

Early Detection of Oral Cancer Through Dental Practice in Jazan Region of Saudi Arabia

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SUMMARY

Summary

Oral cancer is the eighth most common cancer, with high mortality rates worldwide. In this dissertation, the general term 'oral cancer' is comparable to the World Health Organization's reporting on dental public health matters. It also provides a broader scope for the disease burden, whereby the findings could be used by different health professions, such as oral healthcare providers, health promoters, health policymakers and others. The consequences of oral cancer exert a heavy burden on people's oral, systemic, mental and social health. Comprehensive treatments for oral cancer frequently result in inevitable permanent disability and facial disfigurement. The existing threat of oral cancer in the Jazan region (35% of all cases in Saudi Arabia) necessitates an innovative approach to the problem. Among the different groups involved in the problem, the important role of dentists in tackling oral cancer is recognized in the evidence. Dentists are the frontline key to fostering preventative efforts for oral cancer – they can actively engage in preventing, educating, and screening for oral cancer, and hence are able to detect the disease at an early stage.

This dissertation was prepared using the Intervention Mapping approach. The general aim was to develop a comprehensive intervention that aids in enhancing the prevention and early detection of oral cancer in Jazan Dental School (JDS). Upon analyzing the possible contributing factors to the late diagnosis of oral cancer in Jazan, an underlying behavior that usually remains overlooked when addressing oral cancer issues came to light: dentists' behavior regarding oral cancer. The health approach, which solely attributes the responsibility for oral cancer to the patient, has made many dental researchers miss dentists' accountability for the problem, which is embodied in the dentists' passive behavior toward oral cancer examination practices, patient education and counseling. Therefore, the role played by dentists to tackle oral cancer in the Jazan region was carefully evaluated in different ways in this dissertation.

The first chapter of this dissertation provides an overview of the state of oral cancer globally as well as locally in the Jazan region. It also discusses the importance of the early detection of oral cancer and the role of dentists. Furthermore, it also describes the possible risk factors/behaviors associated with oral cancer detection and diagnosis, as discussed in the literature. The chapter sheds light on different intervention approaches for oral cancer, in terms of prevention or treatments, their usefulness in tackling oral cancer and how it will fit with Saudi Arabia's new vision for public health by 2030. In addition, the chapter outlines the theoretical framework for this dissertation and the reasoning behind the choices made.

The studies in the first part of this dissertation (Chapters 2 to 4) focus on dentists' knowledge, beliefs and perceptions, and actual practice of oral cancer examinations. The first study shows that dentists have adequate oral cancer knowledge in general,

but that more emphasis on local issues relating to oral cancer in Jazan needs to be considered in the dental curriculum (Chapter 2). Upon assessing their beliefs, opinions and perceived barriers in relation to oral cancer and its practice in Jazan, dentists share favorable perceptions, but they revealed their lack of experience, confidence and capabilities to perform oral cancer examination practices (Chapter 3). The stress of the clinical requirements and the time available to finish the required dental clinical cases are believed to be barriers for paying attention to oral cancer examination practices. Non-concordance of patients and dentists by gender is also perceived as a barrier for Saudi dentists. The study's findings reveal a passive subjective norm at Jazan Dental School (JDS) related to oral cancer practices, both injunctive and descriptive, and how this passive norm influences students' behavior. Furthermore, dentists emphasize their need for training on patient communication skills. The third study confirms dentists' passive behavior in real clinical settings with patients, in which the majority of dentists failed to perform oral cancer examination practices irrespective of their knowledge (Chapter 4). This chapter also identifies a lack of experience, self-efficacy and skills, as the major factors that are commonly observed in dentists' passive behavior.

In the second part of this dissertation (Chapter 5), patients' related factors were explored and assessed in an exploratory sequential mixed methods study design, which included a qualitative phase, an instrument development phase and a quantitative phase. Dental patients share positive beliefs toward oral cancer examination and articulate the need for oral cancer examinations and education as an essential component in routine dental practice. Patients' beliefs were assessed among a larger sample of dental patients and this further confirmed the results of the qualitative study. The chapter demonstrates that patients have an adequate level of knowledge in relation to oral cancer but lack the knowledge and skills to perform oral cancer self-examinations. Furthermore, the findings provide another confirmation of the third study, of which the results show that dentists are not informing patients about oral cancer, not educating, and not performing oral cancer examination practices. The findings clearly reflect the missed opportunities for preventing or detecting the disease at its early stages because of dentists' passive practice of oral cancer examination. In contrast with dentists' beliefs, patients do not consider dentist/patient gender as a barrier for performing oral cancer practices.

The main outcome of this dissertation is the ISAC intervention (Chapter 6). This dissertation took the initiative to address oral cancer and its risk factors in the Jazan region, by engaging stakeholders, oral healthcare providers and the patient population in the development of this intervention. As a result, the developed intervention (ISAC) aims for a comprehensive oral cancer practice at Jazan University by preparing its dental graduates to perform full oral cancer clinical examinations and by providing patient education. The ISAC intervention emphasizes the four pillars that were found to be deficient among dentists

as the following: I to *inform* (verbally and documentation) about oral cancer examinations; S *screening* which has two parts: thorough history-taking and meticulous screening according to guidelines; A to *advise* patients at high risk, using tailored health messages and health communication principles; and C to *connect* patients to specialized centers, and tobacco users to tobacco-cessation services. The ISAC intervention at JDS will target dental interns and will be delivered by the Community Dentistry Division faculties in the form of workshops composed of didactic and practical components. Chapter 6 of this dissertation provides a detailed description of how the ISAC intervention was developed, along with a proposed implementation plan.

The last part in this dissertation (Chapter 7) discusses the major results of the different studies, the methodological considerations, the implications of the research findings for practice as well as possible avenues for future research.