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THE EFFECTS OF LIFESTYLE CHOICES ON FERTILITY RATES OF WOMEN OF REPRODUCTIVE AGE IN EGOR LOCAL GOVERNMENT AREA OF EDO STATE

E. A. Taiwo

Department of Health, Safety, and Environmental Education, Faculty of Education, University of Benin, Benin City, Edo State.
Corresponding author: taiwo.ajagun@uniben.edu; 09060899181

Abstract

This study investigated the effects of lifestyle choices on fertility rates of women of reproductive age in Egor Local Government Area of Edo State. To achieve the purpose of the study, two (2) research questions were raised and answered. The Descriptive survey research design was adopted for this study. The population of the study comprised one hundred and thirty-one (131) women of reproductive age attending the University of Benin Teaching Hospital fertility clinic. The census/total population sampling technique was used to select a sample size of one hundred and thirty-one (131) women from the total population, due to the small population size available. The instrument used for data collection was a closed-ended questionnaire. The instrument was validated by four experts in the Department of Health, Safety, and Environmental Education, Faculty of Education, University of Benin, Edo State. The data collected was analysed using percentages and frequency counts. The findings of this study revealed that dietary pattern do not indicate their infertile status. Furthermore, it was found that physical activity improves reproductive outcomes and overall health among infertile women. It was therefore recommended to encourage the consumption of a balanced diet rich in fruits, vegetables, protein, and whole grains to support overall reproductive health. Programs should be developed to encourage women to engage in moderate physical exercise regularly.

Keywords: Fertility rates, Behaviour, Lifestyle choices, Lifestyle factors,

Background to the Study

Lifestyle factors can be modified to enhance overall well-being, and they are ultimately under one's control. They play a key role in determining reproductive health and can positively or negatively influence fertility. Lifestyle factors refer to the modifiable behaviours and ways of life that could influence the general health and well-being of individuals, including fertility (Acharya & Gowda, 2017). The ability to conceive, either spontaneously or through assisted reproduction, ensure a healthy pregnancy, and carry a foetus to live birth may be influenced by multiple factors, including modifiable factors and habitual practices that could influence the fertility potential of an individual (Wilcox et al., 2018). Many lifestyle factors, such as the age at which to start a family, nutrition, weight, exercise, psychological stress, environmental and occupational exposures, and others, can have substantial effects on fertility (Acharya & Gowda, 2017; Akorede et al., 2017; Akorede et al., 2021; Muhammed et al., 2025).

Infertility can be defined as the absence of conception within one year of unprotected sexual intercourse, while fertility is the capability of producing an offspring (Aydin *et al.* 2014). Fertility rate, also known as the total fertility rate (TFR), is a statistical measure used to estimate the average number of children born to women of childbearing age in a specific population (United Nations, 2019). It is an essential demographic indicator that provides insights into population growth, reproductive patterns, and the potential for future population changes (Akorede et al., 2022). Fertility rate is usually expressed as the number of live births per woman over her reproductive lifetime, which is typically considered to be between the ages of 15 and 49 (United Nations, 2019). It represents the hypothetical number of children a woman would have if she were to live through her reproductive years and experience the age-specific fertility rates observed in a particular year or time period.

Fertility, defined as the natural capacity to conceive and give birth to offspring, is influenced by a multitude of factors, including biological, environmental, and behavioural determinants. Women of reproductive age (typically 15-49 years) face several lifestyle choices that can significantly impact their fertility (Akorede et al., 2022; Akorede et al., 2023). These lifestyle factors include, but are not limited to, diet and physical activity. This research aims to explore the effects of these choices on the fertility rates of women of reproductive age, drawing from existing studies and theoretical models that explain the complex relationship between behaviour and reproductive health (Rooney & Domar, 2014).

Proper nutrition is a key determinant of fertility. Malnutrition, both under-nutrition and over-nutrition, can lead to hormonal imbalances that may disrupt ovulation and menstrual cycles, reducing fertility (Akorede et al., 2022; Harande et al., 2025; Wilcox et al., 2018). Adequate intake of micronutrients such as folic acid, zinc, and vitamins C and D has been shown to improve reproductive health, whereas deficiencies in these nutrients can impair fertility (Gaskins & Chavarro, 2012). High intake of trans fats and processed carbohydrates is also associated with reduced fertility (Chavarro et al., 2017). A balanced and nutritious diet is crucial for reproductive health. Consuming a variety of fruits, vegetables, whole grains, lean proteins,

and healthy fats provides essential nutrients that support hormonal balance and reproductive function. Adequate intake of vitamins (such as folate, vitamin D, and vitamin E), minerals (including iron and zinc), and antioxidants can promote optimal fertility. Conversely, a poor diet lacking in essential nutrients can lead to hormonal imbalances, irregular menstrual cycles, and reduced fertility. In women, reproduction involves much greater energy expenditures than in males, and as a protective mechanism against under-nutrition, ovarian activity is suppressed in women with eating disorders and exercise-induced amenorrhea through pathways in the hindbrain (Gurruti, Depalo & Angelis, 2019).

