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Musculoskeletal Disorders in Pakistani Women during Pregnancy: A Population Base Study

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Abstract

Introduction: Changes in posture, blood physiology, weight increase, changes in musculotendinous strength, and joints and ligaments laxity are only some of the physical changes that occur during pregnancy. According to several studies, pregnancy-related back discomfort affects 25% to 75% of women. The primary goal of this research is to provide a comprehensive picture of women's musculoskeletal issues during pregnancy and identify the most prevalent triggers of pregnancy-related musculoskeletal discomfort.

Methodology: From Jan 2019 to Jan 2020, the Department of Orthopedic Surgery Territory Care Hospital performed this investigation. In this research, 92 women were enrolled after the IRB (Institutional Review Board) of the Territory Care Hospital approved the study's ethical standards. This research monitored patients throughout their pregnanciesto see if they had any musculoskeletal issues. Pregnant women between the ages of 18 and 45 who had a term pregnancy (37-42 weeks) were included in the research. The authors didn't include women with any history of rheumatoid arthritis, osteoarthritis, or SLE, a systemic autoimmune disease.

Findings: Participants in the research were 32.18 years old on average with a standard deviation of 7.82 years. Moreover, halfof the participants were college graduates, 71. (76.44%) while pregnant, participants gained an average weight of 14.70 and 7.82 kg. Only four (4 %) of these women engaged in aerobic activity. Most study participants reported musculoskeletal complaints at night with 75 reporting nighttime symptoms (85%). There were 82 (90%) people with low back pain, 10 (10%) participants with arthralgia, 35 (40%) participants with arthritis, and 32(35%) participants with neck pain in the study. Pregnancy-related musculoskeletal issues substantially drain the health care system's budget. Arthritis and neck discomfort is among the most prevalent musculoskeletal complaints. Pregnancy-related weight gain and inactivity exacerbate these issues. The findings of this research need to be validated in more extensive trials.

Keywords: *Musculoskeletal Disorders, Pakistani Women, Pregnancy*

Introduction

Changes in posture, weight growth, musculotendinous strength, joints, and ligament laxity are just a few of the numerous physical changes a pregnant woman experiences. Musculoskeletal complaints are common among womenof all ages and backgrounds[1]. They wait until their pain interferes with their everyday activities before seeking medical attention. Pregnancy-related back discomfort affects 25% to 75% of women, while another study found 35.1percent of women have pain in the symphysis pubis during pregnancy[2-3]. Lower back pain, muscular cramps, carpal tunnel syndrome, sacroiliac joint pain, lower leg joint pain, foot discomforts, and edema are all common symptoms for pregnant women[4]. Musculoskeletal dysfunctions are influenced by a person's sedentary lifestyle, cultural beliefs, environmental circumstances, and amount of physical exercise[5]. The research was carried out in KPK, Pakistan, at a tertiary care facility. This research aimed to identify the common musculoskeletal dysfunctions and general distress pregnant women feel during their pregnancies[6]. Thus, this data may be used to generate physical pain requirements and aid in creating these criteria by exercising and learning more about pregnancy for each pregnant lady[7]. Althoughthe subject is essential, there is not enough current literature to conduct clinical trials. Most of the material is based on case studies and expert views based on clinical experience[8]. The primary goal of this research is to examine the prevalence of musculoskeletal pain and symptoms in pregnant women and to determine the most prevalent causes of these symptoms and pains[9].

Methods and Materials

From Jan 2019 to Jan 2020, the Department of Orthopedic Surgery Territory Care Hospital performed the suggested research. Ninety-two women have agreed to participate in this research after it was given ethical clearance by the Institutional Review Board of Territory Care Hospital. According to the results of this research, specific questions were asked about the patient's musculoskeletal health throughout pregnancy. Pregnant women between the ages of 18 and 45 who had a full-term pregnancy (36-48 weeks) were included in the research. Before musculoskeletal diseases such as those that occurred before pregnancy. For example in this research, patients with rheumatoid arthritis, osteoarthritis, or SLE were not included. Medical questionnaires and face-to-face interviews were used to gather basic demographic information about patients, including their employment, literacy level, sex of the baby, and clinical features such as age, BMI, weight acquired during pregnancy, parity, and exercise habits. In a depiction of the human body, musculoskeletal pain locations were described as hand-wrist, elbow, shoulder, neck, back, low back, hip, knee, and ankle-foot. Participants were interviewed at each prenatal visit to measure their musculoskeletalpain intensity in each trimester.

