

Knowledge, Attitude and Practices of Expectant Mothers on Physical Activity - A Comparative Study

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ABSTRACT

Pregnancy is often considered a crucial and complete metamorphic stage in a woman life. Undoubtedly as you continue your pregnancy, you will have numerous questions about various aspects of having a healthy and safe pregnancy. Being physically active during pregnancy contributes significantly towards the health and wellbeing of the mother as well as the child. The aim of the current study is understand the knowledge, attitude and practices of expectant mothers towards physical activity in pregnancy. A total of 100 expectant mothers in the third trimester, 50 of government hospital and 50 of private hospitals, were selected from different maternity hospitals across the city, Hyderabad, through random sampling. The data was collected through self-administered questionnaires. Data compilation was done using Microsoft excel version 2010 and statistically analysed using chi-square test. The results revealed that while majority of the expectant mothers from both the hospital settings agreed that physical activity is important during pregnancy, they reported decrease in physical activity following pregnancy which may be attributed to various reasons like the lack of advice from health care providers regarding physical activity (majorly among the government hospital women) and reported barriers like fatigue and pregnancy discomfort, lack of time and fear regarding the safety of physical activity during pregnancy. It was observed that greater number of expectant mothers of the government hospital performed adequate physical activity when compared to their counterparts. Thus, the study concludes that although there was no statistically significant difference in knowledge regarding the guidelines for physical activity in pregnancy; yet the expectant mothers of government hospitals were more physically active than that of expectant mothers of the private hospital.

Keywords: Physical activity, Expectant mothers, Pregnancy

INTRODUCTION

Pregnancy is a crucial phase in a woman and her unborn child's life as it lays the foundation for the health and wellbeing of the mother and the baby for the rest of the life. Hence, maternal health is manifested as a worldwide health priority. Maternal health refers to the health of the women during pregnancy, childbirth and the post-partum period (World Health Organisation, 2010).

An active lifestyle before and during pregnancy is beneficial for maintaining the health and wellbeing of the individual. Physical activity has been defined as „any bodily movements produced by skeletal muscles that require energy expenditure“ such as activities undertaken while working, playing, carrying household chores, travelling and engaging in recreational actions like yoga, swimming, dancing (<https://www.who.int/dietphysicalactivity/pa/en/>).

It is recommended that pregnant women should engage in moderate aerobic exercise for 30 minutes a day, on most days of the week, with an exception of women with compromising health conditions (American College of Obstetricians and Gynaecologists, 2015). An aerobic exercise

is that in which one tends to move large muscles of the body (like those of the legs and arms) in a rhythmic way. Moderate intensity means you are moving enough to raise your heart rate and start sweating (<https://www.acog.org/Patients/FAQs/Exercise-During-Pregnancy?>)

Pregnancy is no longer considered a condition for confinement rather it is recognised as a unique time for behaviour modification among the individuals. Being physically active and participating in exercise throughout pregnancy has been documented to have positive impact on maternal health outcomes like an improvement in cardiovascular and metabolic function, increased strength and bone density (Prather et al., 2012). It is further indicated that regular physical activity appears to lower the risk of gestational diabetes mellitus, gestational hypertension, and preeclampsia (Hegaard et al., 2007).

Physical activity during pregnancy can limit excessive gestational weight gain and prevent postpartum weight retention (Phelan, 2010), and thus helps in preventing

numerous adverse maternal health outcomes. Physical activity has also been associated with positive birth outcomes like Shortened labour and a lower rate of operative/instrumental delivery (Tinloy et al., 2014; Perales et al., 2016). Studies have shown that regular exercise even in the 3rd trimester neither leads to an increased rate of premature delivery nor to increased hospitalisation (Barakat et al., 2014; Tinloy et al., 2014). Moreover, physical activity during pregnancy is found to impart positive effects on the new-born in terms of long-term risk of chronic metabolic, cardiovascular and oncological diseases (Blaize et al., 2015).

