TEXT NECK: IS TEXTING GONNA REALLY COST YOUR NECK?

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ABSTRACT

Introduction: The text neck epidemic is a global phenomenon and problem faced by most of the adults with the age group of 18-22 yrs. Since now there is no specific tool for identifying the subjects suffering from text neck syndrome hence this study aims at creating a specific tool and validate on subjects with TNS. **Methodology:** *It is an observational study consists of 1000 samples (both male and females) college going students. Individual using mobile phones for more than 2-3 hours per day are included. A set of 25 closed-ended questions were taken and validated. The subjects were asked to answer the questions after which the data were analyzed.* **Results:** *Demographical data were analyzed and linear regression model was used to find out the correlation between the variables of TNS and NDI in which the r value of TNS is found to be 0.177 and r value of NDI was found to be 0.327.* **Conclusion:** *The framed TNS tool was found to be valid and used in clinical diagnosis.*

KEY WORDS

Neck pain, Text neck, Smart phones, TNS, NDI.

INTRODUCTION

"TEXT NECK" is a term used to describe the neck pain and repetitive stress injury due to use of the mobile phone in the head hung/flexed in the forward position. It is also called "turtle neck posture", as injury and pain are sustained from excessive watching and texting on handheld devices for long period of time [2].

Text neck is common in mobile device users as they frequently adopt prolong forward head posture while looking down at the electronic devices. It is a major concern with children since their heads are larger in relation to their body size, thus they are more prone to text neck according to the propensity to use mobile phones [2].

The effect of the text neck, associated with the texting and general overuse of smart devices is reflected in research, which found that people are peered down onto their smart devices for web searching, communicating and socializing for longer than 2.7 hours daily on average. [4]

In one of the survey of university students revealed that forty percent of participated faced text neck using mobile devices. Another study of a developed country in Asia found that almost all people in the Republic of Korea have smart mobile phones (97.4%), spending an estimated 4.1 hours a day on the devices while the heavy smart phone users spent even longer, reaching around 5.4 hours daily [4].

A report from public of Korea confirmed that the heavy smart phone users are affected by multiple stress on the cervical spine, and pain threshold in the muscles around the neck. According to the research conducted in Saudi Arabian female nursing students, where almost all of them own mobile phones (95.91), almost one third spent time on mobile devices longer than 3 hours daily with two fifth experienced mild headache (39.2) % which represents a correlation between visual contact and headache. [4] The usage of mobile devices were taken into account in this study. It is necessary to explore the potential correlation between health problem and students those who use smart phone. [5]

In upright posture, when the ears are aligned with the centre of your shoulders, the weight of the average head experience approximately 10-12 lbs of force through the muscles of neck, but when your head is moved forward by one inch away from this neutral position, the weight of your head dramatically increases approximately six times as much force can be generated that is the same weight as an average 8-year-old baby. If left untreated, a 'text neck' can lead to the inflammation of the neck ligaments, can irritate the nerves and increase curvature in the spine. Text neck is more common in today's generation of young adults who constantly crane their neck or bend over their electronic devices even while doing simple tasks of daily living, such as driving, eating, walking etc. [2]

Considering all the above facts and after reviewing the literature the authors propose that it is advisable to coin the condition of head and neck pain associated with mobile phone usage as mobile phone head and neck pain syndrome, when there is presence of Neck pain, Headache, Irritability, Anxiety, Lack of concentration, Straining of eyes, Insomnia, Memory problems, Depression, Itching. We also emphasize that other than the above positive signs; there should be no history of psychological, neurological and musculoskeletal disorders before the usage of cell phone [6].

Hence the aim of this study is to create a tool and validate it which will be helpful in diagnosing the patients with text neck syndrome.

The objective of this study is to analyse the subjects who are suffering from Text Neck syndrome using this tool.

METHODOLOGY

STUDY DESIGN: Observational study
SAMPLE SIZE: 1000 SAMPLES (both male & Females)
STUDY SETTING: VISTAS, Thalambur campus
INCLUSION CRITERIA

- College going students
- AGE:18-22years
- Individual using mobile phones for more than 2-3 hours per day.