Results

Table 1: Participants, their average age and years of participation

	N	Min	Max	Mean	Std. Deviation
Age	92	07.00	82.00	30.1576	6.80824

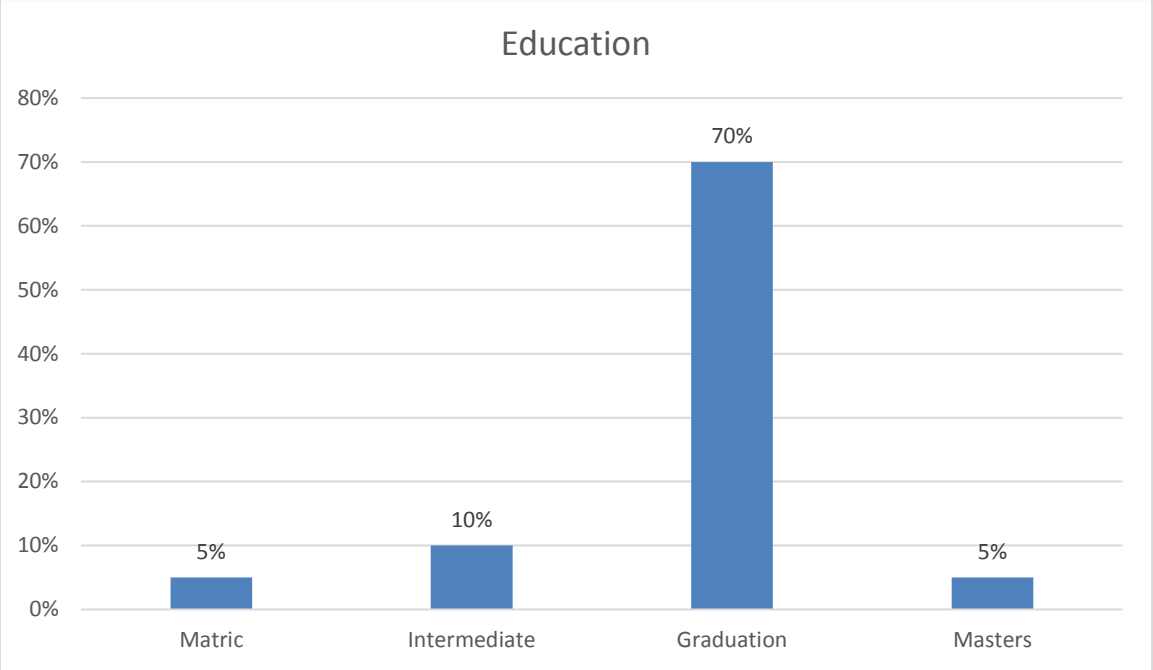

Figure 1: Individuals' educational backgrounds.

Table 2: Average weight increase during pregnancy

	N	Min	Max	Mean	Std Dev
Weight gain in pregnancy	92	5.00	10.00	12.68	2.40782

As indicated in figure 2, just 4 (3 %) of the individuals exercised throughout their pregnancies, whereas 89 (97 %) did not.