Despite the projected health benefits and guidelines for safe exercising, very few women are found to be physically active in pregnancy (Gaston and Vamos, 2013). Hence, it is crucial to understand whether or not the pregnant mothers have been sufficiently informed about the various dynamics of physical activity during pregnancy. And if they have been advised sufficiently, it is important to understand what are the factors preventing them from exercising during pregnancy.

In view of the above literature, the aim of this comparative study is to examine the presence of any association between the knowledge, perception and practice of physical activity and thereby, study the barriers and promoters to physical activity during pregnancy.

MATERIALS AND METHODS

A cross-sectional survey was conducted to examine the knowledge, attitude and practice regarding physical activity among the expectant mothers. A random sampling method was employed to select the subjects. The subjects included a total of 100 pregnant women in the third trimester from both government (n=50) and private hospital (n=50), Hyderabad. Pregnant women in the third trimester (18-37 years) were specifically selected because they would better relate to the parameters under study and promptly describe their attitudes and practices on these parameters throughout the pregnancy period. A self-structured questionnaire was employed to collect information like general information, Anthropometric data-such as height and weight (weight at two instances i.e. pre-pregnancy weight and present weight) by using standard measuring scales and also the reports of the patients.

Information on Physical Activity was obtained by collecting data (through self-structured questionnaire) on the physical activity levels before pregnancy, perception about change in activity due to pregnancy, awareness of the ACOG recommended guidelines for physical activity during pregnancy, the practice of physical activity, and also the promoters and barriers to physical activity. The data collected was consolidated using Microsoft excel (2010) and subjected to statistical analysis using chi-square test.

Practice of physical activity: Expectant mothers who performed physical activity as per the ACOG guidelines (those who reported ≥30 minutes of PA per day for more than 3 days a week) were considered to be performing **Adequate PA**, while those who performed less than these recommended levels were considered to be performing **Inadequate PA**.

RESULTS AND DISCUSSION

A total of 50 expectant mothers of government hospitals and 50 expectant mothers of private hospitals were evaluated,

aged 18-37 years, of whom 44% of expectant mothers of government hospitals and 60% of the expectant mothers of private hospitals were found to be nulliparous, while 56% of expectant mothers of government hospitals and 40% of private hospitals were multiparous.

The mean pre-pregnancy weight of expectant mothers from government hospitals was 58.2 ± 11.2 Kg and that of private hospitals was 61 ± 10.4 Kg, while the mean present weight was about 71 ± 10.8 Kg in expectant mothers of government hospitals and 74.3 ± 10.2 Kg in expectant mothers of private hospitals.

Table-1: Socio-demographic details of the expectant mothers

DETAILS	GOVERNMENT HOSPITAL	PRIVATE HOSPITALS
LEVEL OF EDUCATION		
No education	12%	0%
Primary	16%	2%
High school	34%	20%
Intermediate	26%	14%
Graduate or above	12%	64%
INCOME OF THE FAMILY		
≤ 3 lakh/ yr.	78%	0%
3-10 lakh/ yr.	20%	40%
≥ 3 lakh/ yr.	2%	60%
OCCUPATION		
Working	22%	32%
Non-working	78%	68%

Table-1 depicts that expectant mothers recruited from government hospital had less education qualification; lower annual income and majority of them were non-working. In contrast to this setting, majority of expectant mothers from private hospitals were well-educated, had middle-high income, and a greater percentage of them were working when compared to their counterparts.

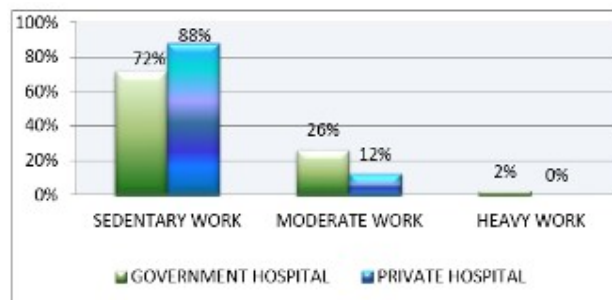


Figure-1: Type of physical activity before pregnancy

Figure-1 shows that the expectant mothers of government hospital were more physically active than their private hospital counterparts before pregnancy. It shows that a majority of women of private hospitals were found to be performing sedentary work even before commencement of pregnancy, with a very small proportion of women performing moderate intensity work.

