

Evaluation of Pregnant Women's Barriers to Physical Exercise During Pregnancy at Maternity Hospitals

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ABSTRACT

Background: There are major health benefits of physical exercise during pregnancy for the mother and newborn. On the other hand, physical inactivity during pregnancy is varied around the world, but it is more common during the third trimester of pregnancy. A positive attitude toward antenatal exercise can reduce physical inactivity.

Objectives: To identify the barriers that prevent pregnant women from doing physical exercise. To find out the association between the barriers and pregnant women's characteristics.

Methods: A descriptive cross-sectional study design was used to assess pregnant women's barriers to physical exercise during pregnancy. Non probability (purposive sample) was used to collect the data from (200) pregnant women. The questionnaire consisted of ten questions for barriers and ten questions for practices.

Results: The higher percentage of women's age was (20-29) years; they graduated from primary school. More than one-third of them have two to three living children. Most of them stated a lack of information or training on physical exercise during pregnancy is the most common barrier, and only (37%) pregnant women practice antenatal exercise.

Conclusion: The perceived barriers to physical exercise during pregnancy are a lack of information or training, a lack of family support, a lack of time, and the fear that it may be harmful to the fetus. Pregnant women need encouragement to perform prenatal exercise and facilitate the overcoming barriers.

Keywords: *Pregnant, Knowledge, Attitude, Physical Exercise, Pregnancy*

INTRODUCTION

Pregnancy is a life-changing experience that can affect women's physical activity¹. Physical activity a crucial aspect of a healthy lifestyle, and has benefits for women's health. Physical exercise as a type of physical activity is a planned, regulated, and repetitive body movement that requires either physical or mental effort and is done to promote health and maintain physical fitness^{2,3}.

Excessive weight gain during pregnancy is considered one of the major growing concerns among pregnant worldwide and is associated with maternal and fetal complications such as gestational diabetes⁴. On the other hand, physical exercise during pregnancy decreases gestational diabetes, premature birth, weight gain, and the risk of preeclampsia, enhances pain tolerance, improves mental health, and improves sleep, according to growing research. It also prevents postpartum depression.

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It enhances the likelihood of vaginal birth, and lowers the chance of cesarean birth⁵⁻⁷.

Lifestyle changes have been demonstrated to lower the risk of pre-eclampsia, preterm delivery, and intrauterine demise according to a meta-analysis of (7278) participants from (44) studies⁸.

Pregnant women should get at least 150 minutes of moderate-intensity physical activity per week, according to the American College of Obstetrics and Gynecology. So, regular physical exercise is suggested for all pregnant women, regardless of whether they were active or inactive before pregnancy⁹.

Pregnant women's barriers, facilitators, and attitudes must first understand from health care providers in order to efficiently target education and evidence-based behavior modification techniques in physical exercise¹⁰.

Therefore, this study aims to assess barriers to antenatal exercise among pregnant women to provide data that would be potentially useful in generating previously unavailable data on antenatal exercise during pregnancy among Iraqi women, which may serve as a baseline for future studies or public health interventions of appropriate planning to improve maternal and fetal wellbeing.

SUBJECTS AND METHODS

A descriptive cross-sectional study design was used to assess pregnant women's barriers to physical exercise during pregnancy at outpatient maternity hospitals in Baghdad city. The study was conducted from October 2021 to November 2022. Non probability (purposive sample) was used to collect the data from (200) pregnant women. Inclusion criteria (Singleton pregnancy, gestational age of (28 to 32) weeks, and hasn't had any medical or obstetrical complications). The questionnaire consisted of socio-demographic characteristics, reproductive characteristics, ten questions for barriers, and ten questions for practices. For barriers items with categorical responses (yes, no) were given an item score of '2', '1', respectively. For practices, "yes" or

"no" responses were assigned item scores of "2" or "1," respectively. A pilot study was conducted in order to determine the reliability of the questionnaire in a sample of (20) women ($r1= 0.85$). The data was collected after obtaining the women's consent to participate in this study. Data are analyzed through the use of SPSS version 26.

RESULTS:

This table 1 shows that more than half (56.5%) of women's ages are between (20 and 29)

Table 1: Distribution of Study Sample According to Socio-demographic Characteristics

Demographic Characteristics	F	%
Age / years		
< 20	38	19
20-29	113	56.5
30-39	46	23
≥ 40	3	1.5
Total	200	100
Mean=25.73 SD=5.6		
Educational level		
Read & write	27	13.5
Primary School	60	30
Preparatory School	49	24.5
Secondary School	27	13.5
Institute graduate	5	2.5
College graduate	27	13.5
Master and higher	5	2.5
Total	200	100
Occupational Status		
Student	26	13
Employee	24	12
Housewife	150	75
Total	200	100
Income		
Sufficient	32	16
Somewhat sufficient	82	41
Insufficient	86	43
Total	200	100
Family Type		
Nuclear	77	38.5
Extended	123	61.5
Total	200	100

years, with a mean (SD) 25.73 (5.6). Regarding educational level, about one-third of them (30%) are graduates of primary school. Regarding occupation, the majority of them (75%) are housewives.

