

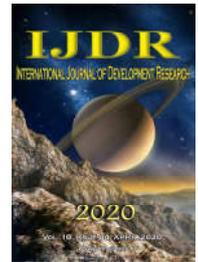


ISSN: 2230-9926

Available online at <http://www.journalijdr.com>

# IJDR

*International Journal of Development Research*  
Vol. 10, Issue, 04, pp. 35022-35025, April, 2020



RESEARCH ARTICLE

OPEN ACCESS

## THE IMPORTANCE OF EARLY DIAGNOSIS AND SELF-EXAMINATION IN ORAL CANCER: A SYSTEMATIC REVIEW

Tatielle da Silva Miranda<sup>1</sup>, Letícia Gomes de Moraes<sup>1</sup>, Idiberto José Zotarelli Filho\*<sup>2</sup>  
and Leandro Moreira Tempest<sup>1,2</sup>

<sup>1</sup>Unorp - University Center North Paulista - São José do Rio Preto - SP, Brazil; <sup>2</sup>Unipos - Post Graduate and Continuing Education, Street Ipiranga, 3460, São José do Rio Preto SP, Brazil 15020-040

### ARTICLE INFO

#### Article History:

Received 08<sup>th</sup> January, 2020

Received in revised form

21<sup>st</sup> February, 2020

Accepted 11<sup>th</sup> March, 2020

Published online 29<sup>th</sup> April, 2020

#### Key Words:

Oral cancer. Prevention. Early diagnosis.  
Self-exam. Epidemiology.

\*Corresponding author: *Idiberto José Zotarelli Filho*,

### ABSTRACT

**Introduction:** The impact of oral cancer (OC) on patients, their families, and the community is high, with severe morbidity and mortality. The most common types are squamous cell, squamous cell, and squamous cell carcinoma, which correspond to 90% to 95% of oral cancer cases. **Objective:** To discuss through a systematic review the profile of patients diagnosed and susceptible to oral cancer, as well as to present the main results of clinical studies in the context of prevention, early diagnosis, and self-examination. **Methods:** A total of 35 studies were submitted for eligibility analysis and then 20 studies were selected following the PRISMA systematic review rules. The search strategy was performed at PubMed, Embase, Ovid and Cochrane libraries, Web of Science, ScienceDirect Journal (Elsevier), Scopus (Elsevier), OneFile (Gale). **Major considerations:** It can be concluded that oral self-examination was more prevalent among the elderly who did not have consequent impacts of oral disorders, possibly because the elderly who positively perceive their oral health condition actually presents a good oral health condition by adopting preventive measures. , among them the oral self-examination. However, it is known that self-perception of oral health, one of the components of quality of life, refers to a subjective experience of the individual about their functional, social and psychological well-being. It may be that the positive self-perception of oral health conditions among the elderly with negative health conditions is a consequence of the resignation and or conformation of these elderly with aging.

Copyright © 2020, Tatielle da Silva Miranda et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Citation: Tatielle da Silva Miranda, Letícia Gomes de Moraes, Idiberto José Zotarelli Filho and Leandro Moreira Tempest. "The importance of early diagnosis and self-examination in oral cancer: A systematic review", *International Journal of Development Research*, 10, (04), 35022-35025.

### INTRODUCTION

The impact of oral cancer (OC) on patients, their families, and the community is high, with severe morbidity and mortality. The most common types are squamous cell, squamous cell, and squamous cell carcinoma, which correspond to 90% to 95% of cases. from oral cancer (Ghani, 2019). Its incidence and prevalence due to predictors such as tobacco use, excessive alcohol intake and other drugs (Astekar, 2018). The OC may appear as white, red, ulcerated or proliferative lesions or swellings, and may also be preceded by potentially malignant disorders. The rate of malignant transformation may range from less than 1% to 36% higher (Silva, 2018). These rates may be due to factors such as differences in follow-up times and risk habits inherent in each population.

