Clinical, Psychological and Socio-Economic Profile of Women Consulting for Couple Infertility in the Yaounde Gynaeco-Obstetric and Paediatric Hospital

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Abstract

Introduction: Infertility is defined as the inability to achieve a pregnancy after at least 12 months or more of regular unprotected sexual intercourse. Our main objective was to describe the clinical, psychological and socio-economic profile of women consulting for infertility in the Yaounde Gyneco-Obstetric and Pediatric Hospital. **Methodology:** This was a descriptive cross-sectional study with prospective data collection at the Yaounde Gyneco Obstetric and Pediatric Hospital over a period of 7 months from 1st December 2021 to 31st June 2022. **Results:** We included 171 patients. The mean age was 32.3 ± 5.5 years. The mean duration of infertility was 4.0 ± 3.7 years. Primary and secondary Infertility made up 31.6% and 68.4% of cases respectively. Past medical history was significant for Abortions (50%), Chlamydia and Mycoplasma infections (43.8%), chronic pelvic pain (49.7%) and endouterine manipulations (33.3%) of cases. Majority of our patients were stressed (76.6%). The most represented stress score was severe stress (66.1%). 51% of our patients were mentally depressed and 35.6% were anxious. Majority of them (74.9%) had low socio-economic status. **Conclusion:** Couple infertility is most often secondary. It triggers the onset of psychological problems like stress, mental depression and anxiety. Most of our patients had a low socio-economic status.

Keywords

Psychological Profile, Infertility, Evaluation Scale, Women

1. Introduction

The World Health Organization (WHO) defines infertility as the inability of a couple to achieve pregnancy after at least twelve months of regular, unprotected sexual intercourse [1] [2]. Infertility affects both women (30% of cases) and men (20% of cases) [1] [2]. Worldwide it affects between 60 million and 180 million people. This situation concerns 15% of couples who desire to procreate. In Central Europe, its prevalence varies between 10% - 15% [3] [4]. In Cameroon as in Africa, 20% to 30% of couples suffer from infertility [1] [3]. Despite the advances in Assisted Reproductive Technology (ART), couple infertility in our context remains a source of anxiety and even rejection within the family. Oftentimes, it is the woman who first realizes that there may be a fertility problem and also, she must first convince her partner of the need to consult at a hospital. During this phase, stress, anxiety, self-pity and vulnerability are predominant. Threatened masculinity was observed in 30% of infertile men and 72% of couples became depressed as they dealt with infertility. Gynecological consultations and explorations can be exhausting and cause anxiety. Advice and counselling then become an integral and important part of managing the problem. Couples need to talk to people who understand and validate their feelings. In cases of infertility, sexual intercourse can eventually become a chore and provide fertile ground for the expression of various negative emotions. Studies have shown that depression decreases the chances of success and lead to even greater failure rates. Severe anxiety at the time of medical procedures significantly reduces the success of treatment [5]. Psycho-social management of infertility would consist of identifying problems, conflicts and important psychological support for the couple to cope with infertility.

Specifically, we sought to determine the socioeconomic characteristics of women consulting for couple infertility, to identify the most predominant type of infertility and its duration, to determine the clinical profile of these women and to describe psychological disorders.

2. Materials and Methods

This was a prospective cross-sectional study carried out in the gynecology/obstetrics unit of the Yaounde Gyneco-Obstetric and Pediatric Hospital (HGOPY). Study authorizations were obtained from the hospital authorities.

The study was carried out over a period of 7 months, from December 2021 to June 2022. Sampling was convenient and exhaustive. Included in our study were all women who consulted for couple infertility during the recruitment period and who met the inclusion criteria. The study was explained to them and informed consent was obtained. A total of 171 women who consulted for couple infertility participated in our study. Data was recorded and analyzed using CSpro version 7.0 and SPSS (Statistical Package for Social Sciences) version 23. Microsoft Word and Excel 2013 software were used to create the tables and graphs.

Quantitative variables were expressed in average. Qualitative variables were expressed in frequency and proportion.

3. Results

3.1. Socio-Demographic Profile

We recruited 171 women. Those of the western (34.5%) and central (34.5%) regions were the most represented. The ages ranged from 21 to 47 years with an average age of 32.3 ± 5.5 years. The majority were between 25 and 40 years old (81.1%). The most represented age group was 25 - 30 (28.1%) (Figure 1). Amongst the socio-demographic characteristics, workers made up (82%). 32.2% in the informal sector, 55.6% at university level, and couples living together (73.7%).

The average duration of infertility was 4.0 ± 3.7 years with a minimum of 1 and a maximum of 23 years. In majority of patients the duration of infertility was less than 5 years (69%). The average age of partners was 39.1 ± 7.8 years with a minimum of 24 and a maximum of 65 years. The most represented age group was between 30 and 45 years (71.9%).