EXCLUSION CRITERIA

- Cervical radiculopathy
- Cervical myelopathy
- Fracture of cervical spine
- Any surgeries in and around the cervical spine
- Whiplash injuries.

PROCEDURE

A set of 25 questions were designed according to the common complaints faced by text neck syndrome patients and this was also compared with NDI questioner and was validated by 10 senior physiotherapists. The group of 1000 samples were taken for this study. Prior to the survey, all the participants have undergone an evaluation for cervical spine and those who have fulfilled the inclusion criteria were taken for this survey in which 158 samples were excluded as they were not meeting the inclusion criteria and the written informed consent was obtained from the subjects. Then the survey was conducted among the 842 students.

The text neck syndrome questionnaire consists of closed ended questions in the form of yes or no where the participants are allowed to choose the answers accordingly and based on this the scoring is done.

RESULTS:

The current study analyses the demographic data of gender and the remaining data was analysed using the linear regression model and the correlation co efficient of both TNS and NDI was evaluated (TNS r = 0.177 and the p value was found to be 0.0001) (NDI r = 0.327 and the P value was found to be 0.0001) which is proven to be significant. The mean value and standard deviation was marked using bar diagram, and the correlation coefficient was marked using scatter plot.

Variables	MEAN	STANDARD DEVIATION	CORRELATION COEFFICIENT	P-VALUE
TNS	16.015	4.544	O.177	0.0001
NDI	33.863	15.363	0.327	0.0001