In this sense, the OC that is associated with 5-year survival is less than 50%, largely attributed to advanced stage diagnostics (Saintrain, 2018). In this context, OC awareness is low, especially in terms of knowledge of signs and symptoms (Hassona, 2018). In addition, as pain associated with OC manifests only late, delayed detection usually occurs leading to advanced disease. The prognosis of patients may show significant improvement when detected early (Hassona, 2018). In addition, it has been analyzed that screening helps in detecting early-stage OC (Cruz-Moreira, 2017). Screening of the oral cavity of asymptomatic and high-risk individuals may lead to OC identified at stages significantly earlier than symptomatic patients (Jornet, 2015). In addition, screening can reduce OC mortality by 34% (Clark, 2014). Still, oral self-examination is relatively fast, inexpensive and simple to perform. However, there is little scientific evidence on the

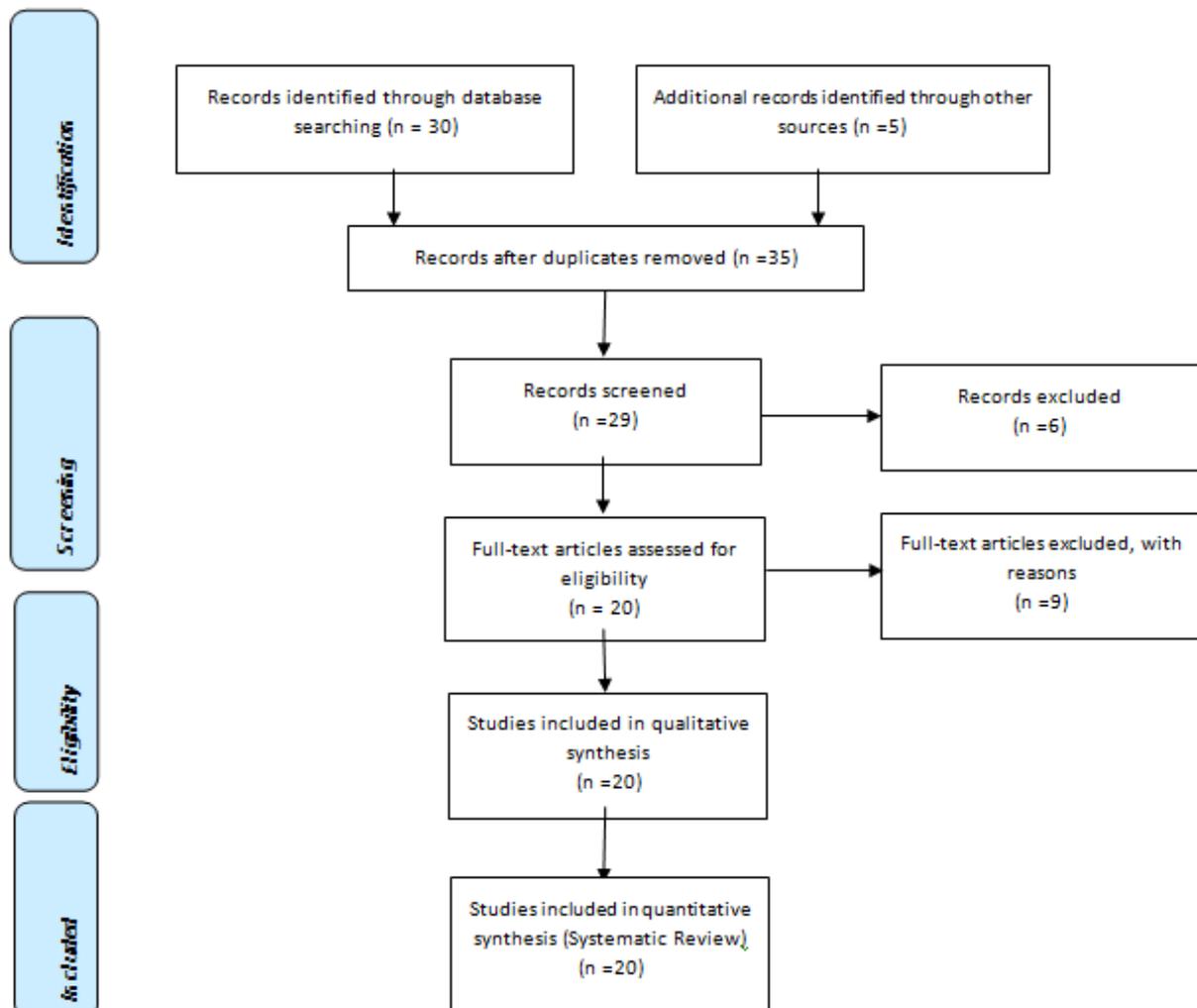
efficacy of AEB as a diagnostic or screening tool with only four studies published so far, reporting variable rates of sensitivity and specificity (Elango, 2011). The diagnostic accuracy of the oral self-examination needs to be established first before advocating it as a potential screening tool for early detection (Furquim, 2014 and Pivovar, 2017). Therefore, considering the importance of prevention and early diagnosis of oral cancer, this study aimed to discuss through a systematic review the profile of patients diagnosed and susceptible to oral cancer, as well as to present the main results of studies. in the context of prevention, early diagnosis, and self-examination.