According to Hudson et al (2017), lifetime rates of prevalence of binge eating disorder, bulimia nervosa, and anorexia nervosa in women are 0.9%, 1.5% and 3.5% respectively. Bulimia nervosa is an eating disorder that is characterised by binge eating, which is followed by fasting or self-induced vomiting or purging. It is an emotional disorder that makes one have a distorted body image and an obsessive desire to lose weight. Anorexia, on the other hand, is also an eating disorder that is more of a psychological condition marked by extreme self-starvation due to a distorted body image. The likelihood of cure is higher with Bulimia nervosa (Tabler et al., 2018). Both disorders suppress ovulation in severely affected women and account for up to 60 (% of women with anovulatory infertility (Tabler, Utz, Smith, Hanson, & Geist, 2018).

Regular moderate physical activity has been shown to have a positive effect on fertility by promoting hormonal balance and healthy weight (Gaskins et al., 2014). Conversely, extremes of physical activity—both excessive exercise and a sedentary lifestyle—can impair fertility. Obesity, in particular, has been associated with an increased risk of anovulation and polycystic ovary syndrome (PCOS), both of which significantly reduce fertility (Pasquali et al., 2016). Similarly, being underweight, often a result of eating disorders or chronic excessive exercise, may also lead to ovulatory dysfunction and subfertility (Zacharias et al., 2020). Regular exercise is beneficial for overall health and fertility. Engaging in moderate-intensity physical activity improves blood circulation, reduces stress, and helps maintain a healthy weight (Sharma et al., 2013). Exercise can also regulate hormone levels, improve insulin sensitivity, and enhance ovarian function. However, excessive exercise or intense training can disrupt hormonal balance and menstrual cycles, potentially impacting fertility. Striking a balance between exercise and rest is important for reproductive health. Physical exercise is beneficial to overweight or obese infertile women. Lifestyle factors, including diet, physical activity, smoking, alcohol consumption, and stress, play a significant role in determining fertility outcomes in women of reproductive age. These choices can either promote or impair fertility depending on the nature and extent of the behaviour. Understanding the relationship between these factors and fertility can help in the development of public health strategies aimed at improving reproductive health outcomes for women.

Statement of Problem

Despite advances in reproductive medicine, declining fertility rates among women of reproductive age remain a global concern. Various lifestyle choices, including diet and physical activity, are increasingly recognised as significant contributors to fertility challenges. However, many women remain unaware of the specific impacts that their daily habits have on their ability to conceive and maintain a healthy pregnancy. The lack of comprehensive understanding regarding the relationship between lifestyle choices and fertility has led to rising incidences of infertility, delayed conception, and complications related to reproductive health. As fertility rates decline worldwide, particularly in developed nations, it becomes crucial to examine how modifiable behaviours influence fertility and whether targeted interventions can improve reproductive outcomes for women of reproductive age. This research aims to address the gap in knowledge by investigating the effects of specific lifestyle factors on fertility and identifying strategies that can mitigate these effects. The findings will contribute to public health policies and interventions aimed at promoting healthier lifestyles to enhance fertility rates.

Research Questions

1. Is there a correlation between dietary choices and fertility rates among women of reproductive age in Egor local government area of Edo state?
2. Is there a correlation between the level of physical activities and fertility rates among women of reproductive age in Egor local government area of Edo state?

Methodology

The descriptive survey research design was used for the study. The population of the study comprised one hundred and thirty-one (131) women of reproductive age attending the University of Benin Teaching Hospital fertility clinic. The census/total population sampling technique was used to select a sample size of one hundred and thirty-one (131) women. This was considered most appropriate due to the availability of a relatively small population size. The instrument used for data collection was a closed-ended questionnaire. The instrument was validated by four experts in the Department of Health, Safety, and Environmental Education, Faculty of Education, University of Benin, Edo State. A pilot study was conducted in Ugbowo, Benin City, Edo State, and a coefficient of 0.81 was obtained; thus, the questionnaire is reliable for usage. Out of one hundred and thirty-one questionnaires administered by the researcher and two research assistants, one hundred and thirty-one (131) were duly completed, returned, and used for the analysis, connoting a 100% return rate. The data collected was analysed using frequency count and percentage.

Result

The results of the study were presented as follows;

Research Question One: Is there a correlation between dietary choices and fertility rates among women of reproductive age in Egor local government area of Edo state?

