



ISSN Print: 2394-7500
ISSN Online: 2394-5869
Impact Factor: 8.4
IJAR 2022; 8(3): 389-394
www.allresearchjournal.com
Received: 19-01-2022
Accepted: 22-02-2022

Bhumika S Patel
Assistant Professor, S.S
Agrawal Institute of
Physiotherapy and Medical
Care Education, Navsari,
Gujarat, India

Maitri Tamboli
Interns, S.S. Agrawal Institute
of Physiotherapy and Medical
Care Education, Nasari,
Gujarat, India

Anjali Pandoriya
Interns, S.S. Agrawal Institute
of Physiotherapy and Medical
Care Education, Nasari,
Gujarat, India

Bhumika Patel
Interns, S.S. Agrawal Institute
of Physiotherapy and Medical
Care Education, Nasari,
Gujarat, India

Corresponding Author:
Bhumika S Patel
Assistant Professor, S.S
Agrawal Institute of
Physiotherapy and Medical
Care Education, Navsari,
Gujarat, India

Role of physical therapy in antenatal care as perceived by the clients-cross-sectional survey on pregnant women attending antenatal OPD in Navsari, India

Bhumika S Patel, Maitri Tamboli, Anjali Pandoriya and Bhumika Patel

DOI: <https://doi.org/10.22271/allresearch.2022.v8.i3e.9593>

Abstract

Background: Physiotherapy is very crucial for the duration of antenatal care. The purpose is to provide the pregnant women with optimum treatment so that she will be able to go through nine months of pregnancy without complications. A pregnant mother's correct and adequate focus on antenatal activities is important in facilitating workout participation.

Aim: This study aims to find out the knowledge and to discover the information and perception of clients regarding the role of Physical therapy in being pregnant, to decide the frequency of clients seeking Physical therapy treatment for the duration of pregnancy, and to evaluate the risk factor for which Physical therapy is suggested.

Methodology: It was a cross-sectional study to know awareness of physical therapy in antenatal women. In this study, women were aged between 18-40 years and had nine months of pregnancy. A total of 100 participants were selected through the purposive sampling technique

Result and Conclusion: There were 100 participants of which 65% were housewives while 35% were working women. 24% of the women were aware of physical therapy out of which 2% agreed that physical therapy plays important role in antenatal care. While only 2% of women attended the physical therapy sessions. Women's knowledge and perception of physical therapy during pregnancy are poor. Only a small percentage of pregnant women exercise.

Keywords: Antenatal care, pregnant women, physical therapy

Introduction

Pregnancy is a perfect time to begin establishing healthful conduct, together with bodily sporting events^[1]. When this physical factor takes place the hobby is deliberate and organized. It is referred to as Exercise^[2]. According to the pointers given by the WHO, Physiotherapy, which is used to avoid musculoskeletal discomfort, in addition to institutional therapy for aerobic and mental well-being, plays a crucial position in antenatal remedies^[3]. Given the importance of fitness literacy for empowerment, the emphasis of antenatal care programs needs is on improving maternal fitness and fitness literacy^[4]. Preventive tactics at some stage in gestation, along with tetanus toxoid vaccinations and coaching women about food regimen, secure childbirth, and post-partum treatment, will all be completed in the course of antenatal care^[5, 6]. It additionally covers the prevention of high-risk births, nutritional recommendations the significance of living a healthy lifestyle, the management of common pregnancy-associated problems, the significance of exercising, and, many others^[7] With theory, postpartum and childbirth are standard activities in women's lives that affect all stages of their lives. The exercise regime has many advantages during pregnancy and may improve bodily fitness and alleviate some of the cache related to pregnancy). Other pregnancy-associated risks, together with loss of bladder feature, backache and can be prevented with antenatal physiotherapy. Fatigue, muscle stiffness, being pregnant-caused high blood pressure, weight problems, varicosity, numbness and swelling of the extremities, reduced practical residual capability, premature labor, and different sympathetic and skeletal symptoms are all common signs and symptoms^[9]. Several complications may arise during pregnancy. The most common causes of maternal death are hypertensive disorder^[10].

