

Role Of Physical Therapy In Antenatal Care As Perceived By The Clients - A Cross Sectional Survey On Pregnant Females Attending Antenatal OPD

M. Sarfraz¹, Deeba Islami², Unaiza Hameed³, Syed Hasan Danish⁴, Farah Ahmad⁵

ABSTRACT

Background: Antenatal care is an essential pillar of safe motherhood. The aim is to give optimal care to the mother so that she can endure the nine months of pregnancy without any complications. A proper exercise plan further helps in achieving appropriate care. The aim of the study is to determine the role of physical therapy in antenatal care as perceived by the clients.

Methods: It was a cross sectional study and females in their nine months of pregnancy aged between 18 to 40 years were inducted in the study. A total of 375 participants were selected through purposive sampling technique. Data entry was done on SPSS version 20 and frequencies and percentages were taken as descriptive statistics for categorical variables.

Results: There were 375 patients among which 81.9% were housewives, 15.5% were working women while 2.7 % were students. 83.7% of the women were aware of physical therapy out of which 95.2% women agreed that physiotherapy has positive role in antenatal care yet only 42% actually attended physiotherapy sessions and 36% were currently following exercise programme.

Conclusion: The perception and knowledge of women regarding physical therapy (exercise) during pregnancy is reasonable but a small number of subjects exercise during pregnancy.

Key Words: *Pregnant Females, Antenatal Care, Physical Therapy.*

INTRODUCTION

Being healthy is the dream of every individual, which can be achieved by indulging one into regular physical activities. When this physical activity gets planned and structured it is called exercise¹. It is necessary for every individual despite of age limit and it becomes very important for pregnant women. In pregnancy, exercise program confers many benefits, and can improve overall physical fitness and relieve some of the discomforts associated with pregnancy².

There are many different types of exercises available for pregnant women that work to strengthen muscles and promote physical fitness. An effective way is aerobic exercise, which increases the heart rate and increases

oxygen and blood demand for muscles, causing to breathe faster. Aerobic exercises include walking, dancing, calisthenics and swimming³. Another way is through strength training, a way to build up muscle mass. This type of exercise involves lifting weights, and performing pushing and pulling exercises⁴. Kegel exercises are also an important part of a prenatal exercise routine. This involves tightening your pelvic muscles, which are the muscles used to control urine flow^{5,6}. Performing all or combination of different exercises under the supervision of a Physical therapist results in various benefits. Aerobic exercises during pregnancy improve heart health and circulatory system³. Strengthening the muscles prepares for the demands of labor and delivery, such as by using muscles to push and practicing how to breathe effectively⁴. Practicing Kegel exercises can also help after the baby is born, as pelvic muscles may stretch during delivery, becoming loose and difficult to control⁷. Physical activity and exercises also improves overall emotional well-being¹.

One of the researches conducted in Brazil by Carmen P Ribeiro and Helaine Milanez showed 65.6% of the women were sufficiently informed about the practice of physical exercise during pregnancy and the vast majority 93.8% was in favor of it. Nevertheless, only just over 20% of the women in this sample exercised adequately⁸. Another research by Kelly R. Evenson and Chyrisse B. Bradley showed 78% of women agreed to continue their

¹ M Sarfraz

Department of College of Physical Therapy, Ziauddin University

² Deeba Islami

Department of College of Physical Therapy, Ziauddin University

³ Unaiza Hameed

Department of College of Physical Therapy, Ziauddin University

⁴ Syed Hasan Danish

Department of Community Health Sciences, Ziauddin University

⁵ Farah Ahmad

Department of Community Health Sciences, Ziauddin University

regular exercise during pregnancy, 68% agreed that most women who never exercised could begin an exercise program during pregnancy. Most 89% agreed that regular exercise was better than irregular exercise during pregnancy. While almost all women agreed with the benefits of light activity 98%⁹.

Antenatal care is an essential pillar of safe motherhood. The aim is to give optimal care to the mother so that she can endure the nine months of pregnancy without any complications. A proper exercise plan further helps in achieving appropriate care. Awareness regarding the role of exercise to relieve undesired effects of pregnancy in Pakistani females is scarce. Research in this area is also limited. Therefore this study aims to find out the knowledge and perception of clients regarding the role of Physical therapy in pregnancy, to determine the frequency of clients seeking Physical therapy treatment during pregnancy and to assess the risk factors for which Physical therapy is advised.

METHODOLOGY

It was a descriptive cross sectional study design conducted on participants who were pregnant and aged between 18-40 years. A sample size of 375 pregnant women was taken through non-probability convenience sampling. Inclusion criterion was females with a normal, singleton pregnancy, age between 18-40 years in any trimester. Study duration was six months from the day of synopsis approval. Females coming for their regular ante-natal visits to Ziauddin hospital and Civil Hospital were approached and asked if they would agree to participate in the study. All women who gave their consent and fulfilled the inclusion criteria were requested to participate in the research and were then interviewed individually. Inclusion criteria for the study were woman with a normal, singleton pregnancy, in any trimester and age between 18-40 years. The questionnaire was based on close ended questions and included information about the demographic details, medical and surgical history, exercise history, physiotherapy awareness and physiotherapy exercise sessions attended.