## METHODS

**Eligibility and Study Design:** A total of 35 studies submitted for eligibility analysis were checked and then 20 studies were selected following the systematic review rules-PRISMA (Transparent Report of Systematic Reviews and meta-analysis-<http://www.prisma-statement.org/>).

**Research strategy and information sources:** The search strategy was performed at the PubMed, Embase, Ovid and Cochrane libraries, Web of Science, ScienceDirect Journal (Elsevier), Scopus (Elsevier), OneFile (Gale) and followed the following steps: - MeSH Terms search: Oral cancer, Prevention, Early Diagnosis, Self-Examination, Epidemiology, and Use of Bouleans "and" between the MeSH Terms and "or" between historical findings.

### Flow chart



## LITERATURE REVIEW AND DISCUSSION

The literature shows that most patients with oral cancer had the late-stage disease due to late diagnosis (Scott, 2010). The literature shows that the average duration of onset of the first symptom was between 35 and 48 days. These findings justified the search for an effective self-screening tool for the early detection of lesions (Hassona, 2015). The low level of oral cancer awareness observed can be largely attributed to the very low educational level population, where almost half of them have never had any formal education. Sociodemographic differences were observed in terms of the level of consciousness, which coincides with other studies in which age and educational levels found associated with oral cancer awareness (Hassona, 2012). The low prevalence of oral self-examination was more common among the elderly, being more susceptible to oral cancer. This prevalence was higher among the elderly assisted at SUS. A previous study identified a prevalence of oral self-examination of 7.2% among individuals with a mean age of 52.7 years (Onizawa, 2003). In contrast, a higher prevalence was found among young adults. These differences in prevalence can be explained by age-related issues, which is called the cutoff effect. In addition, the different sociodemographic characteristics among the investigated populations may be responsible for the differences observed. A lower prevalence of oral self-examination was expected among the elderly than among young adults, due to the vulnerability of the elderly regarding their health literacy

(Agrawal, 2012). This vulnerability was evidenced in qualitative and quantitative research conducted among the elderly when it was verified the roles of practices that aim to increase the health literacy levels among them. Information was collected about reading and writing practices, their difficulties, and the relevance of these practices in aging. It was found that the elderly recognize that these activities bring benefits to the promotion of active and healthy aging, as well as the possibility of improvements in cognition. However, the elderly listed difficulties related to orthographic, textual, biological, among other difficulties. In addition, a low per capita income and / or low education may further compromise the vulnerability of the elderly regarding their health literacy levels, resulting from educational actions developed in the context of health promotion (Ghani, 2011). Educational actions can influence people's self-perception of their oral condition, as well as support the identification of oral problems by patients and self-care in search of prevention and or cure of oral diseases still in the early stages. Most elderly Brazilians perceive their oral health as satisfactory, even with poor oral health conditions. Perhaps because of this positive perception of oral health, even under precarious conditions, the elderly do not consider it necessary to perform self-examination (Ghani, 2011).

