



Original Article

Prevalence of Neck and Back Pain among Gynecologists and Obstetrics in Tertiary Care Hospitals of Lahore

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ABSTRACT

Neck pain is identified as the ache, irritation and discomfort in the area below your head up to third Thoracic vertebrae. It can radiate to shoulders, arms and fingers also. The presenting complaints of cervical patients include headache, stiff neck, stress, muscle pain, fever, and tenderness, radiating pain, weakness in the arm and difficulty in lifting or gripping activities. Patients may also present with numbness, tingling and weakness of the arm. **Objective:** To determine the prevalence of neck and back pain among gynecologists and obstetrics in different tertiary care hospitals of Lahore. **Methods:** The cross-sectional study included 310 gynecologist and obstetrics that were recruited using non-probability convenience sampling. The cases of the neck pain were recruited from the obstetrics and gynecology department of different hospitals including: Fatima Memorial Hospital, Shalimar Hospital, Services Hospital, Mayo Hospital and Sir Ganga Ram Hospital, Lahore. Research was completed within six months from 23 October 2021 to 30th April 2022. **Results:** Among 310 participants, 196 (63.2%) reported neck pain among which; 153 (44.4%) gynecologists reported pain two times per week. Out of total, 306 (98.7%) reported fatigue especially on long days. Results regarding pain area showed that 196 (63.2%) had neck pain, 64 (24.6%) had back pain and 50 (16.1%) had shoulder pain. Results regarding frequency of pain showed that out of 310 (100%), 153 (49.4%) had pain 2 times per week and 105 (33.9%) had pain 0-2 times per month. **Conclusions:** Prevalence of low back pain was 20.65% whereas prevalence of neck pain in gynecologists was 63.23%. The study suggests that neck pain and fatigue were common in gynecologists and obstetrics. They lack of postural awareness and don't follow ergonomics principles during surgical procedures.

INTRODUCTION

Pain is a highly uncomfortable physical and emotional experience caused by either disease or some injury [1]. Any injury, problem, abnormality or inflammation in the bones, ligaments and muscles of your neck can lead to neck pain and stiffness. Neck pain is identified as the ache, irritation and discomfort in the area below your head up to third Thoracic vertebrae. It can radiate to your shoulders, arms and fingers also [2]. The presenting complaints of cervical patients include headache, stiff neck, stress, muscle pain, fever, and tenderness, radiating pain, weakness in the arm

and difficulty in lifting or gripping activities. Patients may also present with numbness, tingling and weakness of the arm [3]. Gynecologists and Obstetrics are a special group of healthcare professionals who are at greater risk for developing work related musculoskeletal disorders [4]. One of the most common MSK (musculoskeletal) problems among Gynecologists is cervicogenic pain [5]. Shift in posture can cause a shift in the relationship between the spine and the line of gravity, putting additional strain on muscles and connective tissues [6]. The etiology of neck

pain in them may be incorrect posture, long laparoscopy procedures, awkward vaginal surgeries, prolonged static position, repetitive movements, poor positioning, fatigue and stress etc. As professionals as they perform pelvic and abdominal examination, they experience cervical problems which gets chronic overtime as they are not aware of the correct posture [7]. Lack of ergonomic awareness like height of operation tables and bed is one of the main factors of neck pain among gynecologists [8]. Females are more prone to neck pain than males. So female surgeons experience more musculoskeletal disorders in the neck, upper back and dominant shoulder [9]. Due to continuous flexion of neck during surgical procedures, surgeons develop forward head posture. Adaptation of forward head posture for prolonged periods of time leads to development of chronic neck pain [10]. The initial treatment protocols consist of rest, icing, hot packs and NSAIDs for pain relief [11]. Other options include physical therapy: stretching and strengthening exercises of cervical muscles, manual therapy for muscle stiffness [12,13]. Work related disorders have not only psychological, physical and social impact but also have some economic effects and when it becomes drastic it affects the performance, work capacity, and lead towards early retirements [14]. In surgeons, 90.1 % musculoskeletal disorders were work related. The most frequent and severe MSDs were observed in neck, upper back and shoulders among surgeons. Those who were old and had more work experience took medical opinions [15]. The frequency of MSDs among gynecologists and general surgeon population and concluded that majority of laparoscopic surgeons developed symptoms of pain, stiffness and fatigue. Stationary and exhausting work positions required in techniques of laparoscopy lead towards this prevalence. The area commonly affected were neck, shoulder and low back. Fever, headaches and visual problems are noticed and those who worked for prolonged hours developed MSK signs and symptoms [16]. Gynecologists inquire musculoskeletal symptoms during surgical procedures and women were at double risk of pain in respective region. A high prevalence of LBP (75.6%), neck (72.9%), shoulder (64.4%) upper back (61.6%) and wrist (60.9%) pain [17]. To determine the prevalence of neck and back pain among gynecologists and obstetrics in tertiary care hospitals.