MEAN
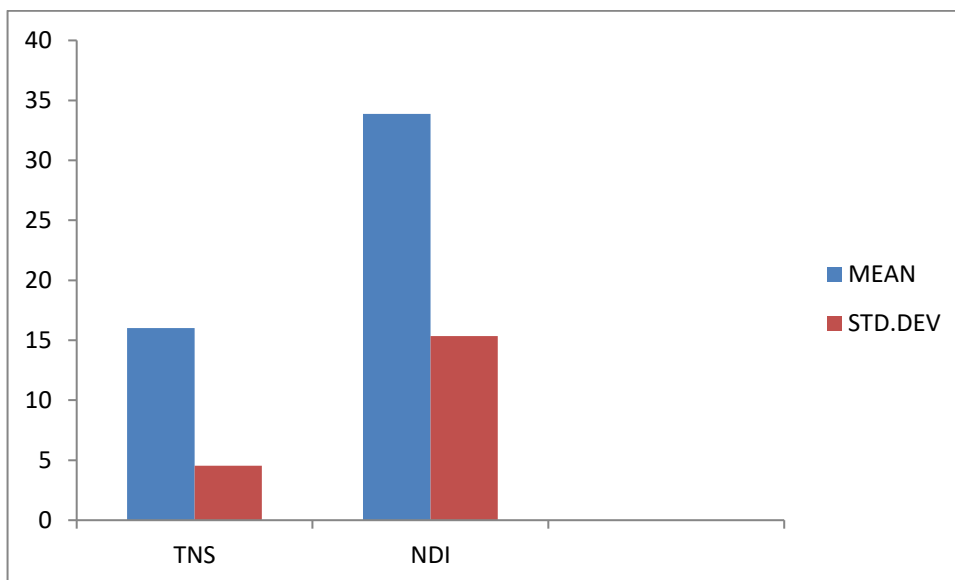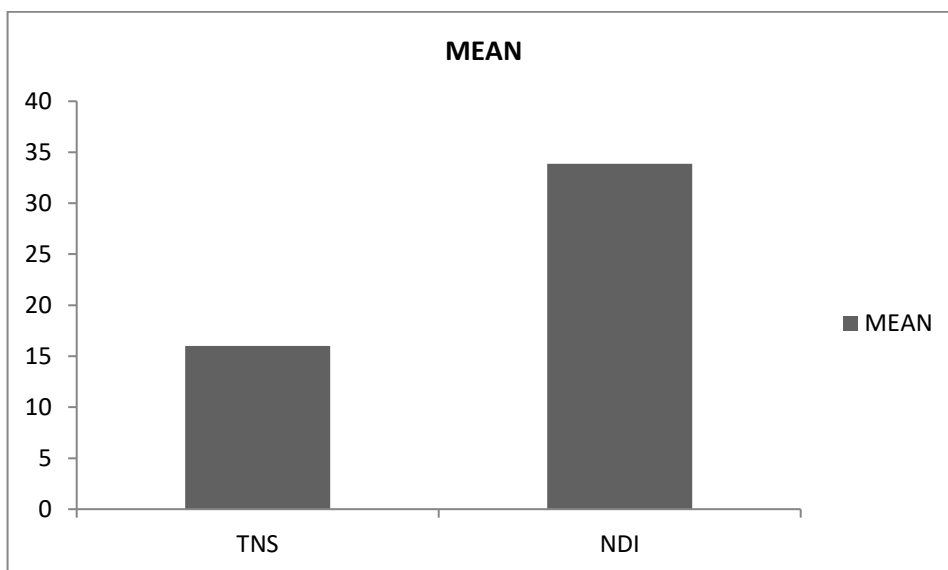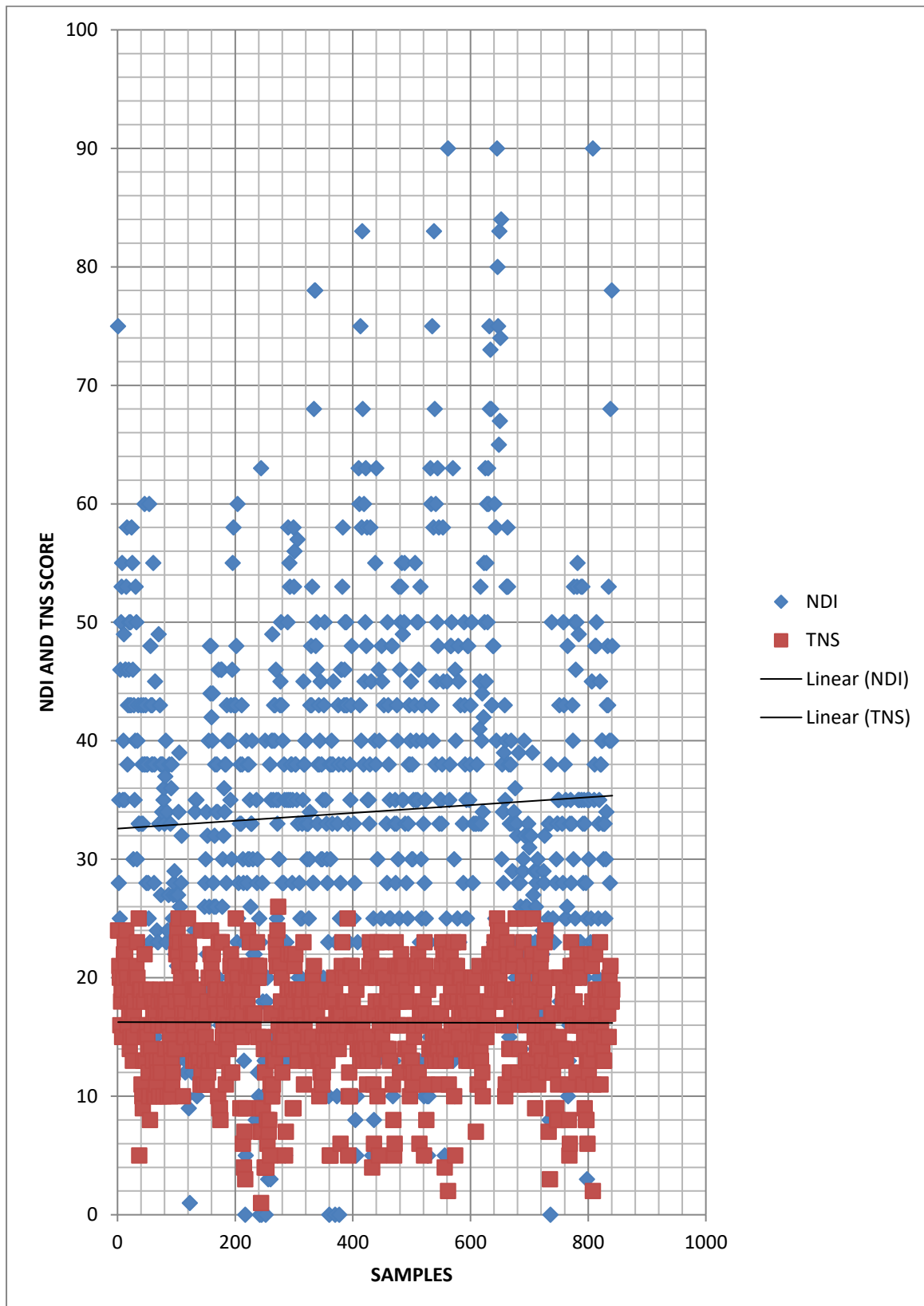
DISCUSSION

