

Knowledge of dental health care professionals in Ebonyi State, Nigeria, concerning teeth whitening

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ABSTRACT

Introduction

Tooth whitening has become one of the most frequently requested dental procedures by the public, especially in the cities. The demand for this procedure has led to many teeth whitening products being made available. Dental health care professionals should have robust knowledge concerning the procedure so they can serve their clients better. However, this seems not to be the case.

Purpose

This study assessed the knowledge of dental health care professionals in Ebonyi state, Nigeria concerning teeth whitening, to contribute to the baseline data that may promote awareness regarding the procedure among them.

Materials and Methods

The study was conducted by distributing questionnaires among the 65 dental health care professionals that were involved with aesthetic improvements in the State during the period of the study. The questionnaires were filled and returned. Data obtained from the survey were analyzed using frequency tables and percentages. And the results were compared with the trends researched in some other places or reported by some other scholars.

Results

59 dental health care professionals filled and returned their questionnaires (90.77% response rate). Results indicated that only a few of the respondents had experiential knowledge of teeth whitening (22%), and 14% did not encourage anyone to go for teeth whitening because of the side effects.

Conclusion

There is a need for more teeth whitening procedure awareness among dental health care professionals and sensitization about access to professional, safe, and approved techniques for teeth whitening in Ebonyi state, Nigeria.

INTRODUCTION

Teeth whitening is a cosmetic dental procedure for whitening or lightening the natural colour of the teeth. After the procedure, the teeth may not completely become changed but the shade may become whiter by the action of the active ingredients in the bleaching agents/products. These active ingredients, hydrogen peroxide or carbamide peroxide break down to release oxygen into the enamel on

the teeth to make it lighter (America Dental Association, [ADA], 2020).

Many people are increasingly seeking to have white sparkling teeth. When patients or clients visit dental clinics to have their routine prophylactic treatment (scaling and polishing), they, sometimes, expect their teeth to become white after the treatment. Unfortunately, scaling and polishing is not designed to whiten teeth. It only helps to

remove deposits from the teeth and other oral tissues. Teeth whitening, on the other hand, is designed to make the teeth whiter than before they underwent the procedure. Many patients are willing to go for this procedure once they know that they can have it. As a result, several teeth whitening products are now available in the market for the procedure (Tecnasio, 2011; Carey, 2014).

According to Vastardis (2006), Carey (2014), and ADA (2020), the side effects of teeth whitening are majorly teeth sensitivity and damage to the teeth structure and the gingivae. The side effects can be prevented by the use of some special materials (desensitizers) during and after the professional bleaching procedure. Certain foods or substances can discolour the teeth again within a short time.

To be able to cope with the growing demand for teeth whitening and the increasing availability of teeth whitening products in the market, dental health care professionals must be aware of the clinical use of the products so they can be able to advise patients and clients better and promote great clinical outcomes. But, this is not so.

A lot of dental health care professionals do not carry out teeth whitening procedures in their practices and, consequently, do not have experiential knowledge of the procedure ("Field observation"). This is on top of the fact that dental health care professionals in underdeveloped countries and communities record low demand for teeth whitening compared with the demand in developed nations (Tecnasio, 2011).

To increase awareness about teeth whitening, and the choice of the best professional techniques to achieve good results, it is important to assess the knowledge of dental health care professionals concerning teeth whitening procedures. It is for this purpose that this study was initiated.

MATERIALS AND METHODS

Research design

The research design adopted for this study was a cross-sectional survey.

Study Area

The study area was Ebonyi State. The State is located in the eastern part of Nigeria.

Population

The study population consisted of all the dental health care professionals (65 professionals) who were directly involved with aesthetics improvement in the State at the time of this study - dental surgeons, dental therapists, and dental surgery assistants working at government and private dental clinics in Ebonyi State, Nigeria.

Data Collection

Data for this study was collected through questionnaires that were distributed to the 65 dental health care professionals. Only 59% of the professionals returned their filled forms (90.77% response rate).

