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ORIGINAL ARTICLE

Association of Active and Passive Coping Strategies with Neck Pain among Dentists of Lahore

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ABSTRACT

Background: Dentists are at increased risk of musculoskeletal problems due to many reasons that include stress and their posture during working time.
Aim: To determine the association between coping strategies and disabling neck pain among dentists working in different hospitals in Lahore, Pakistan.
Study Design: Cross sectional study.
Methodology: non-probability consecutive sampling was undertaken among 134 dentists employed at various hospitals in Lahore. To identify the coping mechanisms, we employed the Vanderbilt Pain Management Inventory and the Visual Analog Scale for Chronic Pain. Data was evaluated by using SPSS version 23. The Chi-square test was used to determine the association of coping strategies and neck pain.
Results: In the study sample of 134 responders, 111 people experienced significant neck pain. The emergence of incapacitating neck pain was substantially correlated with passive coping. **Conclusion**: It was concluded that severe neck pain was strongly associated with passive coping strategies.
Key words: Coping, Disabling Neck Pain and Dentistry.

INTRODUCTION

Literature reports that dentists are at increased risk of musculoskeletal problems. Many causes of this issue have been reported. Among these causes are the stress and posture of the dentist during working time[1]. Like other health care professionals, musculoskeletal problems have been reported many times among dental professionals[2]. Due to the work environment of dentists, they have a probability of developing many work-related issues, such as back and neck pain. Along with other musculoskeletal problems, neck pain is the most common issue.[3,4] During their lifetime, around 70% of the population reported neck pain[5,6]. Financial loss is also registered with musculoskeletal disorders; in the United States, 41 million US dollars is lost due to musculoskeletal disorders. In Pakistan, the prevalence of neck pain is alarmingly high, i.e., 96%. This worryingly high percentage is also present in other parts of the world, such as Denmark, 65%, Saudi Arabia, 65%, and Australia, 57.5%[7]. A study shows that around 88% of dentists at least report one symptom of musculoskeletal disorder during their entire lifetime. Numerous factors are labeled in the literature responsible for causing this pain. Among these factors are the working posture of dentists, lack of equipment, and working in the oral cavity with attention and precision[1,8].

The term "coping" refers to behavioral and cognitive attempts to control (or "Master" "Reduce," or "Tolerate") a problematic person-environment interaction[9]. The patient's psychological and physical health are impacted by their coping mechanisms. These numerous initiatives range from general approaches like cognitive-behavioral therapy and other self-management programs created to assist patients in managing a wide range of pain-related issues to specialized techniques designed to control the sensory intensity of a discrete episode of pain.

Coping has been broken down into several different categories. "Active coping" versus "passive coping" is an often-used dichotomy to describe methods for managing pain or carrying on with daily activities despite pain (withdrawing and surrendering control over pain). Less somatic symptoms, psychological comorbidities, and discomfort have consistently been associated with active coping (such as acceptance)[10].

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Catastrophizing is a passive coping mechanism that has three main components: "Magnification," "Helplessness," and "Rumination." It can be considered an overly pessimistic perspective on the pain that causes anxiety, discomfort, worrying, and helplessness. Catastrophizing, or passive coping tactics, can have detrimental effects through various mechanisms, such as making symptoms worse[11].

The objective of the study was to determine the association between coping strategies and disabling neck pain among dentists working in different hospitals in Lahore, Pakistan.

METHODOLOGY

There was a total of 134 participants in this study. Any history of neck or lower back injuries or fractures, osteoporosis, rheumatoid arthritis, any history of cancer, recent back and neck surgery, pregnancy, systemic illness, or congenital musculoskeletal conditions were all considered as the exclusion criteria. Approval was granted by the Institutional Ethical Review Committee.

The visual analog scale was used to assess chronic pain levels[12,13]. The visual analog scale (VAS) is a standard instrument for quantifying pain. A participant is asked to rate the intensity of their experienced pain along a horizontal line of 10cm, and this rating is then calculated from the left edge (=VAS score). Scores between 1 and 10. Pain levels of 1-3 are classified as Mild, 4-6 as Moderate, and 7–10 as Severe.