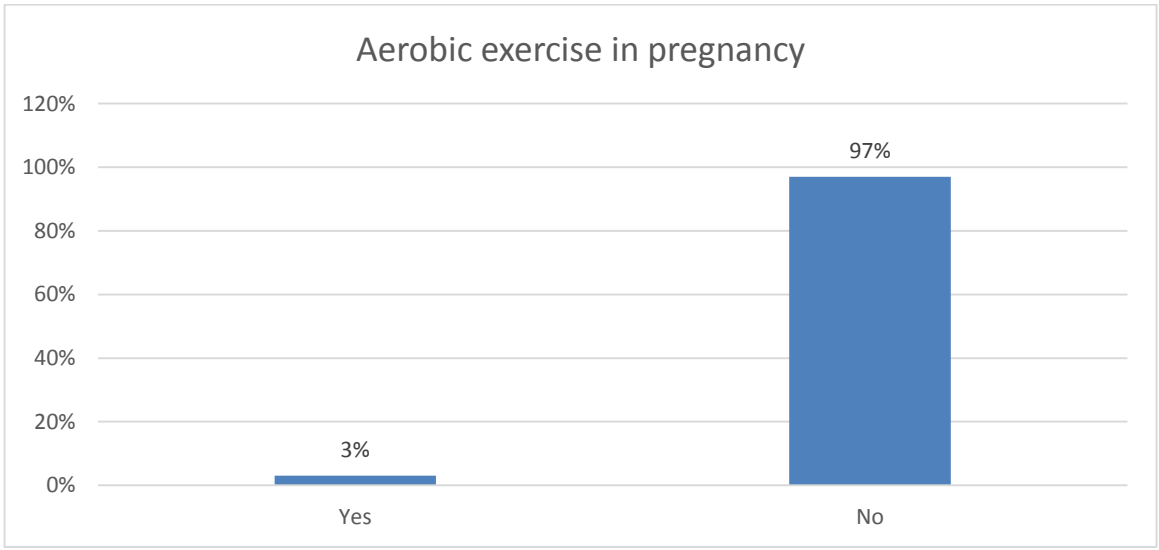

Figure 2: Frequency of aerobic exercise in pregnancy among participants

Regarding timings of symptoms, 8 (4%) had symptoms in the morning and evening, and 72 (86%) had symptomsat night, as shown in figure 3.

Table 3: Participants' weight growth throughout pregnancy was analyzed.

	N	Min	Max	Mean	Std. Deviation
Common pregnancy-related weight gain	92	3.00	10.00	12.695	2.41674

Regarding timings of symptoms, 4 (4%) had symptoms in the morning, 12(11%) had symptoms in the evening, and 76 (84%) had symptoms at night, as shown in Figure 3.

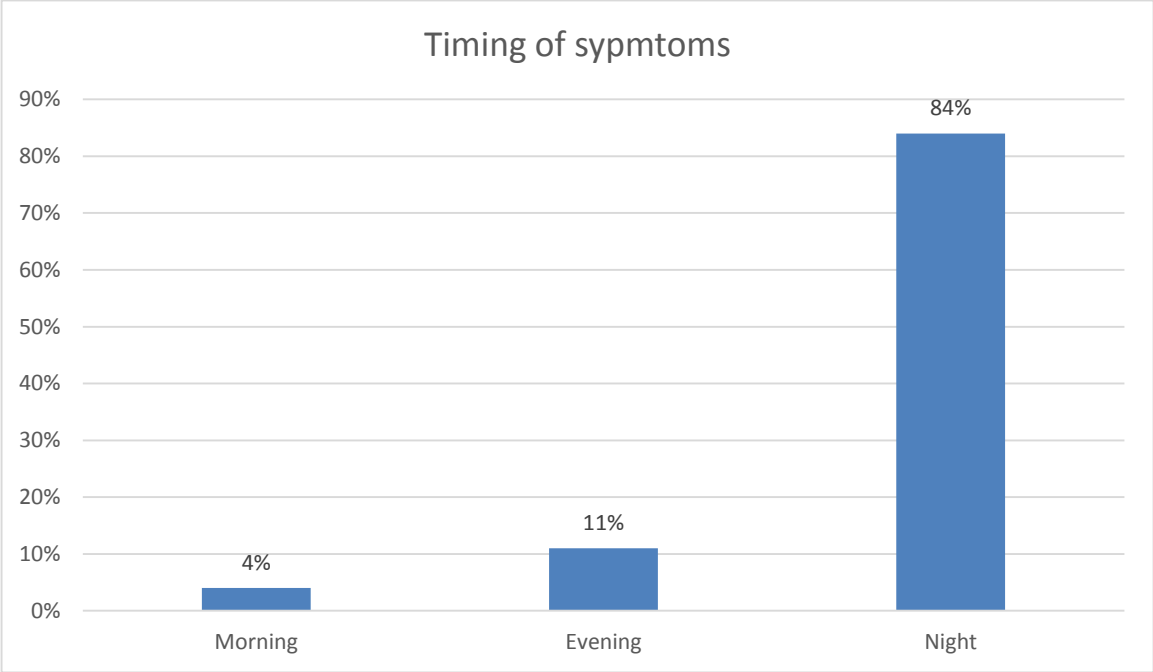

Figure 2: Timings of symptoms

Low back pain, arthralgia, arthritis, and neck pain were the most common musculoskeletal complaints amongparticipants, with 82 (90 percent) and 66 (70 percent) individuals reporting these symptoms, respectively.

According to De, Carpal tunnel syndrome was found in 12 (10 %) of the individuals. For the study, there were five cases of Quervains disease, 09 cases of pelvic discomfort, and four cases of AVN (Avascular necrosis) hip joint among the participants. 19 (11 %) individuals reported elbow, shoulder, ankle, or foot pain, whereas 9 (6 percent) reported shoulder pain, and the remaining 3 (2 percent) reported foot pain. There were 38 (40 percent) casesof leg cramps, 36 (38 %) of plantar fasciitis, and 0 (zero) cases of thoracic outlet syndrome in the study (0 %). Table 4 illustrates these results.