Data was entered and analyzed using SPSS version 20. Data was cleaned before analysis. Frequencies and percentages were taken out as part of descriptive statistics.

RESULT

A total of 375 participants were recruited in the study among which 81.9% were housewives, 15.5% were working women while 2.7 % were students. The participants were selected on the basis of normal pregnancy, in any trimester and age between 18-40 having mean age of 29 years.

At the time of recruitment participants were requested to fill the questionnaire based on demographic details, medical and surgical history, exercise history, physiotherapy awareness and physiotherapy exercise session's attendance.

As shown in Table 1, 83.7% of the women interviewed were aware of physical therapy out of which 95.2% women agreed that physiotherapy has positive role in antenatal care. Majority 48.8% of women conferred that

they get the information of physiotherapy by health care units, where others also mentioned sources like internet/television, books/magazines and family/friends. It was observed that 64.3% women believed exercises as physiotherapy intervention, 15.5% women had no idea and on the other hand few also regarded different heating or current producing modalities as physiotherapy intervention.

Table 1: Attitude of Participants towards the role of physiotherapy in Antenatal care

	n	%
Occupation of subjects		
House wife	307	81.9
Working women	58	15.5
Student	10	2.7
Awareness about physical therapy		
Yes	314	83.7
No	61	16.3
Physical therapy has positive role in antenatal care		
agree	296	95.2
disagree	18	4.8
Info about physiotherapy		
Health care units	183	48.8
News/TV/ Internet	69	18.4
Friend/ Family	64	17.1
no idea	59	15.8
perception about Physical Therapy		
Exercises	241	64.3
Electric Stimulation	19	5.1
Hot packs	11	2.9
Massage	23	6.1
All of them	23	6.1
no idea	58	15.5
Referral for Physical Therapy		
Yes	206	54.9
No	169	45.1
Reason for not attending the sessions		
Not referred	93	24.8
Lack of time	41	10.9
Not interested	21	5.6
Lack of awareness about PT	56	14.9
financial problem	9	2.0
physiotherapy sessions attended		
Yes	157	41.9
No	218	58.1
Current exercise status		
Yes	134	35.7
No	241	64.3

When asked about referral, 54.9% participants stated that they were referred by their gynecologists for physiotherapy, Out of which 41.9% attended the sessions regularly. Among the non attending participants most of the participants 14.9% were not aware of Physiotherapy and remaining had time and interest issues. On the question about present exercise routine 35.7% responded as yes.

Table 2: Frequency of Common Symptoms observed during Pregnancy

Chief Complaint	Region	n	%
Pain	Back	210	56
	Legs	63	16.8
	Lower Abdomen	45	12
Swelling	Ankle/feet	154	41.1
	Whole region	39	10.4
Numbness	Upper limb	73	19.5
	Lower limb	73	19.5
Urinary incontinence	Yes	127	33.9
	No	248	66.1
Major complaints per trimester	1st	40	10.7
	2nd	159	42.4
	3rd	71	19.0
	All trimesters	90	24.0

In majority of cases, as shown in table 2, 56% of women during pregnancy presented the chief complaint of pain at the back, 16.8% women at legs and 12% at lower abdomen region. Swelling was experienced at ankle/feet by 41.1% women. In contrast the complaint of numbness was equally acknowledged in upper and lower limbs by 19.5% women each. 66.1% women when asked regarding urinary incontinence agreed to have this problem. Among the major complaint during the trimesters 42.4% women claimed 2nd trimester, 24% claimed the same complaints in all trimesters, 19% claimed 3rd trimester and 10.7% claimed 1st trimester.

DISCUSSION

This study was carried on pregnant females visiting antenatal clinics to assess the awareness regarding the role of exercise during the antenatal period. The women in this study sample were found to have adequate knowledge concerning the practice of physical exercise in pregnancy and their attitude towards exercising was favorable; however, few actually exercised. The sample population consisted of young women (mean age 29 years) with a mean parity of two. More than 80% were house wives while 15% were working women and 2.7% were students.

