

# An Integrative Process for Oral health care by Buddhist Mindfulness and Oral Health Science\*

<sup>1</sup>Wilai Suriyasangpetch, <sup>2</sup>Sanu Mahatthanadull and  
<sup>3</sup>Phramaha Somboon Vuddhikaro

<sup>1</sup>Sirilux Dental Clinic, Thailand.

<sup>2</sup>International Buddhist Studies College,  
Mahachulalongkornrajavidyalaya University, Thailand.

<sup>3</sup>Graduate School, Mahachulalongkornrajavidyalaya University, Thailand.

<sup>1</sup>Corresponding Author's Email: wilai72@gmail.com



## Abstract

The objectives of this research are: 1. To examine problems and methods of oral health care according to oral health science, 2. To analyze the concept of oral health care in Buddhist scriptures, 3. To present an integrative process for oral health care by Buddhist mindfulness and oral health science. The data were collected from reference documents and seven key informants for in-depth interviews. The Item-Objective Congruence (IOC) form was examined by three experts and the focus group discussion (FGD) was held by five experts to approve the analysis of the integrative oral health care process with Buddhist mindfulness.

The findings of this research are as follows: 1) many people all over the world suffer from the most common oral problems caused by their behavioral and mental aspects. According to oral health science, dental plaque is the key etiological factor of tooth and gum diseases. 2) According to *Tipiṭaka*, the Buddha had taught about oral hygiene for a few cases. Brushing methods in the Buddha's time was related to the methods of dental care that appeared in the *Ayurveda* with the same purposes of making teeth clean and preventing from bad breath. The concept of integrative process for oral health care is applying the practice of Buddhist mindfulness into the way of taking care of oral health in order to achieve the completeness of oral hygiene for perfect functioning affecting holistic well-being. 3) The integrative process for oral health care comprises prevention and providing care. The process of prevention refers to right methods for oral health care including mindful tooth brushing,

---

\*Received March 31, 2022; Revised June 19, 2022; Accepted June 19, 2022



mindful flossing and tongue cleaning as well as practicing right speech and basic Buddhist practices (*Dāna, Silā and Samādhi*). The process of providing care has three points: (1) Visiting the dentist for finding out the exact causes of oral pathology and learning how to do the good oral hygiene applied with Buddhist mindfulness and self-awareness (*Sati-Sampajañña*), (2) Speaking truthfully, politely, honestly with goodwill to help the listeners get something beneficial and abstaining from delivering bad speech (*Sammāvācā*), and (3) Purifying the mind by tranquil meditation to promote mental well-being (*Sammāsamādhi*).

**Keywords:** Oral health care; Integrative process; Buddhist mindfulness

## Introduction

According to oral health science, dental plaque is the key etiological factor of tooth and gum diseases. And the main purpose of tooth brushing is to eliminate dental plaque from every surface of all teeth without injuries. Daily removal of biofilm or dental plaque from the mouth is essential to the maintenance of oral health (Duncan, and Bowen, 2020). Most of the problems of teeth, dental and gum diseases, are because of poor oral hygiene or plaque accumulation on the teeth for a period of time (Lockhart et al. 2009). Oral health has been accepted to be an important component of general health. Moreover, poor oral hygiene relates to the occurrence of bad breath.

According to Buddhist Studies, the Buddha had taught about oral health care by mentioning the term “tooth-wood or tooth- stick” as recorded in some Buddhist scriptures such as *Dantakattha Sutta* (Hares, 1973). The Buddha had also stated that bad breath or halitosis could be the result of bad *Kamma* from past lives as recorded in *Tipiṭaka, Dhammatthakathā, XXIV. Tanhāvaggo: Kapilamacchavatthu* (Burlingame, 2009). It was the story of *Kapila* the fish that had a very beautiful body with golden scales, but terribly nasty smell scattered whenever its mouth was open as briefly narrated below.