Data Analysis

Data obtained from the survey were analyzed using frequency tables and percentages.

Results were compared with the trends researched in some other places or reported by some other scholars.

RESULTS

65 questionnaires were distributed among the dental health care professionals and 59 respondents returned their filled questionnaires (90.77% response rate) (Table 1).

Table 1:

Demographic representation of the professionals' knowledge

Categories	Respondents	Percentage (%)
Dental health care professionals who had experiential knowledge of the procedure	13	22
Dental health care professionals who had no experiential knowledge of the procedure	46	78
Total	59	100

Results showed that 78% of the respondents had only theoretical knowledge of teeth whitening, with no practical experience while 22% had both theoretical and practical knowledge of teeth whitening (Table 1).

Table 2:
Decision and awareness level of the professionals

Responses	Respondents	Percentage (%)
Dental health care professionals who encourage professional teeth whitening	50	85
Dental health care professionals who encourage both home use and professional teeth whitening	1	1
Dental health care professionals who do not encourage teeth whitening at all	8	14
Total	59	100

A significant number of the respondents (85%), including those without practical knowledge, encouraged their patients who insist on going for teeth whitening to have it done by a dental professional and not by using home whitening kits while 14% of the respondents discouraged teeth whitening procedures due to the side effects. One (1%) respondent supported the use of home whitening kits as a valid alternative means of achieving the whitening result (Table 2).

DISCUSSION

All the respondents manifested theoretical knowledge about teeth whitening as dental health care professionals. 78% of the respondents had only theoretical knowledge of teeth whitening, with no practical experience while 22% had both theoretical and practical knowledge of teeth whitening. This finding may be because some of the respondents were not exposed to the practical execution of the teeth whitening procedure while in training. It could also be because the demand for the procedure was very low, given that many of the dental health care professionals surveyed practiced in semi-urban contexts. This argument agrees with the assertion of Tecnavio (2011) who posited that dental health care professionals in the underdeveloped countries and communities record low demand for teeth whitening compared with the demand in developed nations.

The results of this study further revealed that 85% of the respondents encouraged their patients who insist on going for teeth whitening to have it done by a dental professional and not by using home whitening kits. One (1%) respondent supported the use of home whitening kits as a valid alternative means of achieving the whitening result. This may have been informed by the training ideals that some therapies are better administered professionally to avoid certain unintended consequences.

14% of the respondents discouraged teeth whitening procedures due to the side effects, stating that the side effects are irreversible and that instead of improving on the oral health status of the patients, it makes it susceptible to post-operative complications. This position is in agreement with that of Clifton (2014) and Ghada et al. (2020) who harped on the side effects of teeth whitening and supported the practice that desensitizing agents should be prescribed for the patients alongside extensive post-operative instructions to help prevent or reduce the side effects, but at variance with the works of Majeed et al. (2015) and Bersezio et al. (2018) who stated that teeth whitening add quality of life and oral confidence to the patients.

This research has revealed that the demand for teeth whitening was still very low in the study population and that in turn affected the knowledge and practice of many of the dental health care professionals concerning teeth whitening. Many of the respondents were aware of the global trend in cosmetic dentistry concerning teeth whitening but the procedure was not being practiced.

CONCLUSIONS

The knowledge of dental health care professionals in Ebonyi state, Nigeria about teeth whitening leaves much to be desired. It was observed that the low level of awareness and little or no demand for teeth whitening by the patients or clients visiting the dental clinics in Ebonyi state, Nigeria affected the dental professionals' concern and knowledge about teeth whitening and the modern teeth whitening products available in the market.

There is, therefore, the need for more teeth whitening procedure awareness among dental health care professionals and sensitization about access to professional, safe, and approved techniques for teeth whitening in Ebonyi state, Nigeria.

Acknowledgment: We appreciate all the dental health care professionals in Ebonyi State who gave their consent to be involved with this little study and responded to the questionnaires administered to them.

Ethics Approval: No ethical approval was needed for this study

Conflict of Interest: The authors declare no conflict of interest.

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