The role of physical therapy in antenatal care by clients was assessed using a self administered questionnaire. Similar study carried out in Brazil showed 65.6% of the women were sufficiently informed about the practice of physical exercise during pregnancy and the vast majority 93.8% was in favor of it. The mean age of clients was 26 years in that study. In contrast, in our study 83.7% of the women were aware of physical therapy out of which

95.2% agreed that physical therapy plays important role in antenatal care. Apart from the fact when seen in total sample size (375) only 41.9% women attended the physical therapy sessions whereas 58.1% didn't attend the sessions because of non referral, lack of time, lack of interest and financial problems

A study conducted by Duncombe D et al, evaluated factors associated with women's perceptions of the safety of physical activity in pregnancy found that women perceive physical exercise as beneficial because they believe it helps control blood glucose levels, minimizes weight gain, improves energy efficiency and mood, makes childbirth easier and contributes towards fetal health¹⁰. Nevertheless, although these women recognized these advantages, they believed that it was more important to rest and relax during pregnancy than to exercise. These findings are in agreement with the results of the present study, where though knowledge was satisfactory and the women attitude was favorable, only a small percentage of the women in this sample exercised during pregnancy, highlighting the fact that practice was inadequate. These findings regarding practice are in agreement with other studies conducted in Brazil such as that carried out in Pelotas, Rio Grande do Sul¹¹ in which the prevalence of physical activity among pregnant women was low and a study conducted in Campina Grande, Paraíba¹² in which the level of physical activity in pregnant women was inadequate right from the beginning of pregnancy, becoming more so in the third trimester.

Fifty six percent of the women in this study were of the opinion that they experienced Low back Pain during pregnancy similar frequency (57.3%)¹³ was observed in Iran. The same Iranian research reported 40.7% women complaining of pain in the third trimester of pregnancy¹³ where as in our study 42.4% women complaint of low back pain in second trimester.

This study also reported prevalence of Urinary Incontinence in 33.9% women and nearly the same was found in a study conducted in turkey revealing 31.9% women affirming urinary incontinence.¹⁴

The strength of our study was that sample size was large enough though for generalizing the results sample should have been taken from other tertiary care hospitals from the public sector hospitals. Data was primarily collected by the researchers themselves and refusal rate was negligible. Our limitation was exclusion of females with multiple pregnancies.

The finding of the study reveals that this study should be conducted in future on a sample size representing the target population with intervention in the form of handbills and/or seminars for creating awareness.

CONCLUSION

Our results revealed that the perception and knowledge of women regarding physical therapy (exercise) during pregnancy is reasonable; but a small number of subjects exercise during pregnancy.

REFERENCES

- ¹ Principles and labs for fitness & wellness; tenth edition; Warner W. K. Hoeger, Sharon A. Hoger.2010
- ² The Ideal Physical Therapist as Perceived by the Elderly Patient Carole J Grannis *PHYS THER.* 1981; 61:479-486
- ³ Physical activities guidance advisory committee,2008 physical activity guidance for Americans vs Dept. of health and human service.2008
- ⁴ Church T, Earnest C, Skinner J, Blair S. Effects of different doses of physical activity on cardiorespiratory fitness among sedentary, overweight or obese postmenopausal women with elevated blood pressure: a randomized controlled trial. *JAMA.* 2007; 297(19):2081–2091. [Pub Med]
- ⁵ M. and Goh J. (2009) Inside Out - The essential women's guide to pelvic support
- ⁶ Dumoulin C, Hay-Smith J. Pelvic floor muscle training versus no treatment, or inactive control treatments, for urinary incontinence in women. *Cochrane Database Syst Rev.* 2010;1:CD005654. DOI: 10.1002/14651858.CD005654.pub2
- ⁷ Carmen P, Milanez R H. Knowledge, attitude and practice of women in Campinas, São Paulo, Brazil with respect to physical exercise in pregnancy: a descriptive study. *Biomedcentral.*2011; 31(3):
- ⁸ Evenson KR, Chyrise BB. Beliefs About Exercise and Physical Activity Among Pregnant Women. *Patient Educ Couns.*2010;79(1):124-129
- ⁹ Duncombe D, Wertheim EH, Skouteris H, Paxton SJ, Kelly L: Factors related to exercise over the course of pregnancy including women's beliefs about the safety of exercise during pregnancy. *Midwifery* 2009, 25:430-438
- ¹⁰ Domingues MR, Barros AJ: Leisure-time physical activity during pregnancy in the 2004 Pelotas Birth Cohort Study. *Rev Saude Publica* 2007, 41:173-180
- ¹¹ Pereira MA, Rifas-Shiman SL, Kleinman KP, Rich-Edwards JW, Peterson KE, Gillman MW: Predictors of change in physical activity during and after pregnancy: Project Viva. *Am J Prev Med* 2007, 32:312-319
- ¹² Low back pain during pregnancy in Iranian women: Prevalence and risk factors. Ansari NN, Hasson S, Naghdi S, Keyhani S, Jalaie S. *Physiother Theory Pract.* 2010 Jan; 26(1):40-8
- ¹³ Urinary incontinence among Turkish women: an outpatient study of prevalence, risk factors, and quality of life. Kocaöz S, Talas MS, Atabekoğlu CS. *J Wound Ostomy Continence Nurs.* 2012 Jul-Aug;39(4):431-9
- ¹⁴ Urinary incontinence among Turkish women: an outpatient study of prevalence, risk factors, and quality of life. Kocaöz S, Talas MS, Atabekoğlu CS. *J Wound Ostomy Continence Nurs.* 2012 Jul-Aug;39(4):431-9