During the time of *Kassapa* Buddha, a well-educated monk named *Kapila* who taught the *Dhamma* to other monks. However, he also did some bad deeds such as delivering evil speech and insulting many monks. Because of the law of *Kamma*, his evil speech of disrespect to the *Vinaya* or the monastic rules of conduct, and insulting many monks resulted him to be reborn and punished in the Grand Hell of *Avīci*. Though the fruit of his evil deeds still remained, he later was reborn as a fish in *Gautama* Buddha’s time. The good deed of teaching *Dhamma*



brought about the golden scales to him. But his bad deed mentioned above resulted in terribly nasty smell of his opening mouth.

The story of *Kapila* the fish in *Tipiṭaka* interests the researcher because most of patients believed that halitosis was specifically caused by a physical problem. Therefore, they often seek the diagnosis and curing halitosis from a variety of health professionals, including dentists, general surgeons, and otolaryngologists (ear, nose and throat specialists). But they do not ever know that halitosis may also be the result of bad *Kamma* in their past lives.

Buddhist Mindfulness refers to the practice of mindfulness or mindfulness meditation which the practitioners keep the mind at a particular point within the body while perceiving each feeling, thought, or mind object at the present time. It is the same concept as mentioned in *Mahāsatipaṭṭhāna Sutta* (Davids, and Rhys, 1910), in *Tipiṭaka* of *Theravāda* Buddhism. The value of Buddhist mindfulness inspires the researcher to apply mindfulness practice into oral health science becoming the method of oral health care plus mindfulness or mindful oral health care. Basically, it is paying enough attention to every action of tooth brushing, flossing and tongue cleaning in order to achieve the good oral hygiene affecting holistic well-being.

From my experiences as a dentist, many patients know how to brush their teeth correctly, but some of them still have dental problems such as caries, gingivitis, dental abrasion and bad breath. It means that only knowledge of brushing technique is not really enough. It should be the time to improve the training for better taking care of oral health. Thus, the researcher would like to propose the right and effective methods of oral hygiene to achieve not only perfect oral health but also holistic well-being for all people.

## Objectives of the research

1. To examine problems and methods of oral health care according to oral health science.
2. To analyze the concept of oral health care in Buddhist scriptures.
3. To present an integrative process for oral health care by Buddhist mindfulness and oral health science.

## Research Methodology

The research methodology can be divided into six steps as explained as follows:

**1<sup>st</sup> Step:** Data collection and investigating the problems of oral health care according to oral health science



All data were collected from *Tipiṭaka* in English translation version, known as the primary source of Buddhist scriptures, in order to explore how people in the Buddha's time brushed their teeth. Furthermore, the data from secondary sources were also collected, for example, commentaries, sub-commentaries, textbooks, research works, Buddhist journals, and new interpretation from modern scholars both in Thai and English languages. This step was aimed to survey the viewpoints in detailed explanations from all collected data for clearer understanding.

**2<sup>nd</sup> step:** In-depth interview and focus group discussion

This step was categorized into two major processes, in-depth interview and focus group discussion.

**I) In-depth Interview:** Seven key informants were on the interviews. They represent prominent people in Thai society consisting of three Buddhist scholars, one medical doctor and three dental specialists, to share their knowledge of Buddhist studies and oral health science. They have expertise in the educational integration of interdisciplinary subjects and way of oral health care gaining the contemporary of viewpoints on flexibility in term of Buddhist and dental aspects. This process was divided into four parts as follows:

a) Design the in-depth interview form with dissertation supervisory committee in accordance with the objectives of this research.

b) Seven items of the Item-Objective Congruence (IOC) form for in-depth interview were examined by three experts. The index of Item-Objective Congruence (IOC) form was 0.95 before the actual interview.

c) Revising the Item-Objective Congruence (IOC) form according to the three experts' recommendations and using its final version for interviewing with seven key informants.

d) Analyzing information and synthesizing the method of oral health care integrated with Buddhist practice of mindfulness or mindful oral health care. (Draft)

**II) Focus Group Discussion:**

There were five experts for the focus group discussion consisting of one monk, two Buddhist scholars, one dental specialist and one psychiatrist, to cover all necessary information from their knowledge of Buddhism, dentistry, medical and psychotherapy. They also have expertise in the educational integration of interdisciplinary subjects that supports creating the method of mindful oral health care. There are two objectives of the focus group discussion.