METHODS

The cross-sectional study carried out including 310 participants selected by non-probability convenience sampling technique. Keeping confidence level 95%, anticipated population proportion 0.72 and Absolute precision 0.05, calculated sample size was 310 or more respondents [18]. The study selection criteria included

female gynecologists and obstetrics from age group 25 to 40 years, those who had to work for more than 6 hours and who were performing surgeries regularly. The cases of the neck pain in gynecologists were selected. An informed consent was obtained from gynecologists for including data in study. The questionnaire used for this study was taken from previous research "Back and Neck Pain in Gynecologist" [5]. A detailed socio-demographic data was obtained inquiring their life style. A history of onset of the problem was obtained to assess the possible etiology. The severity and duration of the condition was measured. Identity of all the patients was not disclosed. The data was entered in SPSS 22.0. Categorical variables were presented in forms of frequencies and percentages in tables and graphically represented as bar charts.

RESULTS

Results regarding age distribution showed that out of 310, 154 (49.7%) were in the age group of 36-40 years and 123 (39.7%) were in the age group of 30-35 years (Table 1).

Age group	Frequency (%)
30-35	123 (39.7)
36-40	154 (49.7)
41-45	12 (3.9)
46-50	16 (5.2)
51-55	3 (1.0)
56-60	2 (0.6)

Table 1: Descriptive statistics of cases according to age group

Results regarding gender distribution showed that out of 310, 305 (98.4%) were females and 5 (1.6%) were males. Out of total, 177 (57.1%) had 0-5 years of practice and 103 (33.2%) had 5-10 years of practice. Procedure performance showed that 230 (74.2%) had performed both laparoscopic and open procedures, 78 (25.2%) had performed open procedures and 2 (0.6%) had performed laparoscopy. About 196 (63.2%) participants had neck pain, 64 (24.6%) had back pain and 50 (16.1%) had shoulder pain (Table 2). Prevalence of low back pain was 20.65% whereas prevalence of neck pain in gynecologists was 63.23%.

Variables	Construct	Frequency (%)
Gender	Males	5 (1.6)
	females	305 (98.40)
Practice in years	0-5	177 (57.1)
	5-10	103 (33.2)
	10-15	19 (6.1)
	15-20	5 (1.6)
	20-25	6 (1.9)
Performed Procedures	open procedure	78 (25.2)
	laparoscopic	2 (0.6)
	Both	230 (74.2)
Pain region	back pain	64 (20.6)
	neck pains	196 (63.2)
	houlder pain	50 (16.1)

Table 2: distribution of cases according to gender

Variables	Construct	Frequency (%)
percentage of laparoscopic to open	100% open	84 (27.1)
	75% open	155 (50.0)
	50% laparoscopic	63 (20.3)
	75% laparoscopic	7 (2.3)
	100% laparoscopic	1 (0.3)
Proper posture taught	Yes	193 (62.3)
	No	117 (37.7)
Prevalence of Low Back Pain	20.65%	
Prevalence of Neck Pain	63.23%	

Table 3: distribution according to percentage of laparoscopic to open procedure

Results regarding percentage of laparoscopic to open surgery showed that out of 310 (100%), 155 (50.0%) were performed 75% open procedure, 84 (27.1%) were performed 100% open procedure and 63 (20.3%) were performed 50% laparoscopic procedure (Table 3).

