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From: Priyanka Patel, Student of ENGL 301

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Subject: Proposal for preventing musculoskeletal disorder (MSD) in Dental Hygienists at Beddington Dental

**Location of Study**

The study is planned to happen at Beddington Dental in Calgary for Dental hygienists.

**Introduction**

Dental hygienists as well as other dental professionals are required to work with high attention and concentration which often requires working in awkward positions, putting stress on their neck and upper back, as well as keeping arms outstreched for prolonged periods and repeated movements. Dental professionals along with other health care professionals face variety of work-related hazards including musculoskeletal disorder (MSD), eye injuries, vibration induced neuropathy and psychological nature. Out of which MSD is considered as one of the significant diseases amongst many health professionals. This study will help evaluate the risk of MSD involved in dental hygienists working at Beddington dental. This in turn will help learn about prevention factors which can be further used by all other dental hygienists.

**Statement of Problem**

According to world health organization (WHO), MSDs are considered work-related if they are induced by work related activities and exacerbation. (1) Work-related Musculoskeletal Disorders (WMSDs) has been reported as much as 48%, the most common work-related injury across the world. MSD injuries involve muscles, joints, cartilages, Nerves, ligaments and vertebral column. MSDs in dental professionals are a result of uncomfortable working position with posture stress on head and back, prolonged procedures and psychological stress. Inappropriate working posture leads to increased fatigue, decreased work efficiency and high risk of musculoskeletal injuries. Perhaps improvement in ergonomic positions may help reduce MSD.

**Proposed Solution**

Workplace related interventions can help control MSD and reduce the stress in dental professionals. Moreover, looking into increasing individual’s capacity to handle work related physical and psychological stress can help control symptoms of MSD. It has been reported that physical, social, and psychological environment ameliorate some of the occupational factors affecting the health of dental hygienists.

Increased emphasis on occupational health and prevention through ergonomics, improvement in work setting and work relations, alternate between sitting and standing, individual risk assessment, active life-style, yoga, wearing loupes, relieving trigger points, and social satisfaction may help dental hygienists balance some of these factors to prevent Musculoskeletal disorders (MSD).

**Scope**

It has been reported that physical, psychological and social environment ameliorate some of the occupational factors affecting the health of dental hygienists.

* Identify the type of physical factors affecting the health of dental hygienists.
  + Awkward work ergonomics:
* Is the operator chair user friendly with required range of adjustments to work?
* Is the operator room spacious to allow the operator to move freely and not in awkward position?
* Is there enough lighting/ visual ergonomics?
* Are dental instruments in good shape/sharpened regularly or replaced as needed?
* Identify the type of psychological factors
* How is the work environment?
* Is there control over client scheduling?
* Is there time pressure or lack of control?
* Is the dental hygienist working in multiple offices?
* Is there medical and other work benefit provided?
* Identify the type of social factors
* How is the job satisfaction?
* Is there enough work recognition?

**Methods**

I will assess various factors through survey from dental hygienists working at the office. These factors will include questions on:

* Ergonomics
* Improvement in work setting and work relations
* Alternate between standing and sitting while working
* Individual risk assessment
* Active life style
* Wearing loupes
* Checking trigger points
* Yoga
* Social satisfaction

**My Qualifications**

I have been working in dental profession for over eight years and practicing as a registered dental hygienist for over five years. Over the years I have learned that dental profession especially dental hygiene can take a toll on the physical health over time. And I feel that risk of chronic injuries can be reduced with increase in awareness and proper care.

**Conclusion**

MSD in dental hygienists has been multi-factorial, hence it requires a solution which is multifactorial as well. With available resources, one can look at the problem from different angles and manage it effectively using a multifaceted approach. This report will focus on identifying key factors that can help prevent work related injuries in dental hygienists to avoid MSD. I look forward to doing further research with your approval.

**References:**

1. ZakerJafari H, YektaKooshali M. Work-Related Musculoskeletal Disorders in Iranian Dentists: A Systematic Review and Meta-analysis. Saf Health Work. 2018;9(1):1-9.