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RESEARCH ARTICLE

LEVEL OF PHYSICAL ACTIVITY DURING PREGNANCY: WOMEN'S PERCEPTION AND ITS MODIFIABLE BARRIERS.

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Abstract

Background: Traditionally, pregnant women have been advised to restrict exercise due to concerns for the health of the mother and her fetus, while regular exercise has also been has a role in managing stress, depression and gestational diabetes . An awareness that exercise is important in promoting health and well-being has led to many women wanting to continue exercising during.

Method: This cross sectional study carried out among pregnant women who attend King Abdulaziz University hospital as outpatients or inpatients by distributing a questionnaire consist of (demographic data , perception of physical activities during pregnancy , awareness of physical activities benefits) , 300 accepted to enroll in the study.

Result: Sample of 300 pregnant women participated in the study 65.3% of pregnant women were not exercising during pregnancy, 1% relived that they dislike exercise,5.3% of them have work related barriers, 13.3% having no time, 15.4% dined having any kind of motivation, 32% have no knowledge about the benefit of exercise, and 33% have pregnancy related barriers. While 35% were exercising during pregnancy 88.7% of them believe physical activity and exercise during pregnancy will improve their labor and delivery

Conclusions: We found that most pregnant women were not physically active during pregnancy ,we recommend the physician and health care provider to motivate them to be more active . More awareness campaigns should be held.

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Introduction:-

Increasing evidence supports the importance of exercise for individual health. Being active can reduce the risk of diseases such as osteoporosis, cardiovascular disease, type II diabetes, gestational diabetes , hypertension , decreasing the rate of lower back pain colon cancer, and obesity, (1,2,3)regular exercise has also a role inmanaging stress, depression, boosting self-esteem and enhancing body image. (3),also it has good influence on the neonates such as reducing the rate of preterm delivery . (4)The increasing in awareness level about the importance of exercise in promoting health and well-being has led to many women wanting to continue exercising during pregnancy . However regarding tradition thinking pregnant women have been advised to restrict exercise due to concerns for the health of the mother and her fetus, including risks of overheating; impaired delivery of oxygen and

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nutrients to the fetus; and premature labour(5). A lot of speculation regarding the adverse effects of exercise on pregnancy outcome due to culture and social centers . with no scientific supporting . (6)The physical stress arising from leisure exercise has not been shown to increase the incidence of small for gestational age babies or premature labour; and may even decrease the incidence of both (7). During the last few decades a huge dramatic change happened towards practicing exercises during pregnancy .(8)higher amounts of exercise have been associated with a reduced incidence of caesarean section and shorter hospitalization (9), Also among women who deliver vaginally, physical fitness may also be associated with a shorter duration of active labor(9). On the basis of such evidence, American Congress of Obstetricians and Gynecologists recommended on 2002 as update for its 1985 guideline that pregnant women can exercise moderately for 30 minutes on most days of the week, and in 2008 the U.S. Department of Health and Human Services published its guidelines and recommended pregnant women to participate in moderate physical activities at least 150 minutes per week ,in accordance with these recommendations, irrespective of the pregnant woman's physical fitness level, exercise should be low-impact, moderate-intensity, and regular. (9,10,11)In spite of these facts and recommendation, it is submitted that women are not meeting the exercise recommendations of the previous studies. A myriad of factors not limited to beliefs and attitudes of women with respect to exercise in pregnancy , level of knowledge, level of education, safety concern of the pregnant woman and her physician, race/ethnicity, and previous involvement in regular exercise have been implicated as important factors predisposing to exercise engagement or phobia among pregnant women . (9,10,11)This study focused on measuring awareness level of physical activity among pregnant women by using useful questionnaires in this regard., in order to identify factors that affect beliefs and behaviors would objectively encourage a change in attitude.

Method:-

Ethical approval:-

The study was approved from the ethical committee in faculty of medicine - King Abdulaziz University.

