



TO FIND CO-RELATION BETWEEN PSYCHOLOGICAL STRESS AND NONSPECIFIC NECK PAIN IN NURSING STAFF BY USING NECK DISABILITY INDEX AND PERCEIVED STRESS SCALE.

Physiotherapy

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ABSTRACT

Background: The study aimed to find the co-relation between psychological stress and non-specific neck pain in nursing staff in both male and female with age group of 25-35 years. Any discomfort in the muscles, bones, or joints of the neck is referred to as neck discomfort. It is a frequent issue faced by the broader population and it has adverse effects on the health and well-being of the individuals. **Methods:** study investigated the correlation between psychological stress and nonspecific neck among 96 participants who met the inclusion and exclusion criteria. Participants with non-specific type of pain in neck was examined by using neck disability index and level of psychological stress was assessed by using perceived stress scale. Statistical analysis, including co-relation coefficients, was conducted to determine the relationship between the variables. **Result:** The study involved comparing the means of all variables, where analysis was done using the T test. For statistical significance, a criterion of $p > 0.05$ was established. The outcome indicates low degree positive correlation between psychological stress and non-specific neck pain. **Conclusion:** This research concluded that, based on the data analysed, there is significant correlation between psychological stress and non-specific type of neck pain.

KEYWORDS

Non-specific neck pain, psychological stress.

INTRODUCTION

Any discomfort in the muscles, bones, or joints of the neck is referred to as neck pain. It is a pain that originates in the neck and may radiate down one or both arms. It is a common problem faced by the general population and it has adverse effects on the health and well-being of the individuals. It can lead to disability and affect various communities and individuals. [1] There are large number of causes of neck pain – specific causes and nonspecific causes of neck pain such as tumours, trauma (fractures, whiplash injury), infection, inflammatory disorder and congenital disorder. Most underlying cause of neck pain is not well defined and are known as nonspecific neck pain. This group consists of patients with primarily mechanical diseases including degenerative changes and could be known as non-specific type of neck discomfort. [13] In 2019 the worldwide age standardization predominance and frequency of neck discomfort was 3551.1 and 806.6% in 100,000 (2) In 2019, the standardised national age predominance of neck discomfort ranges from 2443.9 to 6151.2 cases per 100,000 population. [2] Neck pain is a most prevalent musculoskeletal condition globally with a predominance ranging from 42 to 67% in young population. Three categories can be used to classify the risk factors for neck pain: biological, psychological, and social. Aging, gender, limited social support, psychosocial issues, and a history of neck and low back pain are some of predisposing factors for pain in neck in adults. [3] The bulk of risk factors for neck pain, according to studies, are related to psychosocial traits rather than physical traits. [3]

Stress is characterised as an internal state that can be brought on by physical pressures on the body (such as illness, physical activity, and temperature extremes) or by social and environmental factors that are viewed as unmanageable, potentially hazardous, or surpassing our capacity for coping. (Morgan et al.1993). A research conducted in India found that 87.6% of nurses reported feeling stressed, with 2.1% reporting extremely high levels of stress.

According to a different survey, 52% of nurses who experienced stress at all reported it as severe. [14] Nursing is a difficult job and their work Load can have adverse effect on health and standard of life. A study observed that employed nurses have greater level of perceived job stress that can jeopardise the physical and mental well being of nurses, reduces energy and their work performance and fails to provide proper nursing care. [7] A study suggests that neck pain is common among the

nurses and prevalence of neck pain among the nurses is 57.8%. (8)

Factors Contributing Stress For Nurses:

Patient related factors: Specific patient care scenarios have been observed to be associated with stress for nurses, such as dealing with death and dying, patient treatment, workload has been identified as common source for stress. Professional factors: such as conflicts with health care professionals and discrimination at workplace. Environmental factors: such as tiring jobs, insufficient time for rest and meals, workload. Personal factors: Age, gender, family, obligations, less experience. [14] According to recent research, psychological risk factors may have an identical effect on musculoskeletal disorders as physical risk factors. It is shown that psychiatric disorders such depression, anxiety, high level of stress can cause musculoskeletal disorders. Some studies show that people who experience frequent psychological stress are more prone to experience an increase in their muscle activity. [5] Psychological stress increases muscle tone in healthy individual, increase in muscle tone is involuntary reaction of body to stress which is protective mechanism of body against pain and injury. [6] There is plenty of description available regarding association between psychological symptoms and muscular pain.

