

4-2020

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ScholarWorks Citation

Cerven, Cecilia, "Exploration of the Effectiveness of NaProTechnology in Women's Healthcare" (2020).
Honors Projects. 772.
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Exploration of the Effectiveness of NaProTechnology in Women's Healthcare

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Many women today struggle with abnormal menstrual cycles and the painful symptoms of reproductive disorders. The standard approach to treatment of infertility, irregular menses, polycystic ovarian syndrome (PCOS), endometriosis, hormonal abnormalities, premenstrual syndrome (PMS), and other pathophysiologic reproductive conditions is the prescription of a pill for symptom management or implementation of assisted reproductive technologies. However, many women may not feel comfortable with this treatment strategy due to ethical concerns or apprehension about potential side effects. The purpose of this paper is to assist in bridging the gaps in education to increase overall awareness of a new approach to women's healthcare, NaProTechnology, as both a diagnostic and treatment strategy for procreative disorders. This goal will be accomplished by assessing the risks and benefits of both artificial and natural approaches to women's healthcare, reviewing statistical data on pertinent research, and evaluating the holistic impact NaProTechnology has on clients who utilize it. It will also explore the unique role nurses can play in the care and healing of patients with reproductive concerns as well as the future of continuing education opportunities in the field.

Literature Review

Oral Contraceptives and Assisted Reproductive Technology

Over the past century, medical advances in obstetrics and gynecology have exceeded human imagination. The development and release of an oral contraceptive for human use in the late 1950's shattered expectations of reproductive healthcare, giving women the ability to control their menstrual cycles and relieve some of the physical symptoms typically experienced. Since then, "the pill" has been under constant observation for adverse health effects and the holistic impact it has on women who use it. This is a hot topic with ongoing research happening daily. In

a recent comprehensive analysis conducted in pharmacological research, it was found that “oral contraceptives may increase the risk of developing ulcerative colitis, and there is a suggested correlation between drug withdrawal and the decrease of this risk” (Wang & Fan, 2019).

Research also supports substantial evidence of a connection between taking the pill and developing breast cancer in the future, with “a significant linear relationship between the age of first oral contraceptive use and breast cancer risk” (Ji & Jing, 2019). These are just a few of the significant dangers that can occur with the use of synthetic hormones. These dangers are often overlooked by providers developing a treatment plan for their patients.

It has been proven that oral contraceptives are a fast and effective way to regulate a woman's menstrual cycle and have been linked to selected health benefits. However, this therapy often masks the underlying disorder presented by symptoms of infertility while increasing the risk of developing other medical conditions in the future. This makes the few known health benefits arguably insignificant. Furthermore, a study was conducted on the potential relationship between the intake of oral contraceptives before pregnancy and the increase in the risk of miscarriage. It concluded that when a low-dose prescription of oral contraceptives was taken for two or more years prior to conception – the most common type used today – endometrial atrophy resulted, which is clinically manifested by amenorrhea. It is hypothesized that this atrophy may modify local factors in the endometrium, thus increasing the risk of spontaneous miscarriage (Garcia-Enguidanos & Martinez, 2005). The potential impact on future pregnancies after taking oral contraceptives is notable when discerning appropriate treatment plans for women seeking out healthcare for reproductive concerns.

Typically used in conjunction, one of the fastest developing areas of medicine, assisted reproductive technology (ART), is aimed at facilitating the conception of a child with invasive

medical intervention. According to the Society for Assisted Reproductive Technology (2020), ART includes in-vitro fertilization-embryo transfer (IVF-ET), gamete intrafallopian transfer (GIFT), zygote intrafallopian transfer (ZIFT), and frozen embryo transfer (FET), with approximately 99% of ART cycles performed being IVF-ET.