3.2. Clinical Profile

Chronic pelvic pain (46.9%) was the most common sign, followed by menstrual disorders (39.5%). Chlamydia serology was positive in 43.7% of patients, and mycoplasma in 25.6% of patients. Pelvic ultrasound was the most requested workup (67.2%). Uterine fibroids were the most frequent anomalies detected on Ultrasound (38.3%). A spermogram was done in 26% of cases and azoospermia was the most found anomaly (19.6%). In 50% of those cases spermogram was normal (Table 1).

3.3. Psychological Profile

Stress: Stress was present in 76.6% of women. It was severe in 66.10% (Figure 2).

Mental depression: More than half of women (51%) suffered from mental depression according to the PHQ-9 scale (Figure 3).

Anxiety: 1/3 of women (35.6%) suffered from generalized anxiety disorders according to the GAD-7 scale (Figure 4).

3.4. Socio-Economic Profile

74.9% of the women recruited had a low socio-economic status according to the EPICEscore.

4. Discussion

The mean age of the study population was 32.3 ± 5.5 years with extremes of 21 and 47 years; the most represented age group was 25 to 30 years (28.1%). Nzintcheu *et al.* in 2012 in Cameroon had similar results with an average age of 32.2 ± 4.8 years [6]. Ngo Oum *et al.* in 2016 found an average age of 31.07 years
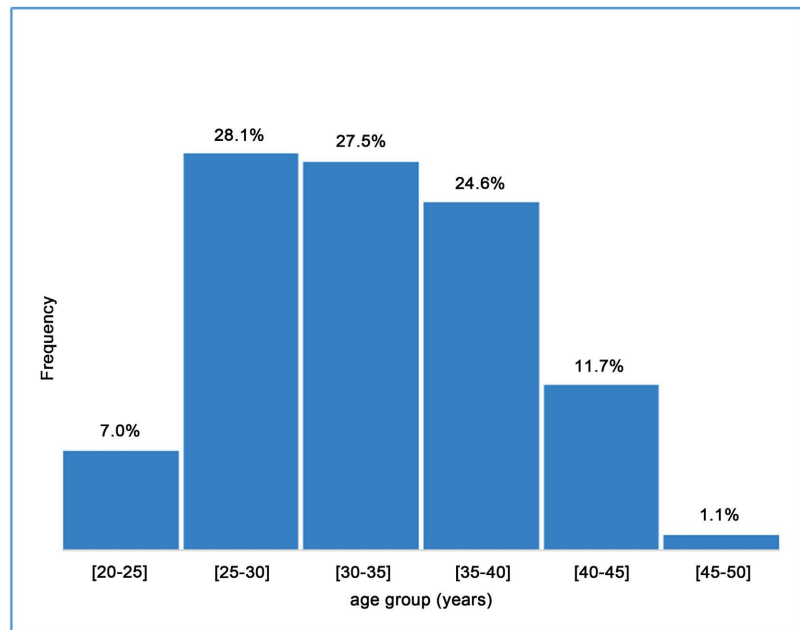
Figure 1. Patient age group.

Table 1. Spermogram disorders.

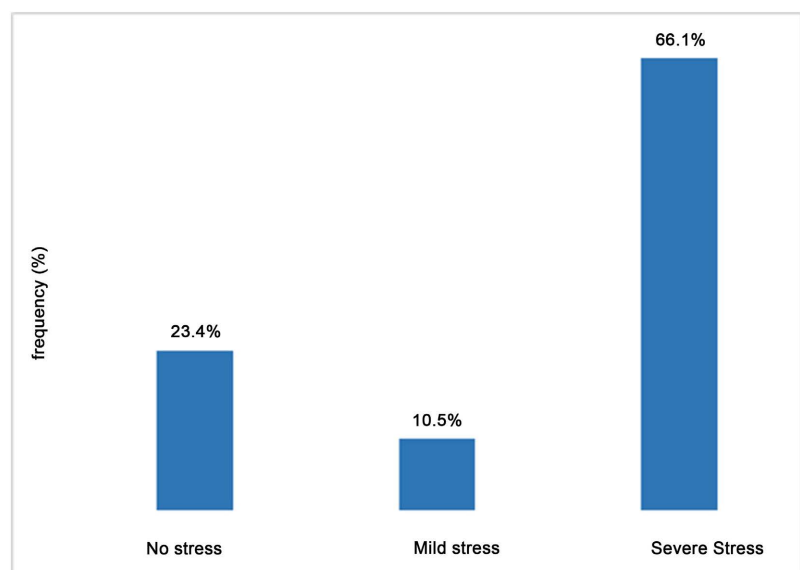| Spermogram (n = 46)		
No anomaly	23	**50.0**
Azoospermia	9	**19.6**
Oligospermia	7	15.2
Hypospermia	3	6.5
Tératospermia	3	6.5
Asthénospermia	1	2.2