Study design:-

This cross-sectional survey , targeted pregnant women population who admitted to the inpatient department or visited the obstetrics and gynecology clinic from September 2015 to November 2015 at King Abdul-Aziz University hospital in Jeddah

Three hundred fifty six pregnant women were recruited to fill the questionnaires and from them only 56 refused to participate so the total respondents were 300.

Questionnaires and measurements:-

The method of the study was adapted questionnaire from 40 articles the piloting was done on eight pregnant women it takes around 10 minutes to fill the survey. The subject informed about the purposes of this study and the consent was taken. The questionnaire consists of different parts. First part was about personal information such as; name, nationality, address and phone number. Then ten multiple choice questions about the socio-demographic information included; age, race, residence, education, occupation status, income, body mass index, pregravid, BMI, general health and smoking. The third part was about women's obstetric history including the parity, pregnancy trimester, and total numbers of prenatal visits, place of prenatal care, any complication during pregnancy and any history of preterm stillbirth, abortion and mode of delivery. In this part collected information about women physical activity level including whether the subject habitually exercise before pregnancy or started during this pregnancy, what are the type of exercise, the duration of each session and what are the sources for their information about physical activity. The last part focused on the women's perception about the physical activity, if there any benefit of it and whether it consider safe to do it and the barrier.

Statistical analysis:-

For the data analysis and processing SPSS, version 20 used. Descriptive statistics (number and percentage) was used for nonparametric data (demographic data, level of Exercise during this pregnancy, Modifiable barriers to physical activity during pregnancy and sources of physical activity (reported in percentage)) . Comparison done to assess the relationship between Pregnancy trimester , educational level, monthly income and occupation as categories and the Women's perception and belief by using Chi square test with a set statistical significance cutoff of $p < 0.05$.

Results:-

Table 1 showed the demographic characteristics of the 300 pregnant women participated in the study, of which 45 % were from group age 20-29 , more than half (57.7%) had university degree & reported multiparty, third quarter of the women (76.7%) were housewives . (Table 1) Almost two third (65.3%) were not exercising during pregnancy, and when asking them about the barriers that prevent them to do the exercise 1% relived that they dislike exercise,5.3% of them have work related barriers (such as being too tired from work, not having enough time because of work duties or having a physically active job),13.3% having no time (i.e. having a lot of child care activities, school or cleaning up),15.4% dined having any kind of motivation (i.e. having no one to go with),32% have no knowledge about the benefit of exercise (i.e. lack of personal knowledge or inadequate advice provided from a health professional) and 33% have pregnancy related barriers (i.e. these included morning sickness, back pain and high risk pregnancies).

Table 1:- Demographic Characteristics of the sample

Demographic data	N (Percent)
Age	
<20	2%
20-24	18.3%
25-29	26.7%
30-34	28%
>=35	25%
Education	
Primary school	5.7%
High school	36.7%
University	57.7%
Occupation	
Housewife	76.7%
Worker	20.7%
Student	2.7%
Previous history of:	
Preterm	3%
Stillbirth	3.7%
Abortion	28%
No history	65.3%
Parity:	
Null parity	30.3%
One parity	19.7%
Multiparty	50%