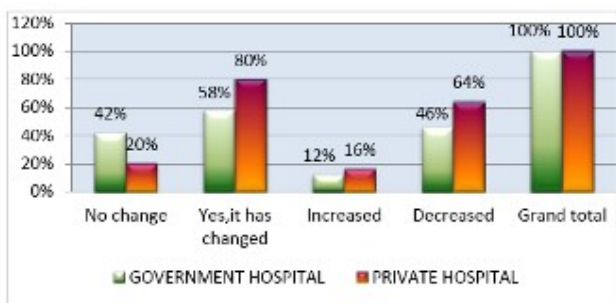


Figure-2: Perception about change in physical activity due to pregnancy

It is observed in figure-2 that the expectant mothers of private hospitals were more likely to report that the physical activity has changed following pregnancy, while a greater number of respondents from government hospitals reported no change in physical activity due to pregnancy. Of those who reported change in physical activity due to pregnancy, majority of them reported that there is a decrease in activity levels in pregnancy. The outcome of this study supports the study conducted by Astrid Merckx et al., (2017) on Factors affecting perceived change in physical activity in pregnancy, which indicated that more than half of the pregnant women reported decrease in physical activity during pregnancy and this perception was more pronounced in women who considered themselves as more active before pregnancy.

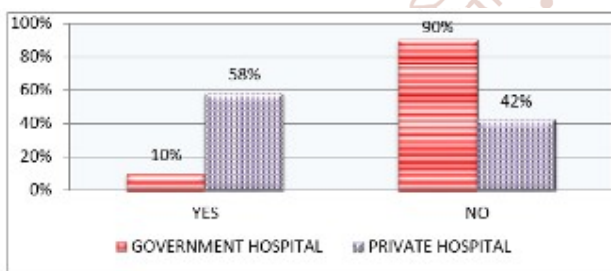


Figure-3: Received health care provider advice on physical activity during pregnancy

Table-2: Awareness regarding the recommended type of physical activity in pregnancy

Type Of Hospital	Awareness Regarding Type Of Physical Activity		T-Value	Result
	Correct	Incorrect		
Government hospital	9	41	0.006	Insignificant
Private hospital	17	23		

Knowledge of private and government hospital respondents, with respect to recommended type of physical activity, is insignificant with under p -value <0.05 with a t -value of 0.006. This indicates that respondents from both the types of hospitals had no difference in knowledge with respect to the recommended type of physical activity in pregnancy.

Table-3: Practice of physical activity in pregnancy

Type Of Hospital	Practice Of Physical Activity		T-Value	Result
	Adequate	Inadequate		
Government Hospital	33	17	6.00	Significant
Private Hospital	13	37		

Practice of physical activity, being adequate or inadequate, among government and private hospital respondents, was found to be significant under p -value <0.05 with a t -value 6.00. This indicates that the respondents of government hospital performed physical activity more adequately when compared to private hospital respondent's in spite of them being less aware of the recommended guidelines for physical activity during pregnancy. A study by Ribeiro and Milanez

Figure-3 suggests that majority of the respondents of government hospitals were not informed regarding the importance and practice of physical activity during pregnancy. In case of private hospitals, some of them reported lack of provider advice but more than half said that they were sufficiently informed regarding physical activity in pregnancy.