To identify the coping style, the Vanderbilt Pain Management Inventory (PMI), a quick evaluation of active and passive coping that has shown excellent reliability and validity, was employed[14]. The passive coping scale and the active coping scale are two scales. The internal consistency of these two 18-item active and passive coping measures, with Cronbach alphas of 0.64 and 0.69, is sufficient[15]. The PMI active and passive coping scales have shown adequate reliability and validity.[16] Passive and active coping scales are further divided into three categories based on their score which are Low (score 1-12), Moderate (12-24) and High (24–36).

Statistical analysis: SPSS version 23 analyzed data. Mean±SD was given for numeric data. Frequency and percentage were given for categorical data. Chi-square test was applied with p-value ≤0.05 was considered significant.

RESULTS

Participants had a mean age of 32.0±4.4. Among 134 participants, there were 55(41%) males and 79(59%) females. Out of 134, 89(66.4%) participants were married. Of the 134 participants, 111(82.8%) reported severe pain, and 16(11.9%) reported moderate pain. The severe chronic pain was significantly associated with passive coping. The high levels of passive coping significantly associated with the people who experiencing severe pain. Active coping was not associated with high levels of neck pain. People who expressed a high level of passive coping were more likely to experience severe pain as shown in table-1.

Table-1: Relationship of Coping Strategies and Pain Intensity

Coping Strategies	Status	Pain Intensity			p-value
		Mild	Moderate	Severe	
Active Coping	Low	7(5.6%)	13(10.4%)	105(84%)	0.143
	Moderate	0 (0%)	3 (33.3%)	6 (66.7%)	
	High	-	-	-	
Passive coping	Low	-	-	-	< 0.001*
	Moderate	7(30.4%)	16(69.6%)	0 (0.0%)	
	High	0 (0.0%)	0 (0.0%)	111(100%)	

*Significant

DISCUSSION

The likelihood that people in the general population may become disabled by their pain increases dramatically when passive coping methods are used to treat non-disabling neck pain.[17] Comparatively to low levels of sedentary coping behavior, using moderate to high levels of passive coping techniques significantly increases the likelihood of debilitating pain. This is irrespective of baseline pain intensity, degree of active coping, demographic, socioeconomic, or health-related characteristics. The current study's findings are consistent with earlier literature, which previously showed that passive coping is maladaptive[18].

Even when other significant risk factors are under control, the high association between passive coping and incapacitating pain has significant therapeutic ramifications. Passive coping is identified as a signal for disability risk in this significant association. This enables the identification of those at risk and require help from others to help them adjust more generally. The passive coping test used in the current study is quick and straightforward to administer to people in pain, which can assist in identifying those who are more at risk[19]. To help people with pain and those who support them recognize these unhelpful coping mechanisms and seek care, it may also be vital to educate the public about the link between passive coping and the emergence of disabling pain.

Strategies to reduce passive coping may benefit public health given the prevalence of chronic pain in society. The findings of the present investigation support the idea that passive coping contributes to the emergence of incapacitating pain. These findings point to the necessity of encouraging pain sufferers to employ these tactics less frequently[20]. Current rehabilitation practices promote the adoption of active coping strategies.

But given the significant association between passive coping and impairment found in the current study, it's possible that controlling passive coping techniques will play a significant role in treatment plans. It may also be helpful to educate people experiencing pain so they can learn to recognize harmful coping mechanisms and how to use them less frequently. Programs that expressly target reducing passive coping strategies may need to be developed if future research shows that teaching people to reduce their reliance on these coping mechanisms improves their pain and functioning[21]. Development of pain impairment and active coping were not related in the current study.

In literature, mixed results have been reported on the correlation of active coping strategies with different types of pain. Active coping strategies can result in both positive as well as negative effects. These mixed results may be the result of diversity in coping strategies. Literature reports that individuals with increased physical activity and with optimistic thoughts have more positive outcomes in comparison with the individuals who lay focus on denial of pain or distractions[22].

Because these methods were integrated into one measurement, there might not be a correlation or inconsistent results. It is necessary to conduct additional research on how well more unified, uniform coping mechanisms work and how they affect adjustment[23]. Given the importance put on improving active coping in many rehabilitation programs, these and other possible explanations for the lack of a consistent connection between active coping and the appearance of incapacitating pain need to be investigated.

Limitations: Long term follow up could not be completed. Limited resources with financial issues were faced.

CONCLUSION

It was concluded that severe neck pain was strongly correlated with passive coping strategies.

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