Hypertensive problems of pregnancy (HDP) are a class of sicknesses characterized by means of high blood pressure, proteinuria, and, in some instances convulsions throughout pregnancy. Eclampsia is generally observed by pre-eclampsia, which causes seizures within the central apprehensive machine and now and then makes the affected person unconscious; if left untreated, it may result in demise. Pre-eclampsia is a shape of high blood pressure that occurs all through being pregnant and is characterized by excessive protein excretion inside the urine (eleven). Preventing eclampsia, which induces stroke in a roundabout way, maybe considerably decreased through enforcing an antenatal regimen that detects and treats high blood pressure.

Physical exercises are harmful to pregnant mothers, consistent with conservative ideals and stereotypes [13]. Moreover, Women are unable to indulge in antenatal exercising applications because they're concerned that it'll harm the foetus in addition to themselves. In addition, cultural norms play a vital role within the identical [13].

In our state, women are encouraged to relax for the duration of their pregnancies. This has been a common principle in view that ancient instances. It is vital to elevate awareness about the advantages of physical and mental health. The subjects and their households have to be endorsed to evolve with the flow of time and allow movement in their myths and misleading cultural beliefs. This seems to be the most difficult thing of our setup. The maximum sizeable obstacles are a lack of awareness and inaccurate ideas [14].

Women must be sturdy sufficient to triumph over those upgrades by taking part in ordinary physical exercise. Physical workout is critical for each mother and infant, as it could assist to lower the hazard of damaging maternal, foetal, and neonatal results, as well as solve pregnancy-associated problems and preserve better health [15].

Physiotherapy may be very critical during antenatal care. Prenatal physiotherapy strategies resource pregnant ladies in reducing being pregnant complications, decreasing gestation time, and letting them heal quicker after birth [16, 17]. In both the antenatal and postnatal levels, physiotherapy may be very relevant in obstetrics. Manual strategies, in addition, to practice, back care, and regular pastime adjustments, all assist to maintain the right postural stability in pregnant girls, lowering joint aches. Physiotherapists will educate core stability sports like transverse abdominis, multifidus, and pelvic floor co-activation. This is useful for both preventing and treating again pain. Early pelvic organ prolapse can be reduced with pelvic floor workout education. A physiotherapist with experience in the discipline will assist you to advantage interest during being pregnant. The relevance of weight reduction, pelvic ground sporting events, respiration sports, postural education, dietary counseling, identification of excessive-chance pregnant ladies, and again remedy, among other subjects, can be included in the antenatal courses. Within the fields of advertising, prevention, treatment/intervention, and recuperation, physiotherapy is concerned with defining and enhancing the first-class of existence and mobility potential [18]. Despite those advantages, pregnant women do no longer workout as plenty as they should, specifically in developed nations. Nonetheless, their lack of schooling, terrible socioeconomic circumstances, loss of getting ng entry to brilliant health care, and fear of workout during childbirth all relate to a sedentary maternity lifestyle [19, 20].

Over the closing two decades, views about physiotherapy at some point of being pregnant have modified extensively. In most instances, exercise at some stage in being pregnant is safe for both the mother and the infant, helping the recommendation for normal exercise throughout maximum pregnancies. All wholesome pregnant girls ought to be monitored on a non-urinary foundation to assess the impact of their health programs on the developing foetus, and adjustments made if feasible. Before making choices on physical exercise involvement during pregnancy, girls with medical or obstetric problems should be very well examined. Despite the truth that pregnancy reasons substantial anatomical and physiological adjustments, exercise has been shown to have low risks and verified advantages for almost all womens [1, 21].

For pregnant mothers there are several special varieties of workouts available that work to enhance the muscles and inspire physical activity. A successful way is a cardio activity, which improves the coronary heart price and will increase the want for muscle groups for oxygen and blood, permitting fast breathing. Walking, dancing, calisthenics, and swimming include cardio sports [22].

Kegel activities also are an essential thing of a routine for prenatal exercise. This consists of contracting the pelvic muscle mass, the muscular tissues used to regulate the go with the flow of urine [23, 24]. Under the steering of a physical trainer, undertaking any or aggregate of separate activities affect more than one beneficial antenatal section, cardio exercising complements coronary heart fitness and the circulatory system [22].

Muscle-strengthening allows for labour and childbearing needs, along with by way of the use of muscle mass to move and discover ways to breathe effectively. It can also assist to carry out Kegel physical activities after the infant is born, as pelvic muscles can stretch all through shipping, be loose a, and are difficult to manipulate [25].