Research shows that there are substantial maternal and fetal risks associated with ART interventions, including conception of triplets or high order multiples (32% ART, 23% non-ART), preterm birth (9.7% ART, 7.9% non-ART), low birth weight (6.8% ART, 4.9% non-ART), monozygosity (1.3% ART, 0.4% non-ART), congenital malformation (0.15% ART, 0.02% non-ART), and maternal morbidity (2.73% ART, 1.26% non-ART) (Kawwass & Badell, 2018). In addition to these risks, it has been found that ARTs are independently linked to increased risk of spontaneous abortion (Nicholas & Rabinov, 2011) and maternal mortality (Velez, 2012). These grave dangers should not be taken lightly but instead be weighed accordingly with the potential benefits that could result from ART therapy.

The impact of oral contraceptives and ART on emotions and overall lifestyle is also important to take into consideration. Emotional and financial commitment to these therapies can place significant obligation and increased stress levels on women and couples seeking out fertility care. In fact, “the median cost of a single fresh IVF cycle, including necessary medications, is between \$10,500 and \$12,500 in the U.S.” (LoGiudice & Massaro, 2018) and, depending on health insurance coverage, oral contraceptive pills can cost around \$400 annually (Pope Paul VI Institute, 2004). It is also quite likely that a patient will have to undertake multiple cycles of treatment due to a 21.2%-27.2% success of conception rate (Pope Paul VI Institute, 2004), leading to further lifestyle modifications. From the emotional side, “women undergoing IVF treatment frequently experience feelings of anxiety, depression, and distress... women also

often experience a reduction in quality of life during infertility treatment” (LoGiudice & Massaro, 2018). The same is true for women taking oral contraceptives. Studies have revealed that oral contraceptives “produce psychological alterations such as depression, mood changes, changes in libido, and the stability of affective relationships” (Klaus & Cortes, 2015). Holistic health impacts of these therapies need to be genuinely considered as the goal of healthcare is to improve the overall quality of life of the patients that are served.

NaProTechnology and Fertility Awareness-Based Methods

Shortly after the debut of oral contraceptives and ART to modern day medicine, research on the normal and abnormal states of a woman's fertility cycle was undertaken by Dr. Thomas Hilgers and a new women's health science was born. NaProTechnology (NPT), or Natural Procreative Technology, is considered a restorative reproductive medicine (RRM) that uses Fertility Awareness-Based Methods (FABMs), like the Creighton Model System (CrMS), to diagnose and treat chronic disorders related to infertility. It takes the approach of “charting the menstrual cycle as a vital sign, which may give clues to pathophysiologic conditions that can be easily treated with the goal of restoring normality to the menstrual cycle pattern” (Gonzalez, 2017). CrMS teaches women how to observe and chart their cervical mucus. These biomarkers provide useful information that offer clues to cycle abnormalities that could indicate a chronic reproductive disorder. NPT uses this information to work synergistically with a woman's reproductive system, identifying the root of the problem and striving to correct it in conjunction with the natural fertility cycle. Thus, no added physiologic risk factors are presented when this treatment strategy is implemented. Through this approach to women's healthcare, the underlying condition is corrected, human ecology is maintained, and procreative potential is sustained.

The latest research in the field of restorative reproductive medicine has revealed that “NaProTechnology is nearly three times more successful than IVF for assisting infertile couples, multiple pregnancy rates are ten times lower than the national average, and prematurity rates have been cut from 12.1% to 7%” (Ferris, 2011). These success rates are also supported by a more recent study on NPT in Ireland, confirming that “rates of prematurity and low birth weight among RRM live births are comparable to those of the general population of Irish women of all reproductive ages... this would suggest that restoring reproductive potential in a comprehensive way may largely overcome this problem” (Boyle & Groot, 2018).