This table 2 shows that a higher percentage of pregnant women (54%) have planned pregnancy. About two-thirds of them (62%) are in the third trimester of gestation. Regarding the number of living children, about one-third of them (39%) have (2-3) children. A higher percentage of them (54%) have had previous deliveries through vaginal birth.

Table (2) Distribution of Study Sample According to Reproductive Characteristics

Variables	F	%
Planned pregnancy		
Yes	108	54
No	92	46
Total	200	100
Gestational Age/ weeks		
1 st trimester	24	12
2 nd trimester	52	26
3 rd trimester	124	62
Total	200	100
Mean (SD) 28.9 (10.3)		
Living children		
0	58	29
1	33	16.5
2-3	78	39
≤4	31	15.5
Total	200	100
Abortion		
0	163	81.5
1	20	10
2-3	12	6
≤4	5	2.5
Total	200	100
Previous Delivery		
Cesarean birth	92	46
Vaginal birth	108	54
Total	200	100

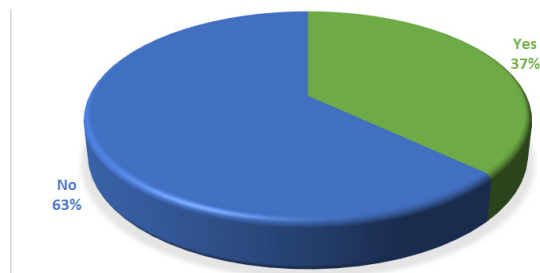


Fig. 1: Women Practices of Physical Exercise During Pregnancy

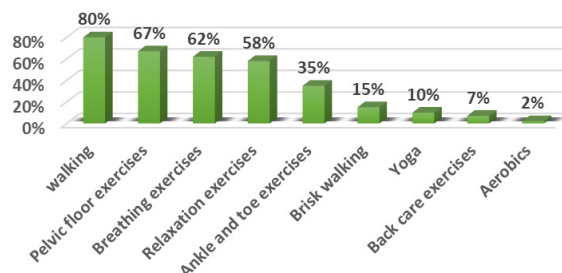


Fig.2: Physical Exercise During Pregnancy

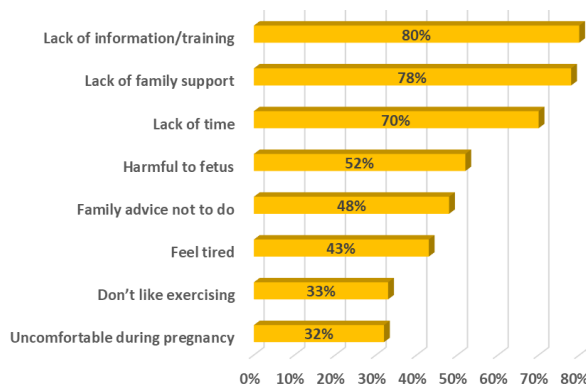


Fig. 3: Women's Barriers Toward Physical Exercise During Pregnancy

DISCUSSION

This study included (200) pregnant women attending outpatient maternity hospitals. The main findings were that most of them (63%) stated they did not perform physical exercise during pregnancy. Antenatal exercise is essential to prevent excessive weight gain or the onset of gestational diabetes mellitus, one must lead a healthy lifestyle that combines exercise and diet. In general, women during pregnancy seem to be more receptive to advice and information since they are excited about making changes that will benefit the

fetus. But the majority of them don't exercise enough, according to reality⁸.

The current study identified the barriers to physical exercise during pregnancy among pregnant women; the majority of them stated that a lack of information or training (80%), a lack of family support (78%), a lack of time (70%), more than half of them were afraid that it may be harmful to the fetus (52%), family members advice not to do it (48%), they felt tired (43%), about one-third of them didn't like exercising (33%), and they felt uncomfortable (32%).

Al Youbi and Elsaid (2020) found that among (442) women attending antenatal care assessed for barriers to physical exercise, most of the study participants felt tired (84.4%). The second barrier includes no access to facilities for (45.9%) of them. Also, some of them reported transportation problems (24.2%), a lack of time (24.7%), more than two-thirds reported no time (65.14%), and not knowing the importance (20.4%)⁴.