In this context, the prevalence of oral self-examination among the investigated elderly may be related to the lack of knowledge about the need to perform this self-care or even lack of access to information on how to perform it. Research conducted in the United States has shown that most dental surgeons agree with the importance of oral self-examination in preventing oral cancer, but less than half exchange information on this issue with their patients. The public dental service should not be limited to clinical care, it must also work in the community, with epidemiological surveys, health promotion, preventive actions, and health education, and in this sense, the results recorded among the elderly investigated show advances (Chher, 2016). Primary Health Care is essential for valuing and caring for the health, as it allows the construction of senses for oral health by the elderly, generating conditions for self-care and healthy attitudes. The use of dental services at appropriate frequency and frequency contributes to disease prevention at all ages and enables early treatment of identified problems. However, oral self-examination was lower among the elderly who routinely used dental services, possibly because this use described as the routine was actually a consequence of oral problems that required curative assistance, including toothache and the search for dental extractions (Amarasinghe, 2010). We emphasize the need to conduct routine consultations among the elderly, focusing on health promotion, health education, and prevention of diseases in order to pass on information to support appropriate health behaviors. Most public campaigns / actions Health policies aimed at preventing oral cancer emphasize the need for lifestyle changes, including the suspension of smoking and drinking habits (Amarasinghe, 2010). Oral self-examination can generate self-perception of the need for professional assistance. Thus, there is a greater chance of an oral examination by a dental surgeon if it is preceded by oral self-examination. So while it may seem counterintuitive, the chance of self-examination is lower among those who use the service. Routinely, on the other hand, it may be evidencing that the perception of problems from the self-examination culminates in the search for treatment, which is consistent with the findings of this investigation (Zhu, 2005).

The practice of oral self-examination was lower among the elderly who reported not having current or past drinking habits. Alcohol consumption represents one of the risk factors for oral cancer. In a case-control study conducted in the United States between 1114 cases and 1268 controls, it was found that the risk of oral and pharyngeal cancer increased with the amount of alcohol used. Knowledge of the carcinogenic potential of alcohol may favor preventive behaviors, such as oral self-examination and decreased drinking habits (Zhu, 2005). Adherence to these two preventive behaviors may be a consequence of high levels of health literacy among some elderly. The lower chance of oral self-examination among older people who report no current or past drinking habits suggests that access to information may lead to greater adherence to self-care behaviors. However, structural issues should be considered to ensure greater access to this information, regardless of whether or not the individual exhibits risky behavior (Scott, 2011). Other etiological factors of oral cancer also need to be considered in health promotion/health education actions, among them the possibility of cancerous oral lesions resulting from poorly adapted removable dentures. The use of removable dental prostheses remained associated with oral self-examination. The chance of oral self-examination was higher among the elderly who used these prostheses. The use of maladaptive removable prostheses may increase the prevalence of mucosal lesions (Scott, 2011). A previous study identified that the most frequent mucosal lesions in the elderly over 60 years of both sexes were inflammatory fibrous hyperplasia and candidiasis, changes that are often induced by the use of poorly adapted prostheses. A previous case-control study, conducted at the University of São Paulo- Clinic Hospital, identified that oral lesions caused by poorly adapted dental prostheses were associated with the occurrence of oral cancer among smokers, noting that chronic physical irritation of the oral mucosa contributes to the carcinogenic effect of tobacco (Silva, 2018). The fact that the patient uses a removable dental prosthesis may favor self-examination due to the greater habit of handling the oral cavity, or to the greater possibility of perceiving oral problems related to soft tissues, which may even hinder or impair the use of prostheses. In addition, there may be a greater concern on the part of the dentist to advise denture users on the importance of oral self-examination (Amarasinghe, 2010).

## Conclusion

It was concluded that oral self-examination was more prevalent among the elderly who did not have consequent impacts of oral disorders, possibly because the elderly who positively perceive their oral health condition actually presents a good oral health condition by adopting preventive measures, among them the Oral self-examination. However, it is known that self-perception of oral health, one of the components of quality of life, refers to a subjective experience of the individual about their functional, social and psychological well-being. It may be that the positive self-perception of oral health conditions among the elderly with negative health conditions is a consequence of the resignation and / or conformation of these elderly with aging.