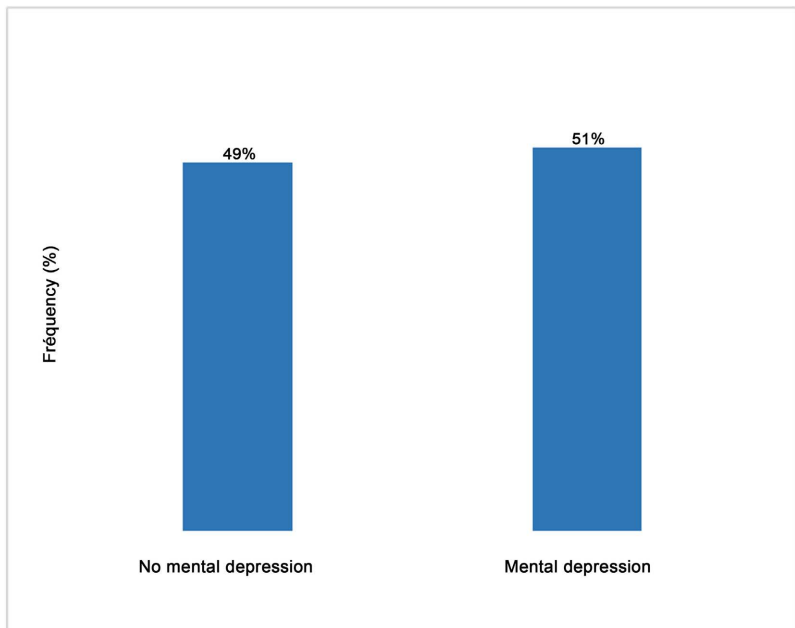**Figure 2.** Prevalence of stress according to the stress scale.

Figure 3. Prevalence of depression according to the PHQ-9 depression scale.
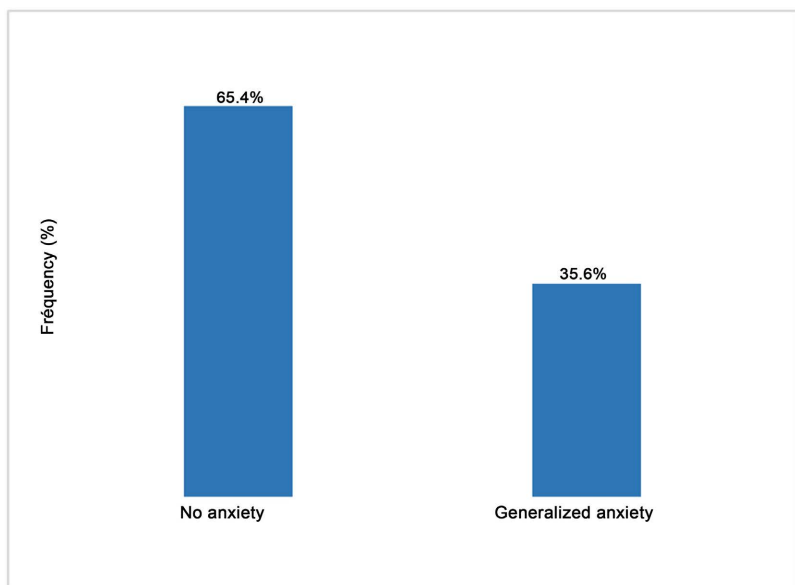

Figure 4. Prevalence of anxiety according to the GAD scale.

with the most represented age range being 25 to 34 years (89%) [7]. This could be explained by the fact that, lately the age at first pregnancy is increasing and estimated at 30 years on average in France [8]. The level of schooling for girls is clearly increasing in our environment, so women start motherhood a little later [1]. Foumsou [5] had noted that the average age of "Grand-multiparous women" was 36.5 years.

38.6% of patients were married as compared to 35.1% who were cohabiting. These results are similar to those of Nana *et al.* in 2012 at the Maternité Principale of the Yaounde Central Hospital. This high rate of patients cohabiting can

be explained mainly by the fact that in Africa and particularly in Cameroon after the celebration of the traditional marriage rights and before the civil wedding, several couples consider themselves married and therefore live together [1].

72% of women had an occupation. This result is similar to that of Ngo Um *et al.* in 2016 in the same health facility who found that 76% of patients were employed amongst which 75% had a university degree. On the other hand, Nana *et al.* at the Maternité Principale of the Yaounde Central Hospital found a majority of women with a Secondary Education (74%). This difference could be explained by the fact that the Maternité Principale is a public health facility where the prices of most gynecological procedures are lower and therefore an increased tendency to have women with a low-income.