METHODOLOGY:

Following approval by the institutional ethical committee, an observational study was initiated. The individuals were screened based on inclusion and exclusion standards. Information regarding research was given to those involved in the research. Participants signed consent was obtained after explaining the procedure. Further demographic data of subject was taken which includes name of the subject, age, gender, address, marital status, qualification and their work experience to know the basic information of the subject.

Participants were enrolled from D.Y. Patil Hospital and Research Centre Kadamwadi, Kolhapur. The study focused on nursing staff, including both male and female individuals aged between 25 and 35 years with working experience of more than 2 years 100 subjects who fit the requirements for inclusion were chosen through the use of a basic random sample technique out of which 4 were dropouts as they did not fill the questionnaire.

Methods of research

sample size: 100, sampling design: simple random sampling study

duration: 6 month ,inclusion criteria Nursing attendant who: are in age group 25-35 years both the gender, willing to take part in the research, diagnosed with nonspecific neck pain by certified practitioner, working since 2 years. exclusion criteria: Nursing staff who: have pathological neck pain, any other musculoskeletal pain, history of neck injury or surgery with neurological problems, consuming any anti-anxiety / anti-depressants were selected.

Outcome Measures

NECK DISABILITY INDEX:

It is designed to measure neck specific disability. It has 10 items questionnaire, each rated on a 5-point scale, 0 represents no discomfort and 5 represents the worst pain conceivable. 50 was the highest possible score. Score 0-14 indicates no disability, score 15 or more indicates disability. Perceived stress scale is a instrument that gauges the level of stress perceived. . It is a 10-item survey that uses a 4-point rating system (1 being never and 4 very often) to gauge how stressful you think certain situations in your life are. The result varies between 0 and 40. Low felt stress is indicated by rating between 0and 13, moderate perceived stress is indicated by rating between 14 and 26, and severe perceived stress is indicated by rating between 27 and 40.

A research study by Eun-Hyun Lee consist of reviews of 19 articles and has shown that the psychometric characteristics of the 10-item Perceived stress scale were shown to be better than those of the 14-item Perceived stress scale, while the 4-item perceived stress scale performed the poorest. The scale intrinsic consistency and dependability, validity of factorial, and validity of hypothesis were all well documented.

VAS Scale:

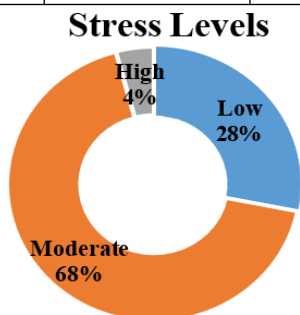
A visual analogue scale, also known as the VAS, is a 10-cm line that can be oriented horizontally or vertically. It measures pain intensity by asking patients to mark the area on the scale that corresponds to their current level of discomfort. Subjects underwent assessment for pain using the visual analogue scale on rest and activity. The nonspecific neck pain was assessed by using neck disability index, The perceived stress scale was employed to gauge the level of stress. Subsequently, a master chart was prepared, containing participant numbers, VAS on rest, VAS on activity, NDI scores, Perceives stress scale score, level of neck pain, level of stress. Statistical analysis was recorded and result was obtained. As the data followed normal distribution, all descriptive were expressed in mean and standard deviation, Tables and pie diagrams were utilised to depict the data, and MS Excel 16 software was used to evaluate the data. The T test was employed to determine the correlation of my study.

RESULTS

This observational Study was conducted for 6 months. A total 96 participants with working experience more than 2 years with complaints of pain in the neck were included in the research. Participants age ranges between 25-35 years. The data obtained in this study were analysed statistically by using the following test:

Table no. 1 Findings Related To Distribution Of NDI Scores Among The Subjects (n=96)

Neck Pain Levels	No. of participants	Percentage
Moderate	88	92%
Severe	8	8%
Total	96	100%



Graph No.2 Findings Related To Distribution Of Stress Levels Among The Subjects (n=96)

According to the data above, 8 out of the 88 individuals had severe neck pain, while 92% of the 88 individuals had moderate neck pain. This distribution underscores the prevalence of nonspecific neck pain within the sample population.