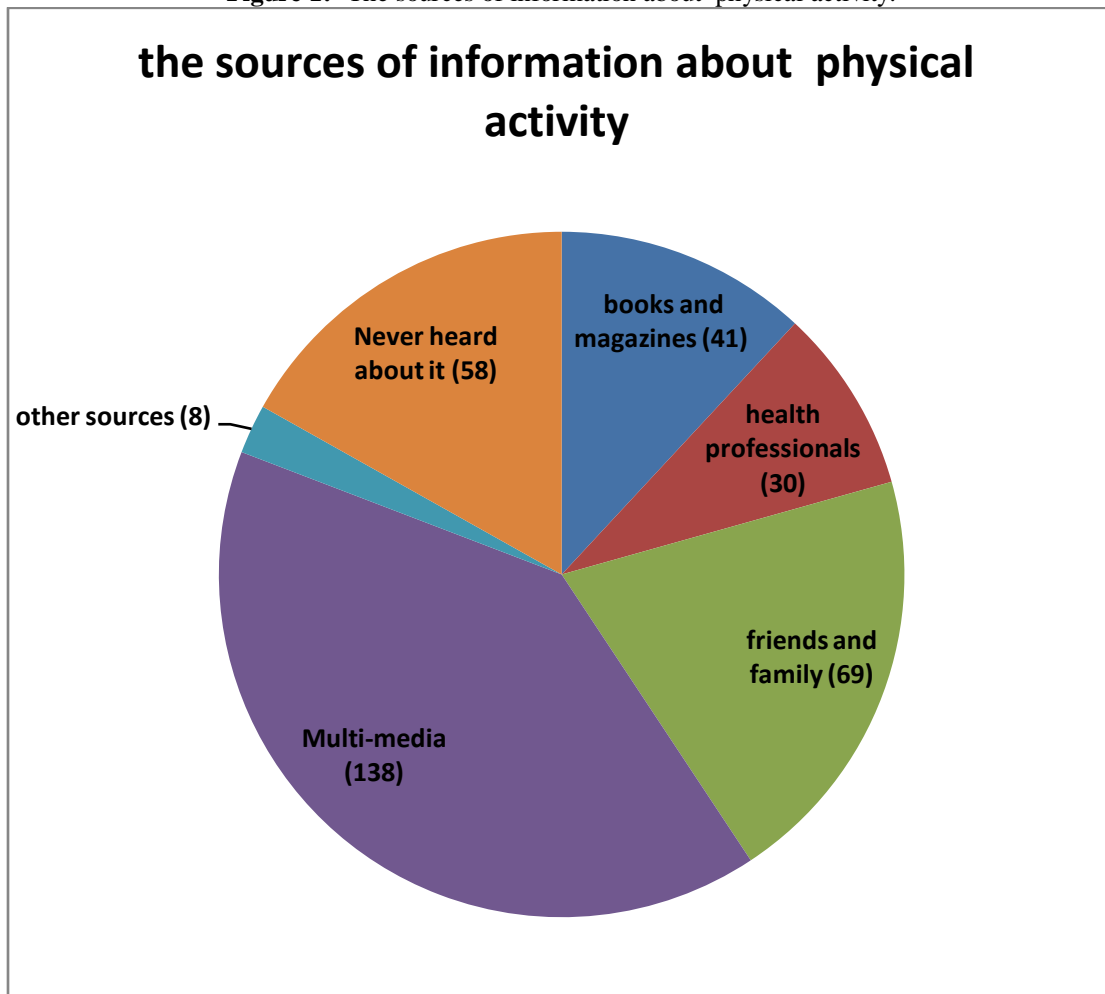
Table 2 showed women’s perception and belief about physical activity during pregnancy, almost third quarters (72.3%) reported that pregnant women can continue their regular exercise during pregnancy on a regular bases (3 times/ week) and the majority of the participant stated the knowing of the benefits of practicing regular exercise during pregnancy. (Table 2) The participants reported several sources about information of physical activity. (figure 1)

Table 2:- Comparing women’s perception and belief about physical activity

Variables	N	%
Women’s perception		
A. . . . most women can continue their regular exercise during pregnancy.	219	73.5
B. . . . most women who never exercised can begin an exercise program during pregnancy.	111	37.4
C. ... for a pregnant woman, it is OK to continue to exercise even if she becomes tired or exhausted.	17	5.7
D. . . . during pregnancy, regular exercise done at least 3 times per week is better than activity done irregularly or less often.	216	72.5
E. . . . pregnant women should not exercise while lying down on their	172	57.9

back during the first trimester.		
F. . . . pregnant women should not exercise while lying down on their back during the second trimester.	89	30
G. . . . pregnant women should not exercise while lying down on their back during the third trimester.	119	40.1
H. ... long periods of standing in one place without moving should be avoided while pregnant.	245	82.2
Benefits		
A. . . . pregnant women will gain some benefit from doing exercise during her pregnancy.	279	93.6
B. . . . physical activity and exercise during pregnancy might make a woman feel more energetic.	261	87.6
C. . . . physical activity and exercise during pregnancy will improve a woman's labor and delivery.	266	89.3
D. . . . physical activity and exercise during pregnancy will improve the health of the baby.	167	56.2
E. . . . physical activity and exercise during pregnancy causes lower weight babies.	38	12.8

Figure 1:- The sources of information about physical activity.



