

TO ANALYZE THE FREQUENCY OF DE QUERVAIN'S TENOSYNOVITIS AND ITS ASSOCIATION WITH SMARTPHONE ADDICTION AMONG COLLEGE STUDENTS**Dr. Jyothi Seshan^{*1}, Dr. Senthil Selvam², Dr. Sundaram³ and Vinitha B.⁴**¹M.P.T (Ortho), Asst. Prof in School of Physiotherapy, VISTAS, Thalambur, Chennai.²M.P.T (Ortho), Ph. D, Prof and HOD in School of Physiotherapy, VISTAS, Thalambur, Chennai.³M.P.T (Sports), Ph. D, Prof in, School of Physiotherapy VISTAS, Thalambur, Chennai.⁴B.P.T Final Year Student in School of Physiotherapy VISTAS, Thalambur, Chennai.***Corresponding Author: Dr. Jyothi Seshan**

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ABSTRACT

Background: Prolonged and frequent use of mobile phone and sms texting leads to pain in thumb and hand. primary prevention strategies have largely been confined to reduce the mobile phone usage as it will prevent the repetitive micro trauma. Recently many studies were in Dequervain's tenosynovitis due to increased usage of smart phone and texting and its results in many pathology in hand and its structure. **Aim and Objectives:** The aim of the study is to analyze the frequency of de quervain's tenosynovitis and its association with smartphone addiction among college students. **Methods:** Hundred college students were included in this study who fulfilled the inclusion criteria. The subjects were taken to observe the frequency of de quervain's tenosynovitis and its association with smartphone addiction. The outcome measure finkelstein test. **Results:** The result shows that the mean value for smartphone addiction scale (SAS) in positive- 129.92. **Conclusion:** The study observed that 75% affected with de quervain's tenosynovitis showed positive result and 25% negative result for finkelstein test.

KEYWORDS: De quervain's tenosynovitis and finkelstein test.**INTRODUCTION**

Hand is the major part which uses manipulating the objects and sensory intact and required for the performance of daily life activities.

De Quervain's tenosynovitis of thumb as a painful complain of the wrist as stenosing tenosynovitis of thumb abductors around the radiostyloid process this way defined by Fritz De Quervain's tenosynovitis.

The activities which involved the repeated thumb pinching and wrist movement can be the consequence of this painful condition. Thumb pain leads to great limitations in performing every day activities. In past few years thumb pain prevalence has been increased to many folds especially among adolescent and young adults. It can be due to some pathologic conditions, fibromyalgia, osteoarthritis, rheumatoid arthritis, deformities of thumb pain.

De Quervain's tenosynovitis is triggered by stenosing inflammation of the tendon sheath in the first dorsal compartment of wrist. Thumb pain due to overuse is the most common cause these days.

The reason is easy access and violent use of electronics, mobiles games and overuse internet leads youngsters to thumb and hand pain.

Risk factors of thumb pain can be divided into modifiable and non modifiable factors. Dequervain tenosynovitis, trauma or overuse injuries related factors, psychological causes, frequent falls leading to fractures, systemic diseases, sedentary lifestyle, poor nutrition are modifiable risk factor.

Prevention includes refrain from pain provoking activities, reduce the mobile phone use, proper alignment, use proper alignment of thumb while operating a device, exercise properly, range of motion exercise, maintain flexibility, maintain ROM and flexibility of entire limb. Treatment options to relief thumb pain include the pharmacological treatment physical therapy, psychotherapy and functional training.

Dequervain's tenosynovitis which includes an acute trauma or an extreme, unaccustomed/new exercise. adults who use their hands and thumb in repetitive manner are more likely to have Dequervain. The patients who experience progressive pain and some degree of limitation in deeds, some degree of morbidity may be accompanied with the disease considering the positive

relationship between the thumb pain and frequent text messaging were research study on this disease is insignificant to make people aware of the over usage of cell phones and excessive messaging. previous studies support the fact that text messaging can strongly be related to Dequervain's tenosynovitis.

AIM OF THE STUDY

The aim of study is the frequency of De Quervain's tenosynovitis and its association with smartphone addiction among college students.

OBJECTIVE OF THE STUDY

To assess frequency of thumb pain.
To observe nature of thumb pain.

NEED OF THE STUDY

To observe the student affected by dequervain's tenosynovitis

BACKGROUND OF THE STUDY

Prolonged and frequent use of mobile phone and sms texting leads to pain in thumb and hand. primary prevention strategies have largely been confined to reduce the mobile phone usage as it will prevent the repetitive micro trauma. Recently many studies were in Dequervain's tenosynovitis due to increased usage of smart phone and texting and its results in many pathology in hand and its structure

METHODOLOGY

Study Type: observational study

Study Duration: 4 week

Study Setting: Vel's school of physiotherapy

Study Size: 100

Sampling Method: convenient sampling

SAMPLE CRITERIA

Inclusion Criteria

- Age group 20 to 23 years
- BASED UPON SMARTPHONE ADDICTION SCALE SCORING UPTO VALUE 72.