Table 4: Participants' reported frequency of musculoskeletal complaints

Musculoskeletal symptoms	Response	Count	Percentage (%)
Low back pain	Yes	92	92%
	No	8	8.7%
Pelvic pain	Yes	9	10%
	No	83	90.2%
Hip pain	Yes	24	21%
	No	59	74.6%
AVN hip joint	Yes	2	1.8%
	NO	90	90%
De- Quervains	Yes	3	2%
	No	90	98%
Carpal tunnel syndrome	Yes	12	13.0%
	No	80	88%
Arthralgia	Yes	65	69%
	No	24	24%
Arthritis	Yes	35	35%
	No	52	60%
Pain in elbow	Yes	19	19%
	No	70	70%
Pain in shoulder	Yes	10	5%
	No	80	84%
Pain in neck	Yes	32	32%
	No	60	62%
Pain in ankle and foot	Yes	2	1.8%
	No	90	98%
Leg muscles cramps	Yes	22	18%
	No	71	71%
Plantar Fasciitis	Yes	23	21%
	No	70	72%
Thoracic outlet syndrome	Yes	0	0%
	No	92	100%

Discussion

Ninety-four percent of individuals in our research reported experiencing low back discomfort, in line with research by Adinma et al. that found that most individuals suffered from low back discomfort [10]. According to previous research, low back discomfort affects an estimated 55% to 85% of women. Multiparity and a sedentary lifestyle have been linked to lower back pain [8-11]. Leg discomfort was reported by 20.9% of pregnant women, but researchby Kesikburun et al. found that 75% of pregnant women had leg cramps [11]. The mean number of pregnancies in this research was 3.5, which is consistent with previous studies that suggest a higher frequency of musculoskeletal problems in multiparous women compared to nulliparous women. De. Abductor and extensor pollicis longus and brevis tendon inflammation is known as Quervains disease [12]. A total of 03 people (2% of the total sample) had De. Sickness caused by Quervain's. Carpal tunnel syndrome was reported by 12 (12 percent) of the individuals. It is estimated that 59 people (32.1 percent) in the research by Kesikburun et al. had this issue [13]. Twenty percent of our patient's leg discomfort is crampy in the calf, which is relatively high. Twenty percent of responders in Adinma et al.'s research experienced this issue [14]. We found that 30.1 percent of women in our study had arthritis in different joints, which is consistent with a previous research study that found an increase in muscle weakness around the kneejoint and a reduction in proprioceptive awareness around the knee joint [15]. According to Vullo and colleagues' research, 30% of pregnant women have hip discomfort [16], and five of our subjects had pelvic girdle pain.

In contrast, Kesikburun et al. found that 34 percent of participants reported experiencing hip discomfort[17]. Most pregnant women saw an increased incidence of hip dysplasia in the second and third trimesters of pregnancy. Theseindividuals should have been screened for osteonecrosis of the hip joint and transitory osteoporosis. Other causes ofhip pain include pubic symphysis diastases, sacroiliitis, caudal equine syndrome, and acetabular labral tears [18]. Lower-extremity joints must absorb more load due to mechanical changes during pregnancy [19]. Women report the most frequent lower-extremity issues: back pain, arthritis, knee pain, foot discomfort, and leg spasms. The hip is the most frequent area of injury in the lower limbs. Some 32% of pregnant women report experiencing hip discomfort, according to Vullo and colleagues.

Similarly, 22.8% of women in the present research reported having hip discomfort. The third trimester was the mostcommon hip discomfort for these women[19]. Increased mechanical stress on hip joints during third-trimester pregnancy may be to blame. However, several particular conditions may cause hip discomfort. Osteonecrosis of the femoral head or transitory hip osteoporosis should also be considered in pregnant women with hip discomfort.

Pregnancy-related hip discomfort may be caused by various unusual conditions, including sacroiliitis, cauda equinasyndrome, and acetabular labral tears [20].

Conclusion

As a result of pregnancy-induced musculoskeletal issues, the health economy of the nation is severely impacted. Inany trimester, most women have these issues. It was found that back pain, arthritic pain, arthralgia pain, carpal tunnel syndrome, and De's were the most prevalent complaints. Sickness caused by Quervain's. Sedentary behaviorand pregnancy-related weight gain exacerbate these issues.

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