The results showed that workers women and from group higher monthly income have good perceptions of physical activities during pregnancy with no significant difference , while there was significant association between women with higher level of education (University level) and good perceptions of physical activities in the following items

(continue exercises during pregnancy on a regular basis $p=0.008$, avoiding standing in one place for a long time $p=0.03$). Regarding the comparison of women's perception depending of pregnancy semester, the results showed high perception of physical activities benefits during pregnancy among women in the third trimester followed by women in the second trimester with no significant difference.

Table 3:- Women's perception and belief about physical activity during pregnancy in this sample comparing with one study in University of North Carolina, US.

<i>Benefits of exercise and physical activity during pregnancy:</i>	Overall n=300 % Agree(n) In this study	Overall n=1306 % Agree(n) North Carolina
pregnant women will gain some benefit from doing exercise during her pregnancy	93.0 (279)	97.9(1275)
physical activity and exercise during pregnancy might make a woman feel more energetic	87.0 (261)	94.3(1225)
physical activity and exercise during pregnancy will improve a woman's labor and delivery	88.7 (266)	94.4(1223)
physical activity and exercise during pregnancy will improve the health of the baby	55.7 (167)	74.7(964)
physical activity and exercise during pregnancy causes lower weight babies	12.7 (38)	4.8(62)

Discussion:-

Several studies addressed the important and the great benefits of physical exercises practicing during pregnancy and after delivery, also they demonstrated that there is no risk on fetus and neonates, and had good influence on lifestyle. (12,13) A lot of body's changes happened to pregnant women which decreased the ability of performance for some kind of exercises. (12) The current studies showed that only 34.7% pregnant women practice physical activities during pregnancy which was lower comparing with the rate of USA study where the authors reported 93.3% of pregnant women practicing exercise during pregnancy (3) and Nigeria study (81.9%). (14), while in other USA study the rate was 15.8% and in Ireland study 21.5%. (13) The main reasons of not exercising in this sample were pregnancy-related barriers (33%) (i.e. these included morning sickness, back pain and high risk pregnancies), in Brazil study Lack of time, feeling tired and uncomfortable were the principal reasons given by the women for not exercising (8) while in Australia study there was six barriers (work burden, exhaustion, pregnancy- symptoms, active with no guidelines, shortage of motivation, and deficiency in the level of knowledge & recommendations). (2) Among all women who exercised during pregnancy walking was the leading activity (60.7%), similar to that the results from Pennsylvania, USA study where authors reported that 81.6% pregnant women reported slow walking, (15) while (59.8%) of Nigerian pregnant women practicing relaxation and breathing the most (10) and in second Nigerian study Aerobic (43.5%) and stretching (33.4%) were the common exercises. (14) A comparison between the findings from the current study with the one from University of North Carolina, US about women's perception and belief about physical activity during pregnancy was illustrated in Table 3 and showed improvement in the level of knowledge about the benefit of physical activities during pregnancy. (11).

Limitation:-

Few limitations of the study should be noted. As majority of women were in their 2nd trimester, Physical activity perceptions may change throughout pregnancy, the sample size considered small, the study conducted at King Abdul-Aziz University hospital in Jeddah which is a coastal city doesn't properly represent the population in Saudi Arabia as well as some villages around Jeddah were not assessed and we suspect the results will be different due to the culture reasons.

Conclusion:-

Most pregnant women were not physically active during pregnancy and of their knowledge about the physical activity was from multimedia, and some of these information were not scientifically correct. We recommend the physician and health care provider to motivate them to be active as the British college recommended and held more awareness events lead by physician to provide pregnant women by the correct information, also advise women to attend prenatal exercise classes supervised by experienced trainer.

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