%) in 2022 and one patient (1.9%) in 2023. The data indicate that non-pharmacological approaches remained the predominant treatment method, despite the slight increase in pharmacological therapy in the following year. Non-pharmacological treatment including operative procedures and routine antenatal care was the most frequently administered, with 34 cases (66.7%) in 2022 and 31 cases (59.6%) in 2023. Pharmacological treatment, involving the use of antibiotics and hormonal medications, ranked second, increasing from 16 cases (31.4%) in 2022 to 20 cases (38.5%) in 2023. The study on the characteristics of foreign tourist patients visiting Bali found that most were women of active reproductive age who presented with lower abdominal pain, were diagnosed with prolonged labor, and subsequently required operative intervention. This finding indicates the need for stricter screening of pregnant women who are permitted to travel abroad, considering the risk of labor occurring during travel. Rigorous screening and clear guidelines on the gestational age at which international travel is allowed should be emphasized, in accordance with the recommendations of the American College of Obstetricians and Gynecologists (ACOG), which states that the safest period for pregnant women to travel is during the second trimester, between 14 and 28 weeks of gestation.

## DISCUSSION

This study found that the 20–35-year age group dominated the patient population, comprising 60.8% (31 patients) in 2022 and 65.4% (34 patients) in 2023. This reflects that women in early to mid-reproductive age constituted the highest proportion of reproductive health cases. Women of reproductive age often experience reproductive issues, especially in developing countries with tropical climates. This condition is caused by the humid climate and a lack of knowledge about reproductive health<sup>9</sup>.

Globally, reproductive health problems account for 33% of all diseases affecting women. WHO data (2012) similarly reports a high burden of sexual and reproductive disorders among women aged 15–49 years. Other studies also show that more than 20% of the disease burden in this age group arises from reproductive causes, with maternal mortality risks up to 33 times higher in developing compared to developed countries<sup>10</sup>.

From these statements, this research is also aligned, as the 20–35 age group constitutes the majority.<sup>2,11,12</sup>

Prolonged labor was the most common diagnosis, affecting 20 of 51 foreign patients in 2022 and 11 of 52 in 2023. Foreign pregnant travelers face higher risks of complications due to increased activity, environmental changes, and limited prenatal care. Another study found prolonged labor in 53.4% of primigravidae, often caused by uterine insufficiency and hypotonic contractions. Hospitals should develop targeted obstetric protocols for foreign patients, including enhanced monitoring and early detection of dysfunctional labor patterns<sup>13</sup>.

Prolonged labor is a reproductive health issue involving complications during childbirth that often occurs in mothers giving birth. In another study, the researchers found that the majority of primigravida mothers experienced prolonged labor, accounting for 53.4%. In that study, 51 respondents reported experiencing uterine contractions twice every 10 minutes with durations of less than 40 seconds<sup>14</sup>. This condition is caused by uterine insufficiency, which is a contributing factor to prolonged labor or prolonged labor in 65% of primiparous women. Uterine insufficiency can lead to weak contractions during labor, known as uterine hypotonic action, and a loss of coordination between the upper and lower segments of the uterus<sup>15</sup>.

In managing cases of prolonged labor, the primary intervention is typically the acceleration of labor using oxytocin. However, if necessary, operative delivery through cesarean section by medical professionals may be chosen to expedite childbirth<sup>16</sup>. In cases of ectopic pregnancy, operative management is crucial in clinical scenarios. Procedures such as laparotomy and salpingectomy are options to address ectopic pregnancy issues<sup>17</sup>.

Cases of Pelvic Inflammatory Disease (PID) were identified, likely resulting from ascending infections and patient reluctance to accept antibiotic therapy. STIs are common among travelers, with 5–50% engaging in unprotected sex abroad and only half using condoms. Many STIs are asymptomatic, and chronic infections can lead to PID, infertility, ectopic pregnancy, and miscarriage. There is a need for stronger sexual health education targeted at travelers and improved screening protocols for early STI detection among foreign patients<sup>18</sup>. Many STIs do not show symptoms in those infected, making

them difficult to identify and control. Clinical manifestations of STIs can be categorized into several syndromes, such as genital ulcers or erosions, urethral or vaginal discharge, and Pelvic Inflammatory Disease (PID). STIs are divided into curable infections caused by bacteria (such as gonorrhea, chlamydia, syphilis, chancroid, lymphogranuloma venereum, granuloma inguinale) or protozoa (trichomoniasis), and incurable viral infections (such as genital herpes, genital warts, HIV). STIs are not only a cause of acute morbidity but can also lead to complications including male and female infertility, ectopic pregnancy, cervical cancer, early death, or miscarriage<sup>18</sup>. In this study, the number of patients with pelvic inflammatory disease (PID) was also found, which may occur due to ascending infection from STIs and a lack of willingness to accept antibiotics, resulting in ongoing infections.

Lower abdominal pain was the most frequent complaint, experienced by 58.8% of patients in 2022 and 36.5% in 2023. This is consistent with the location of reproductive organs in the lower abdominal quadrant. Previous research found similar patterns abdominal pain occurred in 68.14% of cases involving ectopic pregnancy, uterine perforation, and ruptured ovarian cysts, as well as in patients with reproductive infections. Clinicians should maintain a high index of suspicion for reproductive pathology when foreign patients present with lower abdominal pain and ensure timely diagnostic imaging and laboratory testing<sup>19</sup>. Based on the statement, it can be concluded that the results of this study align with previous research, as the majority of the data obtained indicate that lower abdominal pain is the most common complaint among patients with women's reproductive health issues<sup>20</sup>.

Non-pharmacological management, including operative procedures and antenatal care, accounted for 66.7% of cases in 2022 and 59.6% in 2023. Surgical interventions were commonly required for diagnoses such as prolonged labor and ectopic pregnancy. Similar patterns were observed at RSU Premagana Denpasar, where 82–83% of obstetric and gynecologic cases required operative management. Cesarean sections are often performed for prolonged labor, while laparotomy or salpingectomy are standard for ectopic pregnancies. Hospitals serving foreign tourists should ensure the availability of comprehensive obstetric and gynecologic

services, including emergency surgical capabilities and consistent antenatal counseling for high-risk patients<sup>20,21</sup>.

These findings emphasize the importance of strengthening reproductive health education and improving healthcare availability for women of reproductive age, especially in regions with tropical climates where humidity and limited knowledge amplify risks.<sup>16,17</sup>

## CONCLUSION

Based on the research conducted, women's reproductive health problems among foreign tourists seeking healthcare services in Bali during 2022–2023 were predominantly reported among those aged 20–35 years. The most common diagnosis was prolonged labor, with the majority of patients presenting with lower abdominal pain, and treatments were predominantly operative procedures. These findings highlight the need to improve antenatal care services and strengthen hospital preparedness for managing obstetric cases among foreign tourists.

## LIMITATION of the STUDY

The research results can specifically depict the profile of foreign tourists visiting a private hospital with women's reproductive health issues during the period 2022–2023. The study was purely descriptive and analyzed univariately. It would be advisable for this research to serve as a foundation for further studies.

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