To: Dr. Paterson

From: Samantha Teeple

Date: July 22, 2022

Subject: Proposal for

**Introduction:**

Dental office personnel are at increased risk for musculoskeletal disorders (MSDs) and pain. MSDs are a prevalent occupational hazard associated with dental office personnel that usually requires time off from work or an early exit from the profession. Yearly there is a 78% prevalence of MSDs in these workers, with some conditions being acute and others chronic with a higher propensity for the latter.

These MSDs are common in the neck, shoulders, lower back, upper back, and hands/wrists. These injuries are more prevalent due to the posturing of dental office staff throughout dental procedures, where they adopt awkward body positions, use repetitive movements, carry-out treatments for a long duration and use instruments that cause constant vibrations.

**Statement of the Problem:**

These very common MSDs in the dental workplace cause workplace dissatisfaction, time away from work, or early exit from the profession. The implications are one: dissatisfied staff due to injuries that need time off work, and two: daily activities are causing these injuries.

**Proposed Solution:**

One possibility to prevent the early onset of MSDs in dental staff is implementing ergonomic interventions into routine practice. The easiest to adopt is postural awareness and adaption of varied postural techniques. These postural techniques include: varying sitting and standing, watching the alignment of the back to prevent curving, adjusting the dental chair ergonomically, avoiding constant postures, proper client positioning in the dental chair, ensuring feet are parallel to the floor, and preventing twisting of the torso.

**Scope:**

My goal is to identify why dental office personnel report high incidences of musculoskeletal disorders, examine the causal relationships of injuries and determine prevention strategies for workers.

**Methods:**

My primary data resources will include interviews and surveys of dental office staff about MSDs currently or past six months with on-site observations of bodily positioning without photos due to client confidentiality.

Secondary sources will include three publications one meta-analysis, one systematic review and one article by the dental research journal on MSDs and prevention.

**My Qualifications:**

I have been well trained in my dental hygiene schooling to complete proper research, emphasizing the quality of the research articles and critical thinking of weaknesses in the studies. I am confident that the meta-analysis will give insight into this causal issue.

**Conclusion:**

Clear identification of individual problem areas for MSDs to dental staff is needed to determine how to select appropriate intervention strategies for long-term health and longevity in the dental field. With your approval, I will begin my research.