Exclusion Criteria

- Patients with fracture in hand and wrist
- Patients with history of surgeries in hand, elbow.
- Patients with history of rheumatoid arthritis
- Patients with recent injuries in hands.
- Patients with cervical radiculopathy which radiating till hand.

Outcome Measure

- Finkelstein test
- Smartphone Addiction scale

Procedure

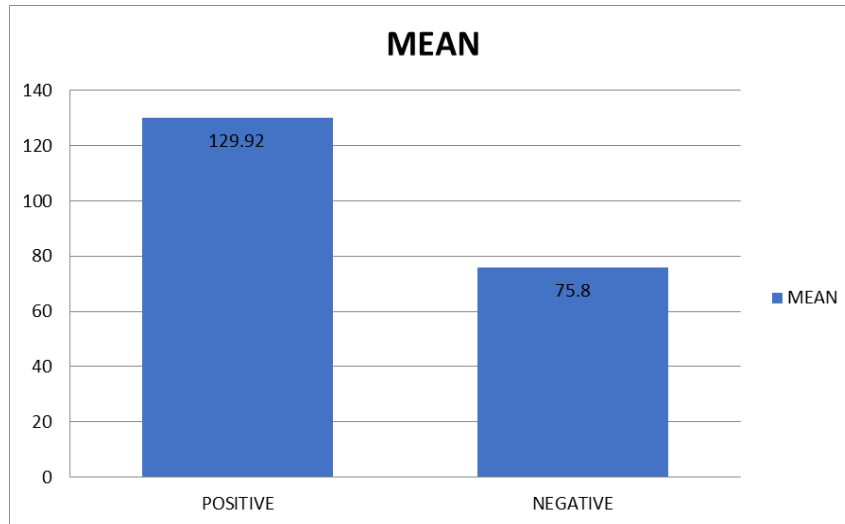
De Quervain Tenosynovitis is named after the surgeon, Fritz de Quervain, who first described it in 1895. It is a condition which involves tendon entrapment affecting the first dorsal compartment of the wrist. With this

condition thickening of the tendon sheaths around the abductor pollicis longus and extensor pollicis brevis develops where the tendons pass in through the fibro-osseous tunnel located along the radial styloid at the distal wrist. Pain is exacerbated by thumb movement and radial and ulnar deviation of the wrist. The estimated prevalence of de Quervain tenosynovitis is about 0.5% in men and 1.3% in women with peak prevalence among those in their forties and fifties. The condition may be associated with the pain or difficulty with task such as opening a jar lid. Tenderness overlying the radial styloid is usually present, and fusiform swelling in this region may also be appreciated. The provocative Finkelstein test, in which the thumb is flexed and held inside a fist, and patient actively deviates the wrist, causes sharp pain along the radial wrist at the first dorsal compartment.



DATA ANALYSIS AND INTERPRETATION

TABLE

**RESULT**

The Mean value of smartphone addiction scale(SAS) is to be found 129.92, Respectively & both p-value found to be $p < 0.0001$ in case of positive group.

The mean value of smartphone addiction scale (SAS) is to be found 75.80, Respectively & both p-value found to be $p < 0.0001$ in case of negative group.

DISCUSSION

Now a days smartphone addiction is very common among the 20 to 23 aged individuals and many of them were affected by de quervains tenosynovitis disease. In this study 100 subjects were observed for de quervains tenosynovitis and 75 subjects were affected by the de quervains tenosynovitis.

Smart phones are definitely useful in scientific era but the more than one uses it, the higher the risk of getting addicted to it, this is a preliminary study to observe the extent of smart phone usage.

Reason for high smart phone usage in our study could be because of absences of recreational and other source of entertainment. Our study did not show much of difference of high smartphone usage among girls and boys.

It has been observed that there is a constant obsession among youth of taking selfies and posting them on social media. This overuse smartphone has an effects of the psychological well being and making them psychologically addicted.

Regardless of the advantages related to smartphone like instant information on various subjects but as social networking its overuse interferes with daily life activities

It can sometimes have an effect on safety, health of an individuals and can result in functional impairment such as blurred vision and pain in the wrist.

Excessive use of smartphones can result in mental and behavioural problems.

De quervain tenosynovitis is triggered by a stenosing inflammation of tendon sheath in the dorsal compartment of the wrist and causing tingling, burning, and cramping were also observed in this study.

De quervain tenosynovitis most commonly arises due to the thumb musculature which is characterized by pain that spread over the surface of radial aspect of the wrist and intensified by ulnar deviation of the hand. The prevalence of this condition upturns with new occupational demands such as extended work at computer and athletes especially who follows a high resistance training that includes lifting weights and using hands for support maximum exertion

CONCLUSION

This study concluded that all smartphone addiction were associated with De Quervain's tenosynovitis among college students. Also studies stated as De Quervain's tenosynovitis highly associated with weakness of thumb muscles due to SMS texting more than 100 SMS per day and frequency of texting messages.

LIMITATION

The sample size was 100

The age limit was from 20-23 years

RECOMMENDATION

Further the studies can be done as a comparative study by increasing the sample size, age group can also be changed.

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