Physical exercise adherence during pregnancy is affected by a variety of variables Fatigue, pregnancy symptoms, discomfort, lack of strength, lack of time, lack of motivation, lack of social support, and concern about the safety of physical activity for the baby and the mother are the most commonly mentioned barriers to physical activity during pregnancy¹¹.

Aslam et al., (2021) found that barriers that prevent pregnant women from doing physical activities include leg cramps, backache, fatigue, and epigastric discomfort¹².

A healthy expectant mother can perform physical exercise since doing it at the recommended level gives pregnant women plenty of energy throughout pregnancy and can help prevent backache and cardiovascular disease. Exercise during pregnancy can improve bodily function and lower psychological stress, both of which are advantageous, especially during labor and the puerperium¹³.

Kianfard et al. conducted a qualitative study to identify the facilitators and barriers

that influence physical activity among (40) pregnant women. They found that the most significant barriers include lack of awareness, inaccurate information, accessibility difficulties, and financial issues. On the other hand, the best facilitators of physical exercise during pregnancy include physicians' recommendations and being among other pregnant women¹⁴.

The current study sample perform physical exercise during pregnancy were only (37%), but the majority of them performed walking (80%), about two-thirds pelvic floor exercises (67%), breathing exercises (62%), and more than half relaxation exercises (58%). A study conducted among (205) pregnant women attending the antenatal clinics at Maternity & Children's Hospital in Jeddah, Saudi Arabia, to assess the prevalence and barriers to physical activity among pregnant women found that only (40% to 46%) maintain an average daily physical activity, and the higher percentage of barriers to exercise are lack of energy, fatigue, or drowsiness (70.2%), lack of medical advice about exercise during pregnancy (69%), inconvenient weather (62.3%), and breathlessness (59%)¹⁵. This result is inconsistent with a study conducted in Pakistan among (186) participants who stated that walking, (5.9%) relaxation, (7.0 %) breathing, and only (4.3%) aerobics ^[16].

Okafor and Goon (2022) conducted a mixed-methods study to assess the barriers to prenatal physical activity among (1082) pregnant women in the Eastern Cape Province, South Africa, they found tiredness, lack of time, discomfort, low energy, lack of support, lack of advice, and lack of information about prenatal physical activity are the most common barriers among their study sample ¹⁷.

Sytsma and colleagues (2018) compared the barriers for pregnant women performing exercise and not performing the exercise, They reported that among (549) pregnant women in the first trimester, the greatest barriers (mean) were nausea/fatigue (3.0) and lack of time (2.6). Exercisers reported significantly lower barrier levels. On the other hand, nausea

and fatigue were greater barriers for non-exercisers compared to exercisers (3.6 vs. 2.8, $p < .001$)¹⁸.

A mixed method study was conducted among (50 pregnant women and 34 providers) to collect qualitative data by interviews, and (88 pregnant women and 64 providers) to collect quantitative data by questionnaires in Mexico. They found the most common barriers to physical exercise during pregnancy include a lack of time, a lack of social support, a lack of instructors, and a lack of a safe and adequate physical environment)¹⁹.

A previous study demonstrated many potential health benefits of aerobic and strength-conditioning exercise for pregnant women and postpartum women. It is considered safe, and even advisable. Unfortunately, among this study sample, the lowest percentage of physical exercise was aerobic, and only (2%) of pregnant women performed it, because of a lack of awareness, encouragement, and fear of fetal harm ^[20].

Healthcare team, particularly nurses, have regular contact with expectant women, they play a critical role in encouraging prenatal exercise. A review of nurse midwives in the United States on their usage of prenatal exercise counselling discovered that (65%) of respondents offered tailored antenatal exercise counselling. A research of 24 pregnant women in Pennsylvania indicated that health advice on exercise and prenatal weight gain was minimal, sometimes insufficient, and hence unlikely to inspire them to engage in physical activity. Another research of community nurses and pharmacists discovered that they often advised pregnant women on diet and physical exercise. As a result, continuing education is important to guarantee that healthcare personnel have the necessary information²¹.

CONCLUSION

The present study concluded that the perceived barriers to physical exercise during pregnancy among pregnant women are a lack

of information or training, a lack of family support, a lack of time, and the fear that it may be harmful to the fetus. Therefore, only about one-third of women practice physical exercise during pregnancy.

Recommendation

Pregnant women need education from their health care provider regarding antenatal exercise to encourage them to perform prenatal exercise and facilitate the barriers. Other studies need to identify the facilitators of physical exercise during pregnancy.

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