Back muscle groups, belly muscle tissues, and pelvic ground muscle groups have to all be strengthened to help pregnant moms. Abdominal muscle strength aids in lowering the effects of pain in the course of gestation. Strengthening the pelvic ground muscular tissues makes it less difficult for the vaginal commencing to increase all through childbirth. Moreover, it helps in the prevention of urinary incontinence each earlier than and after beginning. Back muscles should be strengthened and postures should be improved to reduce the strain on the lower back during pregnancy. Exercises for the lower legs should be recommended to increase circulation and avoid any complications stepped forward to reduce the pressure on the decrease returned at some point of being pregnant [25-31].

An essential pillar of covered motherhood is antenatal care. The intention is to provide the mother with the most efficient treatment so that she can undergo 9 months of being pregnant without complications. Appropriate educational programs similarly pursue to attain adequate care. There is little knowledge of the role of exercise in relieving undesired pregnancy effects in Indian girls. Research on this vicinity is likewise constrained [32].

Aims and Objectives: The aim of the study is 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

- **Study Design:** Descriptive cross-sectional
- **Sample Size:** Sample size is calculated based on G* power software analysis with a significant chance level of 0.05 and 0.80 power was selected. These criteria led to an estimated sample size of 100 participants in to take into account a probable no drop out, the sample size is enhanced to 100 so that of 100 participants were included in this study.
- **Sampling Method:** Non-probability Convenient sampling

Inclusion Criteria

- Singleton pregnancy
- Age between 18-40 years in any trimester

Exclusion Criteria

Pregnant women the with follow conditions;

- High blood pressure
- Placenta previa
- Incompetence cervix
- Gestational diabetes
- Loss of amniotic fluid

Procedure

The purpose of this was to explain a written informed consent was obtained from all the subjects. It was a descriptive cross-sectional study design conducted on participants who were pregnant and aged between 18-40 years. A sample size of 100 pregnant women was taken through non-probability convenience sampling. The inclusion criterion was females with a normal, singleton pregnancy, age between 18-40 years in any trimester. Pregnant women with the following conditions; high blood pressure, placenta previa, incompetent cervix, gestational diabetes, loss of amniotic fluid were excluded from t study duration was six months from the day of synopsis approval. Females coming for their regular ante-natal visits to Anand hospital, Ramaben Hospital. And Shraddha Hospital were approached and asked if they would agree to participate in this study explained to all women who have participated and written consent was obtained from all participants and fulfilled the inclusion criteria were requested to participate in the research and were then interviewed individually.



Fig 1: Consent form

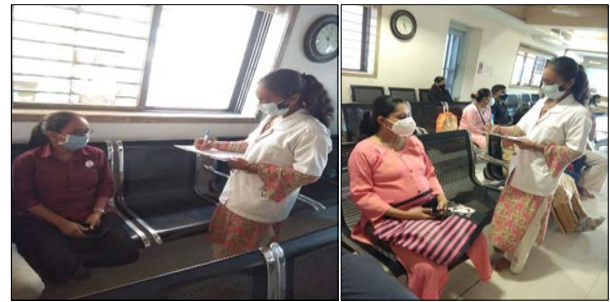


Fig 2, 3: Questionnaire for participants

Results and Discussion

A total of 100 participants were recruited in the study among which 65% were housewives, 35% were working women. The participants were selected on the base of normal pregnancy, in any trimester and age between 18-40 years having a mean age of 29 years. At the time of recruitment part, occupants were requested to first ll the questionnaire based on demographic details, medical and surgical history, exercise history, physiotherapy awareness physiotherapy exercise session attendance.

As shown in Table 1, 24% of the women interviewed were aware of physical therapy out of which 2% of women agreed that physiotherapy has a positive role in antenatal care.