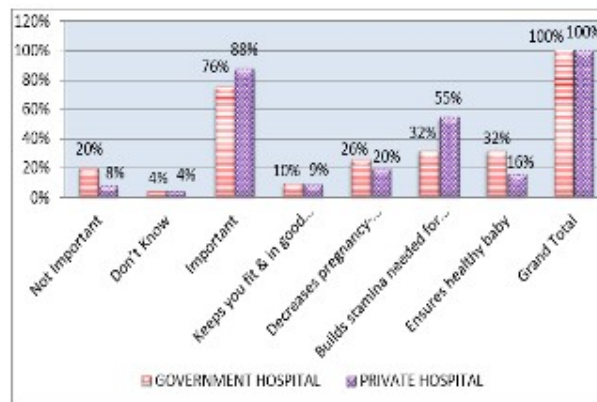


Figure-4: Knowledge about the importance of physical activity during pregnancy

Figure-4 represents that women from private hospitals viewed physical activity as being important during pregnancy more than their government hospital counterparts. Among the women who reported that being physically active during pregnancy is important, a greater number of respondents reported that physical activity helps to build stamina required for childbirth, while the benefit that physical activity helps keep oneself fit and in good health was least identified among the expectant mother. This may imply that the expectant mothers are less concerned about themselves and are more about the outcome of pregnancy and the health of the baby.

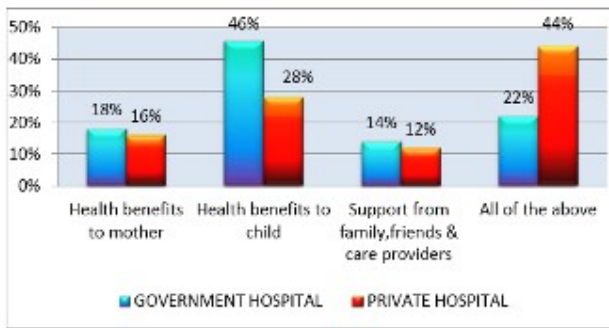


Figure-5: Promoters to physical activity in pregnancy

Figure- 5 indicates that health benefits to the child was identified as the main driving force for being physically active among the expectant mothers of government hospital, while a majority of expectant mothers of private hospital attributed not just one but all the listed promoters to be equally important drivers to physical activity in pregnancy.

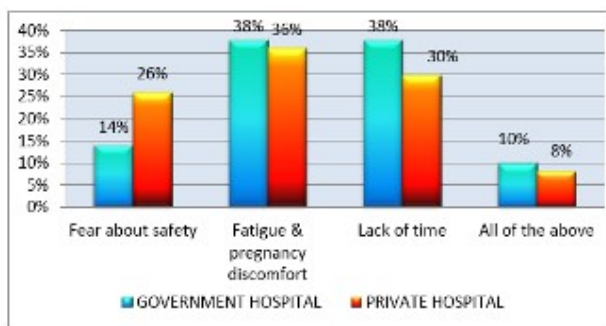


Figure-6: Barriers to physical activity in pregnancy

Figure-6 depicts that fatigue and pregnancy discomfort, followed by lack of time was identified as the major barriers to the practice of physical activity in pregnancy. It is further evident that expectant mothers of private hospitals are avoiding exercise more frequently due to fear regarding the safety of exercising during pregnancy.

A study by Ribeiro and Milanez (2011) on Knowledge, attitude and practice of women in Campinas, São Paulo, Brazil with respect to physical exercise in pregnancy shows similar barriers being reported by pregnant women i.e., women reported tiredness, discomfort and lack of time as the factors responsible for avoiding physical activity in pregnancy.

CONCLUSION

The current highlights the need to inform the expectant mothers on the recommended type/ intensity of physical activity in pregnancy as majority of the women were reported lack of knowledge or incorrect knowledge about the recommendations of physical activity during pregnancy. Moreover, it was reported that the health care providers did not inform the pregnant women regarding physical activity in pregnancy, particularly in government hospital. But in spite of this deficit, it was observed that expectant mothers of government hospital performed more adequate physical activity than that of the private hospital women. This may be due to lack of sufficient income to hire a domestic help by the expectant mothers of the government hospital, unlike the expectant mothers of the private hospitals.

The study further elucidates that expectant mothers of government hospital majorly practiced physical activity due to health benefits it has on the child, but reported barriers to physical activity like fatigue and pregnancy discomfort, and lack of time. Contrarily, expectant mothers of private hospitals practiced physical activity because of overall health benefits to the mother as well as the child and also the support offered to them, but reported barriers like fatigue and pregnancy discomfort, and fear about the safety of physical activity.

RECOMMENDATIONS

- This study can be extended to a larger sample to get more conclusive results.
- The sample population could be given an education intervention and the response of it may be studied.

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