**Conflict of Interests:** There is no conflict of interest between authors.

## REFERENCES

- Agrawal M, Pandey S, Jain S, Maitin S. Oral cancer awareness of the general public in Gorakhpur city, India. *Asian Pac J Cancer Prev*. 2012;13(10):5195–9.
- Amarasinghe HK, Usgodaarachchi US, Johnson NW, Laloo R, Warnakulasuriya S. Betel-quid chewing with or without tobacco is a major risk factor for oral potentially malignant disorders in Sri Lanka: a case-control study. *Oral Oncol*. 2010;46(4):297–301.
- Astekar M, Taufiq S, Sapra G, Agarwal A, Murari A, Putthia H. Prevalence of oral squamous cell carcinoma in Bareilly Region: A seven year institutional study. *J Exp Ther Oncol*. 2018 Nov;12(4):323-330.
- Chher T, Hak S, Kallarakkal TG, Durward C, Ramanathan A, Ghani WMN et al. Prevalence of oral cancer, oral potentially malignant disorders and other oral mucosal lesions in Cambodia. *Ethn Health*. 2016;23(1):1–15.
- Clark NP, Marks JG, Sandow PR, Seleski CE, Logan HL. Comparative effectiveness of instructional methods: oral and pharyngeal cancer examination. *J Dent Educ*. 2014 Apr;78(4):622-9.
- Cruz-Moreira K, Huamán-Garaicoa F, Mena G. Knowledge of oral cancer among the community served during the stomatological lesion prevention campaign conducted at Universidad Católica de Santiago de Guayaquil - Ecuador. *Acta Odontol Latinoam*. 2017 Dec;30(3):113-117.
- Elango KJ, Anandkrishnan N, Suresh A, Iyer SK, Ramaiyer SK, Kuriakose MA. Mouth self-examination to improve oral cancer awareness and early detection in a high-risk population. *Oral Oncol*. 2011;47(7):620–4.
- Furquim CP, Pivovar A, Cavalcanti LG, Araujo RF, Bonfim CMS, Torres-Pereira CC. Mouth self-examination as a screening tool for oral cancer in a high-risk group of patients with Fanconi anemia. *Or Surg or Med or Pa*. 2014;118(4):440–6.
- Ghani WM, Razak IA, Yang YH, Talib NA, Ikeda N, Axell T et al. Factors affecting commencement and cessation of betel quid chewing behaviour in Malaysian adults. *BMC Public Health*. 2011;11:82.
- Ghani WMN, Razak IA, Doss JG, Ramanathan A, Tahir Z, Ridzuan NA, Edgar S, Zain RB. Mouth self-examination as a screening tool for oral potentially malignant disorders among a high-risk Indigenous population. *J Public Health Dent*. 2019 Mar 8. doi: 10.1111/jphd.12313.
- Hassona Y, Scully C, Abu Ghosh M, Khoury Z, Jarrar S, Sawair F. Mouth cancer awareness and beliefs among dental patients. *Int Dent J*. 2015;65(1):15–21.
- Hassona Y, Sawair F, Matarweh D, Abdalhamid A, Thweib D, Scully C. Oral Cancer Early Detection: What Do Patients Need To Know? *J Cancer Educ*. 2018 Aug;33(4):865-869. doi: 10.1007/s13187-017-1191-x.
- Jornet PL, Garcia FJ, Berdugo ML, Perez FP, Lopez AP. Mouth self-examination in a population at risk of oral cancer. *Aust Dent J*. 2015 Mar;60(1):59-64. doi: 10.1111/adj.12274.
- Onizawa K, Nishihara K, Yamagata K, Yusa H, Yanagawa T, Yoshida H. Factors associated with diagnostic delay of oral squamous cell carcinoma. *Oral Oncol*. 2003;39(8):781–8.
- Pivovar A, Furquim CP, Bonfim C, Torres-Pereira CC. Mouth examination performance by children's parents and by adolescents in Fanconi anemia. *Pediatr Blood Cancer*. 2017;64(11).
- Saintrain MVL, Bandeira ABV, Pequeno LL, Bizerril DO, Marques PLP, Viana FAC. Oral health of older people: tracking soft tissue injuries for the prevention of oral cancer. *Rev Esc Enferm USP*. 2018;52:e03380. DOI: <http://dx.doi.org/10.1590/S1980-220X2017033603380>.
- Scott SE, Rizvi K, Grunfeld EA, McGurk M. Pilot study to estimate the accuracy of mouth self-examination in an at-risk group. *Head Neck*. 2010;32(10):1393–401.
- Scott SE, Weinman J, Grunfeld EA. Developing ways to encourage early detection and presentation of oral cancer: what do high-risk individuals think? *Psychol Health*. 2011; 26(10):1392–405.
- Silva AM. et al. Câncer de boca – ação educativa centrada na capacitação para o auto-exame *Rev. Ciênc. Ext.* v.14, n.1, p.116-124, 2018
- Zhu L, Petersen PE, Wang HY, Bian JY, Zhang BX. Oral health knowledge, attitudes and behaviour of adults in China. *Int Dent J*. 2005;55(4):231–41.

\*\*\*\*\*