The distinct difference between the successes of NPT and ART could be attributed to the utilization of CrMS, individualized hormone assessment, ultrasound technology, selective hysterosalpingography, and diagnostic laparoscopy, which allows for the opportunity to form a sound and personalized approach to treatment. In addition, hormone therapies that are prescribed through NPT are bioidentical, meaning that they have the exact chemical make-up as the hormones produced naturally by our own bodies. Using bioidentical progesterone in NPT has not been shown to have an association with future development of breast cancer (Asi & Mohammed, 2016), unlike synthetic progestin used in ART has. Progesterone supplementation is one of the main therapies of NPT and is implemented to treat extreme symptoms of PMS, postpartum depression, amenorrhea, and chronic discharges. It is also used to support pregnancies in women with previous infertility, miscarriage, or ectopic pregnancy (Hilgers, 2019). This unique therapy makes it possible for a woman to conceive and carry a healthy child to term completely on her own without invasive medical intervention, thus improving physical and emotional well-being overall.

Treatment of infertility via NaProTechnology and FABMs is also a considerably more cost-effective option for families and the healthcare system at large. According to the Pope Paul VI Institute (2004), infertility treatment via NPT costs roughly \$322 per cycle of treatment. This is significantly less expensive than the thousand-dollar price tag on IVF, and NPT is typically covered by insurance. Learning how to chart menstrual cycles via CrMS is also comparatively minimal as the main fees are for initial instruction and supplies (charts and stamps), but insurance companies typically do not cover this cost. However, there are “no ongoing costs after the method is learned and, given the high continuation rates of users, the initial cost will easily be balanced as an extremely economical method in comparison to other methods of family planning” (Ferris, 2011). Lower financial obligation is correlated with decreased stress levels, which is linked to an enhancement in quality of life. Although treatment via NPT can sometimes have a longer timeline of care, the emotional well-being of couples has been shown to improve after the implementation of these therapies.

The mnemonic S.P.I.C.E. is often taught in conjunction with NPT, which stands for spiritual, physical, intellectual, communicative, and emotional, referencing the different aspects of human sexuality (Hilgers, 2019). The assessment and support of S.P.I.C.E. within fertility care “allows couples to collaboratively participate in their plan of care, which has the potential to increase and improve interactions and overall satisfaction” (Camacho, 2018). After couples are taught how to incorporate each of these components and effectively develop them into their relationship with one another, increased trust, communication, balance, and perspective is often established, which is directly correlated with psychological well-being. When taking a holistic healthcare perspective, NaProTechnology seems to be remarkably effective at caring for the whole person and seeks to support couples in all aspects of their health, not just physical.

Nursing Influence & Opportunities

Nurses are in a unique role when called to care for women with fertility challenges. They should be aware that NPT is an effective option for treatment, especially for women who are seeking a well-rounded approach to healthcare. Opportunities to provide promotion of health and holistic care can be found in family practice. Nurses should be prepared to teach and counsel couples on the various approaches to fertility care and the physical, emotional, financial, and relational impacts it can impose. Nurses can also receive training on CrMS so that they are able to teach women how to chart their cycles and be able to refer them for NPT medical evaluation if abnormalities are discovered. Continuing education in this field can be obtained through in-seat or online courses offered by professional medical or nursing groups. These can be found by doing an internet search or by contacting a local nurse educator. Exploration of opportunities to engage in nursing research to contribute to building up nursing and medical evidence-based literature in the field is also desperately needed. Barriers include financial obligation, lack of access, and added time commitment.

Conclusion

Nursing is known as a profession that seeks to maintain and restore the integrity of the mind, body and spirit of a person through the works of healing. This can be attained in any medical specialty, but in a special way through fertility care. Effective treatment of infertility and other chronic reproductive disorders is achieved with a restorative reproductive medicine called NaProTechnology, which incorporates a holistic approach that is inclusive of the well-being of the couple's bodies, spirituality, relationship and lifestyle. Nurses are constantly placed in exceptional positions to assist in providing restoration to the patients they are called to serve. Advocacy and promotion of superior health and well-being are essential to professional nursing

practice. The responsibility to uphold the honor of being the most trusted profession lies in the hands of all nurses, who must continually prepare themselves to provide evidence-based, well-rounded, and quality care to all.

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