The average duration of infertility in our patients was 4.0 years ± 3.7 years, with a minimum of 1 year and a maximum of 23 years. This is similar to the results of Fopoussi *et al.* in Cameroon in 2020 who found an average duration of 4.6 ± 4.9 years [9] and Fatemeh *et al.* in Iran in 2004 who found a minimum duration of one year and a maximum of 20 years [10]. These results can be explained by delay in consultation and medical expertise for optimal management. The earlier the medical assessments the better because the prognosis also depends on the duration of infertility and additional medical factors [6]. Primary infertility accounted for 31.6% while secondary infertility accounted for 68.4% of cases. These results are close to those of Ngowa *et al.* [11], who found 28.3% primary infertility and 66.8% secondary infertility and Ngo Um *et al.* [5] who found 34% primary and 66% secondary infertility in Cameroon in 2016. This highlights the role played by sexually transmitted infections which are the leading cause of infertility in our context.

Clinical signs associated with infertility were mostly menstrual disorders (39.5%), and signs of infections (32.1%). This observation recurs in most studies done in Africa [5] [6]. Pelvic ultrasound was the most requested amongst the workup done to assess infertility (67.2%). Uterine myomas were present in 35.6% of cases. This result is consistent with that obtained by Moriera *et al.* in Senegal in which uterine fibroids were associated with infertility in 39.6% of cases [12]. A study done in Cameroon by Belley Priso *et al.* showed that uterine myomas are found in 57.4% of cases as the main cause for secondary infertility [13]. Myomas are responsible for endometrial dystrophy due to uterine vascularization disorders which render the endometrium unfavorable for implantation.

We looked for stress, anxiety and mental depression as the psychological profile in our study population. Indeed, the majority of infertile couples learn to cope with infertility, but some cannot adapt to this stressful condition and suffer from problematic emotional responses, such as severe stress, depression and anxiety. Stress was present in the majority of patients recruited (76.6%). This result is similar to that of Panel *et al.* in 2016 who found that 80% of infertile patients were stressed [14]. Similarly, the study by Nana *et al.* in Cameroon in 2011 found stress in 83.6% of these patients [1]. The most common stress score in our study was severe stress (66.1%). Infertility is a very stressful event in a woman's

life. The high rate of stress found in this study could be due to the importance given to motherhood in African culture.

Anxiety was found in 35.6% of cases. Our results are similar to those of Upkong *et al.* in Nigeria in 2006, who found anxiety in 37.5% of infertile patients [15]. Similarly, the study by Benbella *et al.* in Morocco in 2018 found anxiety in 45.6% of infertile women [16]. These results highlight the consequences that infertility can have in the lives of couples. Infertility can play an important role in the life of the couple concerned, thus not only affecting their mutual relationship, but also their interaction within their family and the society.

All these psychological disorders show the interest of involving a psychologist in the management of infertile women in Cameroon.

According to the EPICE score, about 75% of the women in our study lived in uncertain or vulnerable conditions. This result is similar to data from Cameroon's National Institute of Statistics (NIS) in 2014. Indeed among the 51.5% of the Cameroonian female population who live below the poverty line, 79.2% are in a vulnerable or delicate situation [17]. This could reflect the fact that infertility most often sets in precarious circumstances. Indeed, women in vulnerable situations are more often exposed to risky sexual conditions, which expose them to sexually transmitted infections. In this light, Ombelet *et al.* found that sexually transmitted infections and poverty were major risk factors for infertility in developing countries [18]. The increasing prevalence of sexually transmitted diseases has had a negative impact on reproduction [19]. This high prevalence is usually worsened by a delay or complete lack of diagnosis, coupled with incomplete, inappropriate or non-existent management [18]. However, low socioeconomic status and reduced access to health services may have made patients in developing countries more vulnerable to conditions that can lead to infertility [19]. Thus, the burden of infertility knows no social or economic boundaries and affects especially those least able to seek treatment [19].

5. Conclusion

Couple Infertility affects the Cameroonian woman who is productive for the society. Low socioeconomic status is a major risk factor as well as a history of sexually transmitted infections. Psychological disorders are stress, anxiety and mental depression. The management of infertile women must therefore include psychotherapy in order to reduce the impact of infertility on the mental health of women in particular and society in general and to improve reproductive outcomes.

Author's Contributions

Patient management: junie YANEU NGAHA, Claudia TOUKEM. Data collection: junie YANEU NGAHA, claudia TOUKEM. Manuscript drafting: junie YANEU NGAHA, Isidore TOMPEEN, bilkissou MOUSTAPHA, claudia TOUKEM, anabelle AKO MANGWI, Brigitte WANDJI, laure MENGUENE. Manuscript

revision: Brigitte WANDJI, Pascal FOUMANE. All authors approved the final version of the manuscript.

Conflicts of Interest

The authors declare no competing interest.

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