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Abstract

Natural family planning methods provide women with an opportunity to use natural methods to plan pregnancy. This is done through daily monitoring of symptoms and biomarker fluctuation in accordance with hormonal changes throughout the menstrual cycle to identify the fertile window. Through the identification of the fertile window and ovulation, one can determine appropriate days for sexual intercourse. This format allows participants to develop a greater understanding and in-depth knowledge of reproductive health to avoid or achieve pregnancy. The use of natural family planning has greatly increased over the last two decades, growing the demand for clinical practice in applicability and assurance of the efficacy of the methods as a reliable alternative to common clinical practices such as hormonal contraceptives.

Keywords: natural family planning (NFP), fertility awareness-based methods (FABMs), symptothermal method, natural family planning applications, Marquette method, hormonal contraception

Introduction

The World Health Organization reports growth in the usage of natural family methods from 900 million in 2000 to approximately 1.1 billion in 2020. During a woman's menstrual cycle, many hormonal fluctuations occur. Monitoring these biomarkers and the effect they have on the body can allow women to naturally monitor their cycle to determine their fertile window. All family awareness methods, can be used both to avoid or plan pregnancy. The three most common methods include recording temperature at the same time in the morning, cervical mucus appearance and consistency, and simply charting menstrual cycles (planned parenthood, 2021).

Statement of the Problem

When trying to plan pregnancy, some people prefer to use natural methods to avoid or plan pregnancy. This can be commonly attributed to cultural or religious beliefs and women desiring an alternative to hormonal contraception experience and side effects. Sundaram et al. (2017) completed a study that shows the result of FABMs not being routinely taught to medical professionals. Traditional medical school curricula have not addressed fertility awareness-based methods (FABMs) of contraception. As a result, a majority of medical professionals do not feel comfortable educating on this topic. The purpose of this literature is to educate on what natural family entails and determine if it is an effective alternative to hormonal contraception to value its worth in applying to clinical practice.

Research Question

In sexually active female patients, are natural family planning methods an effective alternative to hormonal contraception in planning pregnancy?

Literature Review

Hormonal contraception:

- Overall, in the first year, usage rates of implants and long-acting intrauterine devices were found to be as effective as female sterilization. The most reliable method was found to be female sterilization at 0.08-0.69, and the least reliable method was determined to be barrier methods at 7.4-17.7 for life risks (Mansour et al., 2010).
- Hispanic and African Americans were at higher risk of failure than Caucasian women, which was found to be also related to poverty rates. Women who were cohabiting were found to be at the highest risk of failure at 15% when compared to married users. Overall, methods seemed to significantly decline in failure rates over time ranging from 4-14%. (Sundaram et al., 2017) .

Marquette Method:

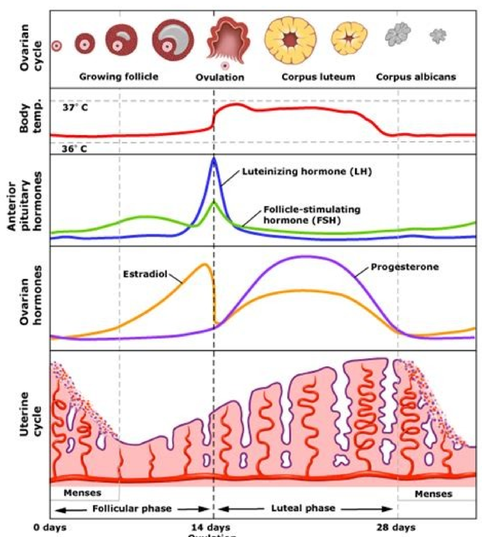
- Pregnancy rates overall at correct use were at 0.6% with proper usage resulting in a 99.4 % efficiency outcome (95% CI of 0.9 to 1.00). Overall, the unintended pregnancy rate was 10.6% (95% CI of 0.84 to 0.94) with typical use. Satisfaction at one month was found to be 3.10 and 3.00 at six months (Fehring et al., 2016).

Fertility Awareness-based Method Apps:

- The majority of apps do not provide supportive medical literature or allow health professional involvement (Moglia et. al., 2016).
- Overall, the rate of becoming pregnant per year is 7.5% with a 95% CI of 5.9% (Berglund et al., 2016)

Symptothermal Method:

- Overall, for participants with 24 cycles, six unplanned pregnancies were recorded which is equivalent to 0.4 pregnancies per 100 women (Frank-Hermann et al., 1991).
- Typical use effectiveness was calculated at 17.6 and 8.5 with a CI of 3.6-13.4 (Peragallo et al., 2018)



Discussion

- The majority of studies conclude the Marquette method is the most effective method of NFP with 98-99.4% efficacy in perfect use for avoiding pregnancy and with an average of 86%-93% effective with typical use (Fehring et al., 2008; Duane et al., 2022; Peragallo et al., 2018; Mu et al., 2022).
- Other methods like the symptothermal method were found to be less effective than the Marquette method but still more effective than barrier and withdrawal methods (Frank-Herrmann et al., 1991; Bradley et al., 2019).
- Mobile applications were often found to be unsupported by medical literature and revealed to be least effective and may increase the risk of unintended pregnancy (Berglund et al., 2016; Duane et al. 2016; and Moglia et al., 2016).
- Studies discuss that it is important that the applied NFP method be taught by a certified educator (Fehring et al., 2008; Frank-Herrmann et al., 1991; Mu et al., 2022).
- Across the board, the most effective hormonal method of contraception was found to be implants and intrauterine devices with a 0.3-1.2% failure rate (CI 0.1-1.5) and barrier and withdrawal being the least effective methods with a 7.4-17.7 failure rate (Sudaram et al., 2017; Mansour et al., 2010; Bradley et al., 2019).
- Methods that require frequent application such as taking a pill, injection, or applying a patch routinely have higher error rates than those with longer expiration windows such as IUDs and implants (Bradley et al. 2019).
- All methods of pregnancy prevention can be found to be less effective when used in a younger and lower socioeconomic status user (Bradley et al., 2019).

Applicability to Clinical Practice

Primary care providers will address multiple patients a week who seek pregnancy prevention and planning. It is their responsibility to educate their patients on all options to allow them to make personalized and educated decisions. Discussion should include simplicity of use between methods that can be easily be incorporated into their daily life.

Clinical Benefits:

- Caring for a wider variety of patients
- Can go beyond pregnancy avoidance and be used to assist in achieving pregnancy
- Education allows proper identification of ovulation window to be recognized and optimized in patients who do not have the average cycle or experience infertility (PCOS, endometriosis, etc.)
- Can be applied further into fertility education and management (FEMM). This helps women identify signs and symptoms of fertility that they can record and bring to the clinic to help diagnose and determine treatment options in women's health.

Things to Consider:

- All methods require abstaining from intercourse for a duration every month
- Requires a committed partner and communication to ensure efficacy
- NFP does not protect against sexually transmitted infections
- For providers requires additional education to become certified in teaching NFP methods. Clinical visits will be longer in duration to properly review patients' charts.

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