**No: 14093 Date: 18 June 2020**

**RESEARCH PROPOSAL TEMPLATE**

**Title (not to exceed 50 words):**

**Dental caries and sealant prevalence in children and adolescents in Peshawar Pakistan.**

**Name of Candidate (s): Ghazala**

**Name of Supervisor: Dr. Attuallah**

**Co-Supervisors:**

1. **Dr. Attuallah**

**Duration of Project: 6 month after approval**

**Department: Allied health sciences**

**Name & Signature of Student/Scholar: Ghazala**

**Name & Signature of the Supervisor: Dr. Attuallah**

**Name & Signature of Department Chairman: Dr. Imran**

**1. TITLE: (not to exceed 50 words):** Should reflect objective of the study.

Dental caries and sealant prevalence in children and adolescents in Peshawar Pakistan.

**2. INTRODUCTION:** (must include problem statement, background information and rationale 250-300 words)

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| Dental caries is, by far, the most common chronic disease affecting children and adolescents in the United States.1 It is a multifactorial, transmissible disease that involves dissolution of mineralized tooth structure by acids produced by dental plaque bacteria.2 Untreated dental caries can result in pain, infection, impaired oral function, and other personal and population problems.  Dental caries prevention in children and adolescents involves a range of population- and individual-level strategies that may include oral health education, community water fluoridation, and topical fluorides such as fluoride varnish, dental sealants, antibacterial rinses, and dietary interventions. Other than community water fluoridation,3 the community-based prevention strategies best supported by evidence and feasibility are dental sealants and fluoride varnish application. A dental sealant is an effective method for preventing dental caries in which plastic like coatings are bonded to the occlusal (chewing) surfaces of permanent molars, the sites most susceptible to dental caries.   World Health Organization (WHO) in 2000 had a global goal for dental caries of no more than an average of 3 DMFT (decayed, missing, filled teeth) at 12 years of age.3 WHO developed oral disease observation systems to monitor dental caries in children at 12-year in 1969. 3 Dental caries prevalence in developed countries has declined in the early 1970s.In 2007 the WHO reported that 60-90% of school children worldwide have dental caries6. Dental care remains a significant economic problem in developing countries and has been a major public health challenge. In 1997, 22.7% of Indian population was estimated to be 5-14 yrs.7 Dental caries has increased in prevalence and severity in urban and rural areas and there has been minimum data of exact prevalence in India, Iran and Bangladesh. In Pakistan, a few studies have been carried out on oral health. A DMFT value of 0.8 was observed between 12-15 years old children in Multan. This study aimed to investigated the prevalence of dental caries among school school going children 10-17 years in Peshawar Pakistan.     . |

**3. OBJECTIVE(S):** (must be stated in measurable terms and starting with an action verb)

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| To determine dental caries and sealant prevalence in children and adolescents in Peshawar Pakistan. |

**5. HYPOTHESIS:** (**If required**): (only the alternate hypothesis must be clearly stated aligned with objective)

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**6. Materials and Methods**

**6a. Study Design**

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| Cross sectional study |

**6b. Study Settings**

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| The study will be conducted in both government and private schools at Peshawar Pakistan. |

**6c. Study Duration**

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| The study will be complete within 6 month after approval of proposal.de |

**6d. Sample Size:** (with justification of its calculations and reference used):

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| Sample size is ---- it is calculated by Raosoft sample size calculator with following assumptions.  Total population is ---- from 4 to 10 class in Peshawar Pakistan with margin error 5% and 95% confidence interval. |

**6e. Sampling Technique**

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| Non-probability purposive sampling will be used to recruit the study participate. |

**7. SAMPLE SELECTION**

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| **7a. Inclusion Criteria:** (What type of subjects or material is to be included in the study)   * School children and adolescents aged 10-17 years * School children and adolescent who were residents in Peshawar * Both male and female |

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| **7b. Exclusion Criteria:** (What type of subjects or material is to be excluded from the study and why excluded)   * Individual suffering from systemic illness * Individual who were not willing to participate in the study * Individual with orthodontics brackets and severe extrinsic stains of their teeth. |

**8. DATA COLLECTION PROCEDURE:** (Detailed inclusion of subjects and data collection plan, including briefs about laboratory procedures, surgeries etc. Must clearly explain how the researcher will flow his data collection plan right from start till finishing the follow up on subjects or material.

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| Prior permission and consents were obtained from school authorities. A self-administrated questionnaire was filled, and oral consent from the participated was taken before the study. Different questions were asked of the students, they were asked by the examiner and also examined the oral cavity by the examiner. |

**9. DATA ANALYSIS PROCEDURE:** Detailed description of type of analysis plan according to type of variables and study design, statistical tests (if required), stratification of confounders/effect modifiers, presentation of results etc must be clearly mentioned.

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| The statistical analysis was performed using SPSS version 23. The mean and standard deviation of scores were calculated, comparison between private and government schools Children and adolescent was done using chi-square test, probability of 0.05 was considered as satistically significant. |

**10. REFERENCES:** In Vancouver style.

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4. Azarpazhooh A, Main PA. Pit and fissure sealants in the prevention of dental caries in children and adolescents: a systematic review. J Can Dent Assoc. 2008;74:171–177.

5. Office of the Surgeon General: [http://www.surgeon general.gov/library/oralhealth/]webcite Oral Health 2000: Facts and Figures. Accessed on February 20, 2011.

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