Table 1: Dietary choices and fertility rates among women of reproductive age in Egor local government area of Edo state

S/N	Items	SA	A	D	SD
1	I often consume caffeinated drinks	18(13.7%)	65(49.6%)	29(22.1%)	19(14.5%)
2	My dietary choices are not usually high-fat diets	10(7.6%)	75(57.3%)	46(35.1%)	0.0%
3	I include a variety of fruits and vegetables in my daily meals	44(33.6%)	65(49.6%)	22(16.8%)	0.0%
4	I consume an adequate amount of protein-rich foods in my diet	39(29.8%)	70(53.4%)	12(9.2%)	10(7.6%)
5	I regularly choose refined grains over whole grains in my meals	13(9.9%)	49(37.4%)	54(41.2%)	15(11.2%)
6	I often consume foods rich in multi-vitamins	26(19.8%)	81(61.8%)	14(10.7%)	10(7.6%)
7	I drink an adequate amount of water throughout the day	52(39.7%)	48(36.6%)	16(12.2%)	15(11.5%)
8	I limit my consumption of sugary beverages in favour of water or healthier alternatives	22(16.8%)	59(45.0%)	22(16.8%)	28(21.4%)
9	I often consume foods rich in animal protein as against plant protein	16(12.2%)	72(55.0%)	23(17.6%)	20(15.3%)

The table showed the dietary choices and fertility rates among infertile women of reproductive age in Egor local government area of Edo state. It was observed that majority of the respondents indicated that they often consume caffeinated drinks (49.6%), their dietary choices are not usually high fats diets (57.3%), they include a variety of fruits and vegetables in their daily meals (49.6%), they consume an adequate amount of protein-rich foods in their diet (53.4%), they often consume foods rich in multi-vitamins (61.8%), they limit my consumption of sugary beverages in favour of water or healthier alternatives (45.0%), they often consume foods rich in animal protein as against plant protein (55.0%) and they drink an adequate amount of water throughout the day (39.7%). They disagree that they regularly choose refined grains over whole grains in their meals (41.2%). Hence, they engage in a proper dietary pattern apart from their consumption of caffeinated drinks. This shows that dietary pattern do not indicate their infertile status.

Research Question Two: Is there a correlation between the level of physical activities and fertility rates among women of reproductive age in Egor local government area of Edo state?

Table 2: Level of physical activities and fertility rates among women of reproductive age in Egor local government area of Edo state

S/N	Items	Frequency	Percentage
1	Engage in regular physical exercises to maintain a healthy lifestyle?		
	Yes	98	74.8%
	No	33	25.25%
2	How often do you engage in regular physical exercise to maintain a healthy lifestyle?		
	a. Always	4	3.1%
	b. often	35	26.7%
	c. Seldom	63	48.1%
	d. Never	29	22.1%

The table showed the level of physical activities and fertility rates among infertile women of reproductive age in Egor local government area of Edo state. It can be observed that the majority of the infertile women indicated that they engage in regular physical exercises to maintain a healthy lifestyle (74.8%). But the majority of them indicated that they seldom engage in physical exercise (48.1%).

Discussion of Findings

It was observed that majority of the respondents indicated that they often consume caffeinated drinks, their dietary choices are not usually high fats diets, they include a variety of fruits and vegetables in their daily meals, they consume an adequate amount of protein-rich foods in their diet, they often consume foods rich in multi-vitamins, they limit my consumption of sugary beverages in favour of water or healthier alternatives, they often consume foods rich in animal protein as against plant protein and they drink an adequate amount of water throughout the day. They disagree that they regularly choose refined grains over whole grains in their meals. Hence, they engage in a proper dietary pattern apart from their consumption of caffeinated drinks. This shows that dietary pattern do not indicate their infertile status. This is supported by Aj and Je (2018); Garruti and De Angelis (2019); Nazni (2014) and Umar et al. (2024), as they stated that a growing body of evidence points to a link between diet and female fertility. Lifestyle, including caloric intake and diet composition in terms of vitamins, protein, lipids, carbohydrates, as well as the mineral content, seems to be especially vital in the context of infertility caused by endometriosis and ovulation disorders.

It can be observed that the majority of the infertile women indicated that they engage in regular physical exercise to maintain a healthy lifestyle. But the majority of them indicated that they seldom engage in physical exercise. This finding is against or contrary to the findings of the study carried out by Harande et al. (2025) and Gaskins et al. (2014), who reported that physical inactivity and sedentary behaviours often result in reproductive dysfunction, including irregular menstrual cycles and anovulation. Previous studies, like the study carried out by Lynch et al (2017) and Gaskins et al (2014), have found that greater

physical activity (PA) in daily life improves the chance of successful conception and reduces the need for infertility treatments. Regular exercise participation may also improve the prevalence of live birth following IVF, IUI, and other methods of reproductive assistance, according to recent data (Rao et al., 2018). Furthermore, some researchers have indicated that moderate activity on most days may improve reproductive outcomes and overall health among infertile women (Rooney & Domar, 2014).

Conclusion

Based on the findings of the study, it was concluded that dietary pattern do not indicate their infertile status. Furthermore, it was concluded that physical activity improves reproductive outcomes and overall health among infertile women.

Recommendation

1. While the study indicates that dietary patterns do not strongly correlate with infertility, there is still a need to promote healthier food choices and lifestyles. Encourage the consumption of a balanced diet rich in fruits, vegetables, protein, and whole grains to support overall reproductive health.
2. Despite the contradictory findings on physical exercise, promoting regular physical activity can offer numerous health benefits and potentially improve fertility rates. Programs should be developed to encourage women to engage in moderate physical exercise regularly.

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