Text neck is a common painful condition of the neck & shoulder among smart phone users, using smart phone while keeping the head in forward bending position for a prolonged period affects the upper back and arm. The main symptom observed in this study was cervical pain

which was reported by most of the subjects in the TNS questionnaire.

The neck pain was associated with texting among 18-22years of old the high percentage of participants who use a mobile phone for more than 4 hours per day in our study is a considered, since the time spent on this device itself is said to be a risk factor for hand & fingers. The finding of this study reveals a high prevalence of text neck pain among the college going students.

It is also likely that a far greater number of subjects were identified as symptomatic cases in this study. Academic activities may contribute in developing neck pain, as the students include themselves in poor posture, sleeping habits, reading, writing during their lectures. This paves way for newly graduating persons to enter the workplace with prevailing neck pain and may lead to developing recurrent neck problems throughout their lifetime.

Most validations of this self-reported TNS questionnaire was based the factors influencing the symptoms of text neck pain which in turn will be useful in clinical diagnosis and also to direct the treatment to the respective areas. Relationship between neck pain and the level of its prevalence were similar for male and female. Therefore, separate analysis for both male and female were not performed.

The result of the study also reveals a significant association between the prevalence of neck pain and the degree of neck disability. This study limits itself as an observational study so future researchers can be done as an experimental study in order to strengthen the existing data and more of open ended questions with multiple choices and categorization of the values as mild, moderate and severe can be done to have a more accuracy in diagnosis.

CONCLUSION

This questionnaire was found to be a valid in analysing the subjects with text neck syndrome and can also be used in clinical diagnosis in identifying the patient's dysfunction.

TNS QUESTIONNAIRE

		YES	NO
1.	Do you use the electronic devices such as cell phones & tablets?	☐	☐
2.	Do you use mobile phones for 4 hours or more?	☐	☐
3.	Do you often use your phone for texting?	☐	☐
4.	Do you bend your neck forward often while using the phone?	☐	☐
5.	Do you have any eye irritation when you are using the gadgets?	☐	☐
6.	Do you use reading glasses?	☐	☐
7.	Do you get headache while looking at the screen?	☐	☐
8.	Do you get any dizziness or vertigo?	☐	☐
9.	Do you get frequent headaches?	☐	☐
10.	Do you have pain in the elbow or shoulder?	☐	☐
11.	Do you have any radiating pain to the digits?	☐	☐
12.	Do you have numbness in the upper limb?	☐	☐
13.	Is there any tingling sensation felt in the upper extremity?	☐	☐
14.	Do you have neck pain in the past week?	☐	☐
15.	Does the pain was lasting for more than 24 hours?	☐	☐
16.	Do you feel any neck strain or any discomfort when you get up in the morning?	☐	☐
17.	Do you have any neck pain when you use any other gadgets?	☐	☐
18.	Do you have pain during lifting up things or moving a chair?	☐	☐
19.	Do you have any difficulty in moving the head from side to side?	☐	☐

20. Do you get any neck muscle tightness often?   ☐   ☐

21. Do you have neck pain while taking notes during class?   ☐   ☐

22. Do you use mobile phone while lying in bed?   ☐   ☐

23. Do you have upper back pain?   ☐   ☐

24. Do you have any psychological stress?   ☐   ☐

25. Do you get jaw pain?   ☐   ☐

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