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

Total number of participants		%
Occupation of subjects		
Housewives	65	65%
Working women	35	35%
Awareness about physical therapy		
Yes	24	24%
No	76	76%
Physical therapy has a positive role in antenatal care		
Agree	2	2%
disagree	98	98%
Info about physiotherapy		
Health care units	9	9%
News/TV/Internet	0	0%
Friends/family	15	15%
No idea	76	76%
Perception about Physical Therapy		
exercises	21	21%
massage	10	10%
no idea	69	69%
Referral for Physical Therapy		
Yes	0	0
No	100	100%
Reason for not attending the sessions		
Not referred	68	68
Lack of awareness about PT	30	30
Physiotherapy sessions attended		
yes	2	2%
no	98	98%
Current exercise status		
Yes	2	2%
No	98	98%

9% of women conferred that they get the information of physiotherapy by health care units whereas re others also mentioned sources like books/magazines and family/friends. It was observed that 21of % of women believed exercises as physiotherapy intervention, 69% of women had no idea

when asked about Ut referral, participants stated that they were not referred by their gynecologists for physiotherapy, 2% attended the sessions regularly. Among the non-attending participants most of the participants 98% were not aware of Physiotherapy and the remaining had time and interest issues. On the question the about present exercise ROU, time 2% responded as yes.

In the majority of cases, as shown in table 2, 30% of women during pregnancy presented the chief complaint of pain at the back, 13% women at legs. The swelling was experienced at ankle/feet by 49% women. In contrast, the complaint of numbness was acknowledged in the upper and lower limbs by 13% and 3% of women each. 28% of women when asked regarding urinary incontinence agreed to have this problem. Among the major complaint during the trimesters 8% of women claimed 2nd trimester, 37% claimed 3rd trimester.

Table 2: Frequency of Common Symptoms observed during Pregnancy

Chief complaint	Region	Total number of participants	%
Pain	Back	30	30%
	Leg	13	13%
Swelling	Ankle/foot	49	49%
	Whole region	12	12%
Cramps	Abdominal	17	17%
Numbness	Upper limb	13	13%
	Lower limb	3	3%
Urinary incontinence	Yes	28	28%
	No	72	72%
Major complaints per trimester	1 st	0	0
	2 nd	8	8%
	3 rd	37	37%

Discussion

The purpose of the study was to establish pregnant women's awareness about antenatal physiotherapy services. In this study 100 young females were allocated. 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 exercised.

The sample population consisted of antenatal women (mean age 29 years). In that 65% were housewives while 35% were working women. The role of physical therapy in antenatal care by clients was assessed using a self-administered questionnaire. A 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 [25]. In contrast, in the present study, 24% of the women were aware of physical therapy out of which 2% agreed that physical therapy plays important role in antenatal care. Apart from the fact when seen in total sample size (100) only 2% of women attended the physical therapy sessions whereas 98% 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.* [41] Women perceives physical activity as beneficial because it helps control blood glucose levels, minimizes weight gain, improves energy efficiency and mood, makes childbirth easier, and contributes to fetal health, according to a study that looked at factors associated with women's perceptions

of the safety of physical activity during pregnancy. Nevertheless, the present study shows that according to the participants they should resting was more necessary than exercising during pregnancy. Only a small fraction of the women in this group exercised during pregnancy, indicating that practice was insufficient.

Thirty percent of the women in this study thought that they experienced Low back Pain during pregnancy while in another study 56% of women were experienced low back pain [32]. The same research reported 19% of women complained of pain in the third trimester of pregnancy [32]. In contrast, in the present study 37% women complained of low back pain in the third trimester. This study also reported the prevalence of Urinary Incontinence in 28% of women whereas another study revealed 54% of women affirming urinary incontinence. Another study reported that 7.4% of Women experienced numbness in the upper extremity [7] while in the present study 13% of women experienced numbness in the upper extremity.

The finding of the study reveals that this Pregnant m' has accurate and adequate awareness of antenatal activities, as well as positive attitudes toward them, are critical in facilitating exercise participation. Understanding current information about antenatal exercises among pregnant mothers, as well as attitudes toward antenatal exercises in the framework of the pregnant mothers' socio-cultural, educational, and economic backgrounds, is critical in developing any educational initiative to support antenatal exercises also this study should be conducted in future on a sample size representing the target population with intervention in the form of pamphlets and/or Seminars for creating awareness.

The strength of our study was that the 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 the refusal rate was negligible. Our limitation was the exclusion of females with multiple pregnancies.