1) To discuss this dissertation entitled “An Integrative Process for Oral Health Care by Buddhist Mindfulness and Oral Health Science”,

2) To make approval judgement of this dissertation entitled “An Integrative Process for Oral Health Care by Buddhist Mindfulness and Oral Health Science”.

The focus group discussion was divided into three parts as follows:

a) Before the focus group discussion: Working with dissertation supervisory committee to design the questionnaire. All of five experts had already received the draft of this research before starting focus group discussion through Zoom, the application for video conference.

b) While making focus group discussion: The content of this research was revised and improved in accordance with the experts’ recommendations before the final dissertation defense.

There were two issues for the focus group discussion:

Issue 1: Appropriateness in choosing Buddhist principles for integrating of oral care process by means of Buddhist mindfulness and oral health science,

Issue 2: Appropriateness of proposing “An Integrative Process of Buddhist Oral Care for Better Oral Health or Mindful Oral Health Care”.

c) After focus group discussion: The practical method of mindful oral health care came to conclusion.

In-depth interview and focus group discussion had been discussed for the new knowledge corresponds with using mindful oral health care as well as pre-integrative process for Buddhist oral care counseling.

**3<sup>rd</sup> step:** Analyzing, synthesizing and interpreting the raw data as well as systematizing the collected data in order to find the best solution. This step comprised the data analysis, in-depth interviews with seven key informants and focus group discussion for creating pre-integrative process analysis of oral care development.

**4<sup>th</sup> step:** Constructing the overall outline of integrative process for oral health care in all related dimensions in accordance with the objectives.

**5<sup>th</sup> step:** Developing an integrative process for oral health care by Buddhist mindfulness and oral health science or mindful oral health care. Holding a presentation for public hearing and proposing the body of knowledge by way of descriptive method.

**6<sup>th</sup> step:** Formulating conclusions, identifying significant research findings, and presenting useful information for further research. And recommendations for educating people to take good care of their oral health by means of mindfulness-based techniques for holistic well-being.

## Research Result

**The 1<sup>st</sup> objective** is to examine problems and methods of oral health care according to oral health science. From the research results, it was found that the most common dental problems are caused by behavioral and mental aspects. The problems can be categorized into four issues as follows: (I) Lack of the knowledge for oral health care, (II) Attitudes and behaviors about dental care, (III) Problems caused by habituation, and (IV) Personality problems. Poor oral hygiene can lead to tooth cavities, gum disease and could also evoke a systemic inflammatory response. Dental plaque is the main etiological factor of tooth and gum diseases.

There are various techniques of tooth brushing. The five commonly used brushing techniques are as follows: Bass or modified bass, Charters, Modified Stillman, Rolling stroke and Modified stroke. (Duncan, and Bowen, 2020). Each technique is individually suitable for each person. Importantly, there are some wrong ways of using the manual tooth brushing people should realize and avoid, for example, 1) Using improper toothbrushes especially with hard bristles, 2) Using unsuitable ways of interdental cleaning due to the ignorance of individual uniqueness of teeth, 3) Brushing teeth too hard, 4) No evaluating the cleanliness after brushing teeth, 5) Using inappropriate amount of toothpaste for each time of brushing, and 6) No flossing or using only toothpicks instead.

The main purpose of every technique of tooth brushing is to clean every side of each tooth completely. Proper tooth brushing depends on several factors including the time spent, hand movement skills, motivation, and knowledge. The vertical scrub method can help remove more plaque from the interproximal surfaces of teeth than the horizontal scrub method (Mastroberardino et al. 2014).

