



Prevalence of risk factors associated with wrist pain

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ABSTRACT

Background: Wrist pain is one of common and disabling condition in working population; there are various risk factors that enhance the prevalence of wrist pain in different working class.

Objectives of Study: This study is intended to determine the risk factors for wrist pain associated with nature of work.

Methodology: The descriptive cross sectional study design was used to determine the risk factors. A sample of 196 patients was recruited through purposive sampling from 1st June -31st December 2013 from different hospitals of Rawalpindi and Islamabad. The detail demographic information was taken from diagnosed cases of wrist pain along with risk factors.

Results: The results showed that the mean age of patients' were 32±6 with age bracket of 21-30 years. The prevalence of wrist pain 59(29%) in house wives and office workers were 51(26%). The most common factor is multiple activities 62(31%), type writing 60(30%) and cooking and washing 41(21%).

Conclusions: The findings of the current study highlighted that housewives are more prone to wrist pain, and occupations that require repetitive work is the most common risk factor.

Key Words: Wrist pain, risk factors, female gender, occupation, workload

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INTRODUCTION

Wrist pain is located in hand and around wrist and it is often dull ache in nature that affects the daily activities of life.⁽¹⁾ In carpal tunnel the pins and needle sensation around wrist and hand are present especially at night.⁽²⁾ The repeated activities are the main risk factors for causing wrist pain in young people. The contributing factors are the age, skeletal maturation and the level of activity.⁽³⁾ The appropriate and comprehensive physical assessment is required to diagnose and classify the wrist pain, because non-specific wrist pain is difficult to diagnose and treat.

Pain and swelling in the wrist after a trauma is a common presentation in clinical practice. The routine diagnostic work-up for acute wrist trauma consists of a physical examination.⁽⁴⁾ Wrist pain is more prevalent 16% in hand and 11% wrist among white collar workers.⁽⁵⁾ There is strong association of occupational risk factors with the musculoskeletal disorder in the workplace.^(6,7)

There is also an association of computer work and manual work with wrist pain. The prevalence of wrist pain in bankers is also reported in literature.⁽⁸⁾ Pakistan has 3 % prevalence of wrist/hand pain while 6 % in Japan and 37% in Brazil.⁽⁹⁾ In female risk factor for wrist pain is the osteoporosis which leads to the distal fracture of wrist.^{(10) (11)} The age, physical activity and other hormonal factors in females are related with the

occurrence of wrist pain. The pain in the upper limb can directly affect the daily activities. The pain in wrist is the contributing factor and results in impaired motor control and poor work performance.⁽¹²⁾ The bad posture, repetitive or overuse of wrist muscles can cause wrist pain. Work-related overload syndromes are predominantly associated with upper limbs ailment.⁽¹³⁾ Musculoskeletal and connective tissue abnormalities comprise the major disability to work related issues in females who are having wrist pain⁽¹⁴⁾. Osteoarthritis and rheumatoid arthritis which are common in females is another contributing factor of pain. Due to these the joint predisposes to the development of arthritic and degenerative changes, abnormal loading at joint and ultimately limitations in movement⁽¹⁵⁾ There are variety of risk factors contributing for the wrist pain but no study conducted in Pakistan. The purpose of this study was to determine the risk factors associated with wrist pain

METHODOLOGY

A descriptive cross sectional study was conducted with a sample of 196 patients from different hospitals of Rawalpindi and Islamabad. The study was done from 01 June 2013 to 31st December 2014. The consent was taken from



patients and was recruited through the non-probability purposive sampling technique. The diagnosed cases of wrist pain were recruited in the study and the details of associated risk factors were collected through semi-structured questionnaire in which major risk factors were mentioned. The demographic data was recorded and the descriptive analysis was done through SPSS 20.

RESULTS

The descriptive analysis shows the prevalence of wrist pain in different occupations. The sample has 131 females (66.83%) and 65 (33.17%) were males. The mean age of patients were 32 ± 6 and the majority patients 84 (42%) belong to age bracket 21-30 years and 51 (26%) were in 31-40 years.

Table 1: Descriptive analysis of wrist pain and occupation

Occupation	Frequency (%)
House wife	59 (29)
Office/desk job	51 (26)
Student	41 (20.8)
Laborer	16 (8.1)
Field Job	9 (4.6)
Others	20 (10.2)

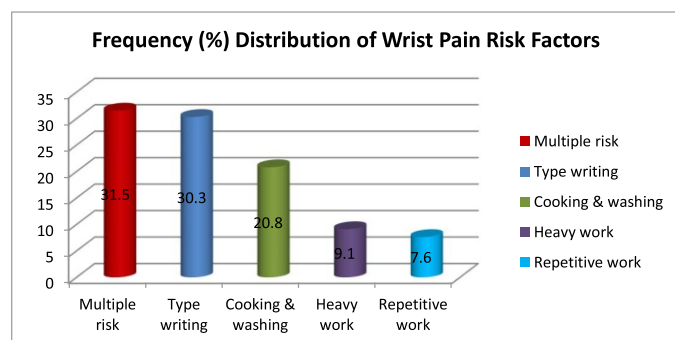


Fig 1: Frequency (%) Distribution of Wrist Pain Risk Factors

Table 2: Descriptive analysis of risk factors

Risk Factor	Frequency (%)
Multiple activities	62 (31.5)
Type writing	60 (30.3)
Cooking & washing	41 (20.8)
Heavy work	18 (9.1)
Repetitive work	15 (7.6)

DISCUSSION

The current study examined the various risk factors responsible for wrist pain. Results highlighted that more than one risk factor is highly associated with wrist pain. The type writing, cooking and washing are the leading risk factors. It is more prevalent in house wives, desk worker and students respectively. The work disability due to wrist pain is more common in hand intensive or manual workers.⁽¹⁶⁾ The routine repetitive work is also related with the muscular pain.⁽¹⁷⁾ The forearm and hand pain in different occupation is linked with the compensation of work and absenteeism from the work.⁽⁷⁾ The wrist pain after the fracture in female can cause disability and decrease the activities of daily life.⁽¹⁸⁾ The physical activity is related with the occurrence of wrist and ankle joint in females but prevent from osteoporosis.⁽¹⁹⁾ A cohort was conducted to observe the hand and wrist pain in workers.⁽²⁰⁾ The wrist pain is common in high class professional musicians and the risk of playing repetitive music.⁽²¹⁾ The kitchen activities are the contributing factors for the development of wrist and hand pain in females. The fatigue is one of the common symptoms presented by the females working on kitchen station.⁽²²⁾ The protection to the wrist and hand can prevent the prevalence of pain during repetitive manual activities.^(23, 24) The proper posture care and wrist/hand exercises are recommended in house wives and desk office workers to prevent from pain disability. Several limitations need to be considered. First, sample size was less, due to small time frame. It was descriptive study; future studies should be conducted documenting interventional strategies and public awareness about risk factors of wrist pain.

CONCLUSION

The findings of this research are noteworthy because preliminary outcome data suggest that repetitive activities are the major risk factors and wrist pain is common in the house wives and desk worker. The manual work is at high risk for the developing of hand and wrist pain.

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