Limitations

The sample was collected from three hospitals of Navsari which cannot be generalized to the whole population

Conclusion

Our study results state that the knowledge and perception of women regarding physical therapy during pregnancy is poor, but a small number of subjects exercise during pregnancy. Inadequate knowledge on the importance of Physical therapy in antenatal care in this study. Poor referral of pregnant women for physiotherapy treatments or exercises is two major causes of lack of awareness regarding antenatal physical therapy.

Future Recommendation

This study should be conducted the in future on a sample size representing the target population with intervention in the form of seminars for creating awareness. Pregnant women should be informed about physiotherapy and encouraged to use it during their prenatal checkups, according to healthcare practitioners. In prenatal clinics, physiotherapists should give frequent health education sessions

Ethical Clearance: Taken from the institutional advisory board.

Conflict of interest: None

Source of funding: Self

References

- Larry A. Wolfe GALD. Canadian Guidelines for Exercise in Pregnancy. *Clinical Obstetrics and Gynecology*. 2003;46(2):488-95.
- Wener WK, Hoeger SAH. Principles and labs for fitness & wellness, 2010, 624.
- Elamurugan Sujindra AB, Suganya A, Praveena R. Knowledge, attitude, and practice of exercise during pregnancy among antenatal mothers. *International journal of educational and psychological research*. 2015;1(3):234-7.
- World Health Organization dumps. Working with individuals, families, and communities to improve maternal and newborn health, 2003, 52.
- Govindasamy P, Stewart MK, Rustein SO, Boerma JT, Sommerfelt AE. High risks births, and maternity care. *Demographic and Health Surveys Comparative Studies*, 1993, 8.
- S Aboud EFL, Kristoffersen EK, Matre R. Tetanus Immunity among Pregnant Women Attending Antenatal Care in Dar es Salaam, Tanzania. *African Journal of Reproductive Health*. 2002;6(2):87-93.
- Sajan M. Awareness of physiotherapy interventions among pregnant females in the antenatal clinic, Buffalo City Municipality, Eastern Cape, South Africa, 2013.
- Grannis CJ. The Ideal Physical Therapist as Perceived by the Elderly Patient, 1981, 61.
- Wijesiriwardana WS GNS. Knowledge, attitudes, and practices regarding antenatal exercises among pregnant mothers attending De Soya Maternity Hospital Colombo. *Sri Lanka Journal of Obstetrics and Gynaecology*, 2015, 37(4).
- Moodley J. Maternal deaths due to hypertensive disorders in pregnancy. *Best Practice & Research Clinical Obstetrics and Gynaecology*. 2008;22:559-67.
- Kathleen A, Pennington JMS, Daniel Jackson L, Laura Schulz C, Schust DJ. Preeclampsia: multiple approaches for a multifactorial disease. *Disease Models & Mechanisms*. 2012;5:9-18.
- McCaw-Binns AM DEA, Knight LP, MacGillivray I, Golding J. Strategies to prevent eclampsia in a developing country: I. Reorganization of maternity services. *International Journal of Gynecology and Obstetrics*, 2004, 87.
- Chidozie Emmanuel Mbada OEA, Taofeek Oluwole Awotidebe, Funmilola Adenike Faremi. Practice and Pattern of Antenatal and Postnatal Exercise among Nigerian Women: A Cross-Sectional Study. *International Journal of Women's Health and Reproduction Sciences*. 2015;3:93-8.
- Ruhi sheth SG, Megha Sheth. Knowledge, attitude, and perception about antenatal physiotherapy among pregnant women in Ahmedabad *International Journal of Medical Science and Public Health*, 2019, 8(9).
- Kovac SR. Guidelines to determine the route of hysterectomy. *National library of medicine*, 1995, (1).
- Yiping Wang ZW. The effect of antenatal pelvic floor muscle training on labor and delivery outcomes: a systematic review with meta-analysis. *International urogynecology journal*. 2015;26(10):1415-27.
- AK Khatri SS, Sanjay Dixit, Shailesh Rai, Dhruvendra Pande. Effect of antenatal exercise on outcome of labor. *National Journal of Community Medicine*, 2014, 5(3).
- (WCPT) WCFPT. Physical therapists as exercise and physical activity experts across the life span, 2019, 5.
- Gastaldi AC. Flutter Device Review: Effects on Secretion and Pulmonary Function. *Journal of novel physiotherapies*, 2016, 6(3).
- Chao Y-HCaY-H. Proprioceptive Neuromuscular Facilitation Approach for Functioning Muscle Transfer: A Case Report. *Journal of Novel Physiotherapies*, 2016, 6(3).
- Exercise during Pregnancy and the Postpartum Period. *International Journal of Gynecology & Obstetrics*. 2002;77(1):79-81.
- Physical Activity Guidelines for Americans, 2008.
- Chantale Dumoulin JH-S. Pelvic floor muscle training versus no treatment, or inactive control treatments, for urinary incontinence in women. *Pelvic floor muscle training versus no treatment, or inactive control treatments, for urinary incontinence in women (Review)*, 2010, (1).
- Kenway M. Inside out - The Essential Women's Guide to Pelvic Support, 2009, 88.
- Milanez CPRaH. Knowledge, attitude and practice of women in Campinas, São Paulo, Brazil concerning physical exercise in pregnancy: a descriptive study. *Ribeiro and Milanez Reproductive Health*. 2011;8:31 <http://www.reproductive-health-journal.com/content/8/1/31>. 2011.
- Gerald S, Zavorsky ALDL. Adding Strength Training, Exercise Intensity, and Caloric Expenditure to Exercise Guidelines in Pregnancy. *Obstetrics & gynecology*. 2011;117:1399-402.
- Pre & Post-Natal Exercise Guidelines, 2011.
- Carolyn Kisner LAC. *Therapeutic Exercise*, 2007.
- Abedzadeh M TM, Sadat Z, Saberi F. Knowledge, and performance of pregnant women referring to Shabihkhani hospital on exercises during pregnancy and postpartum periods. *Journal of Jahrom University of Medical Sciences*, 2011, 8(4).
- Shivani S. Study to assess the knowledge, attitude, and practice regarding selected antenatal exercises among the pregnant women attending O.P.D., in a selected hospital of Bangalore, 2007.
- Jones JH, Jeff McAleese, Willis. Exercise, nutrition, and weight management during pregnancy. *American Journal of Health Studies*, 2010, 25(3).
- Sarfraz M DI, Unaiza Hameed. Role of Physical Therapy in antenatal care as perceived by the clients-a cross-sectional survey on pregnant females attending antenatal OPD. *Pakistan Journal of Medicine and Dentistry*, 2013, 1.
- FarhanaAfroz. Pregnant women's awareness about physiotherapy services at selected maternity hospitals. 2010-11.
- Shifna ULB DV, Nasmy MNM, Sandamali AAK, Sugandika RKDE, Waththage CN, Welgama WRSD, *et al*. Awareness and Effectiveness of Physiotherapy Interventions among Pregnant Women Attending