causes of fatigue

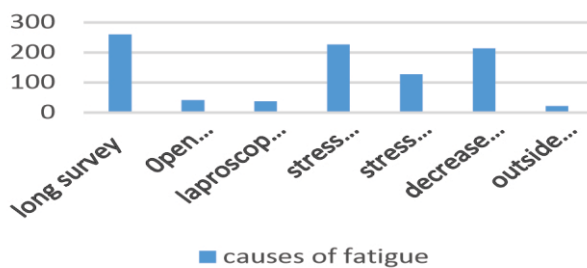


Figure 1: distribution of cases according to causes of fatigue

METHODS

On inquiring about causes of fatigue, like long survey, open procedures, laparoscopic procedures, stress from work and disturbed sleep subjects report multiple causes, out of which long surveys (83.8%), stress from work (72.90) and disturb sleep (69.03%) were the most frequent causes of fatigue reported. Results regarding posture knowledge shows that out of 310 (100%), 193 (62.3%) had posture

knowledge and 117 (37.7%) had no posture knowledge (Figure 1).

DISCUSSION

Pain is a common complain due to sustain posture, restricted ROM, and decrease head mobility. Increased rate of work-related MSD was reported among surgeons and the most frequently affected area of the body is neck. In this study most of the gynecologists were females. This study showed that almost 63.2% gynecologists and obstetrics were reporting neck pain. The result was more or less same with a previous study conducted in 2018 that reported the frequency of neck pain among vaginal surgeons were 50.3% [9]. The present study reported that 74.2% surgeons suffer from neck pain who perform both open and laparoscopic procedures and 25.2% who only perform open procedure. Laparoscopic surgery is predominantly more stressful as compared to open procedures regarding physical demands. Because laparoscopic surgery requires more static posture than open surgery [19]. Current study portrayed the relationship between fatigue & neck pain and frequency of fatigue among gynecologists and obstetrics. According to research of 2010, surgeons who experience fatigue had more chances to develop neck and back pain than those who do not experience fatigue. And the cause of the fatigue was assumed prolonged procedures and poor posture that surgeons were adopting during surgical procedures [20]. In the present study it was reported that young gynecologists exhibited a high prevalence of neck pain due to lack of work experience and weaker skills in surgical procedures. Inexperienced surgeons had not proper grip on instruments and fine movements. While in contrast one of the previous researches it was found that increased age gradually influences the overall effectiveness and cause pain in different regions of their body including neck and lower back [21]. Total 86 surgeons were participated in this study. And the results shows that 66% participants were reported work related MSK disorders. Low back pain was one of the most common work related MSK disorder among orthopedic surgeons. And prevalence of low back pain is 29.3%. As comparison in my study the most common MSK complain is neck pain among gynecologists and obstetrics [22]. Another systematic and meta-analysis was conducted recently in 2018. The purpose of the study was to calculate the prevalence of work relate MSK disorders among surgeons and interventionists. The most common MSD's and their percentages were following; carpel tunnel syndrome (9%), lumbar spine diseases (19%), shoulder pathologies (18%) and neck problems (17%). The study indicated that the prevalence rate of neck problems was increased 18.3% from last previous years. Current study shows that neck

pain is one the most common MSD among gynecologists and obstetrics. Percentage of neck pain is 63.2% and the frequency of neck pain among them is 2-3 times per week (49.4%) [23]. There was low frequency of male gynecologists as compared to females. There should be self-controlled tables for height adjustments. Proper ergonomics should be followed e.g., maintaining head straight in the middle of shoulders, keeping feet in contact with floor while sitting. General exercises of neck and back should be performed. There should be equal male and female ratio.

CONCLUSION

Prevalence of low back pain was 20.65% whereas prevalence of neck pain in gynecologists was 63.23%. The study suggests that neck pain and fatigue were common in gynecologists and obstetrics. They have lack of postural awareness and don't follow ergonomics principles during surgical procedures. Female gynecologists and obstetrics had at greater risk of developing neck pain may be because they face ergonomics disadvantage in Operation Theater. They also had shorter stature and less strength than males.

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