According to the statistics above, 28% of the 27 individuals showed low levels of stress, 68% of the 65 participants showed moderate levels of stress, and 4% of the 4 people showed severe levels of stress. This distribution underscores the prevalence of perceived stress within the sample population.

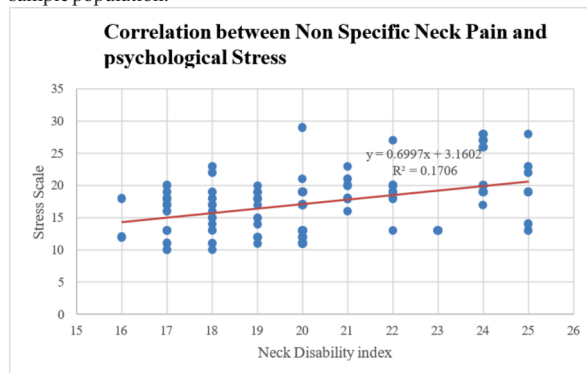


Table No. 3 Findings Related To Correlation Between The Psychological Stress And Neck Pain Among The Subjects (n=96)

Correlation Between	Correlation Coefficient (r)	t-statistic	P Value	Decision
NDI Stress Scale	0.41308	4.39766	0.00003	Significant

Analyses of the co-relationship between psychological stress and non-specific neck discomfort in 96 participants are suggested by the data above. Statistical analysis, with a p- value of 0.00003, indicates that there is low degree positive significant co-relationship between psychological stress and non-specific neck pain within this same.

DISCUSSION

The current study set out to determine the connection between psychological stress and nonspecific neck discomfort in nursing staff members. In this study, 96 subjects had participated, level of pain in neck was evaluated by neck disability index and level of psychological stress was assessed by perceived stress scale. In the current study, out of total participants (96), 28 were male, 68 were female where men represented 29.17% and female represented 70.83% respectively. According to this study, female made up more than half of the participants. The average mean age and standard deviation of participants was 28.23 and 3.06 years respectively. Mohammed S Aghamdi et.al showed similar results with median age 22.0 years respectively. [12] In the current study the mean and standard deviation of visual analogue scale score on rest was 3.41, 0.85 and on activity was 5.96 , 0.88. whereas neck disability index score was 19.96, 2.52 and perceived stress score was 17.13 ,4.27. The study showed the frequency of neck pain among nursing staff, with 92% of participants having a significant level of neck pain and 8% having a severe level of neck pain. The current study evaluated the prevalence of stress in nursing staff, finding that 28% of subjects had little stress, 68% had moderate stress, and 4% had high stress. In present study prevalence of stress among nursing staff in which 28% of participants has low level of stress, 68% of participants has moderate level of stress and 4% of participants has high level of stress. A study on the impact of stress and anxiety on neck discomfort in undergraduate physiotherapy and nursing students by Shruti H. Wankhade et al. found similar results . According to the PSS-10 scale, 84.2% of the undergraduate study participants in this study reported stress, with 60.0% reporting moderate stress and 24.2% reporting severe stress and participants in the study experienced mild to moderate level of neck discomfort, none of the participants had severe level of neck pain. In the present study, statistical 0.41308 low degree significant correlation was found between psychological stress and nonspecific neck pain within our sample population. This finding justifies the use of stress-reduction techniques in the care of patients with neck pain. Some research reported contradictory results, indicating a substantial correlation between the existence of neck pain and the degree of stress [12].

CONCLUSION

This study was conducted among nursing staff including subjects

ageing from 25 to 35 years in D.Y Patil hospital and Research institute Kolhapur, which reveals low degree positive correlation between psychological stress and nonspecific neck pain. As a result, this study supports the efficacy of stress-reduction strategies in treating neck pain. Future clinical research studies must assess the potential of stress management as an extra treatment for patients with persistent neck pain who frequently experience elevated muscle activity due to psychological stress. Future studies must also determine the benefits of psychosocial therapies in addition to examining the direction and causes of the connection between neck pain and psychological suffering like stress.

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