- Antenatal Care in Gangawatakoralle. International Journal of Scientific and Research Publications, 2017, 7(9).
35. Ali ZA. Knowledge, attitude, and practice of pregnant women toward antenatal physiotherapy in Al-Qurayyat: A cross-sectional study. Drug Invention Today, 2019, 12(11).
 36. Samuel E, Anya AHaLEJ. Antenatal care in The Gambia: A missed opportunity for information, education, and communication. BMC Pregnancy and Childbirth. 2008, 8(9).
 37. Kelly R, Evenson CBB. Beliefs about exercise and physical activity among pregnant women. Patient Education and Counseling, 2009, 124-9.
 38. Hina Munawar AT, Nosheen Zehra. Awareness of Obstetricians/ Gynecologists Regarding the Role of Physiotherapy Services in Managing Obstetric Patients. Pakistan Journal of Medicine and Dentistry. 2013;2(1):17-23.
 39. Ruben Barakat MP, Rocio Montej, Maria Luaces, Maria Zakythinaki. Exercise during pregnancy improves maternal health perception: a randomized controlled trial. American Journal of Obstetrics & Gynecology, 2011.
 40. Zaky LA. End-range Mobilization (ERM) Versus Mobilization with Movement (MWM) in Treatment of Adhesive Capsulitis. Bulletin of Faculty of Physical Therapy, 2012, 17(2).
 41. Marlos Rodrigues Domingues AJDB. Leisure-time physical activity during pregnancy in the 2004 Pelotas Birth Cohort Study. Rev Saúde Pública 2007. 2004;41(2):173-80.