Yotnuengnit (2021) stated that the best method of oral health care is not only considering Buddhist mindfulness but also self-awareness. Mindful flossing every day will help thoroughly remove food debris stuck between teeth to prevent plaque buildup in the interdental areas where the bristles of toothbrush cannot reach. Thus, Flossing is as important as tooth brushing.

**The 2<sup>nd</sup> objective** is to analyze the concept of oral health care in Buddhist scriptures. From the research result, a few cases of oral hygiene taught by the Buddha were found in *Tipitaka*. Brushing methods in the Buddha's time was related to the methods of dental care that appeared in the *Ayurveda* with the same purposes of making teeth clean and preventing from bad breath. Buddhist mindfulness refers to the practice of meditation which the

practitioner pays attention only to a particular point within the body while perceiving a feeling, a thought, or a mind object at the present moment. It is the same concept as mentioned in *Mahāsatipaṭṭhana Sutta* in *Tipiṭaka* of *Theravāda* Buddhism (Davids, and Rhys, 1910). Basically, the Buddha's time coincided with the discovery of Ayurveda in ancient India and tooth-sticks were popularly used to clean both teeth and tongue. The techniques of removing plaque mechanically with either toothbrush or teeth-cleaning twig are different but the same purpose (Albertain et al. 2018). However, they are less important than people's attitudes, knowledge and manual dexterity.

The study of materials and teeth cleaning devices used in the Buddhist era compared to the materials used in the modern era are shown as follows:

| Oral health science                                                       | Buddhist studies                                                                                     |
|---------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| 1) Toothbrush (Baruah et al. 2017)                                        | 1) Tooth- wood (Hare, 1973)                                                                          |
| 2) Dental floss                                                           | 2) Unwoven-thread (Oldenberg, 1995)                                                                  |
| 3) Dental paste<br>(Aeeza et al. 2014)                                    | 3) No need to use dental paste: There are therapeutic effects of using the twigs (Aeeza et al. 2014) |
| 4) Mouthwash                                                              | 4) clean water (Horner, 1976)                                                                        |
| 5) The only propose is:<br>good oral hygiene<br>(Bowen, and Pieren, 2020) | 5) The aim is to clean body (including oral hygiene), speech and mind<br>(Masefield, 2000)           |

According to the Buddha's teaching of oral hygiene recorded in *Tipiṭaka*, the term "tooth-wood or tooth- stick" appears in many *Suttas* and *Vinayas* such as *Dantakattha Sutta* (Hare, 1973) and *Vinayapiṭaka* Volumn III: *Suttavibhanga Forfeiture (Nissaggiya XX)*. (Oldenberg, 1993). The Buddha advised his disciples to clean their teeth by chewing tooth-woods or tooth-sticks as the tool for dental hygiene. He explained the benefits of doing that and the bad results of not doing that. Five bad results of not chewing tooth-woods or tooth-sticks, were as follows: 1) the eyes would become negatively affected; 2) the breath would become nasty; 3) the taste buds would malfunction; 4) phlegm and mucus would be mixed with food in the mouth; and 5) the food would not be enjoyable. He also repeated that not using tooth-sticks would cause bad breath.

Function of the mouth is not only eating but also speaking. Thus, this integrative process for oral health care also is related to the impact of speech and mind for the

cleanliness or purity of verbal and mental actions as well as physical cleanliness of overall organs in the oral cavity. The process refers to effective manual tooth brushing techniques and physical cleanliness of oral related organs as well as verbal and mental cleanliness for holistic well-being.

**The 3<sup>rd</sup> objective** is to present an integrative process for oral health care by Buddhist mindfulness and oral health science. It comprises prevention and providing care. Mindful tooth brushing simply means complete self-awareness and carefulness of the vigor of the bristles touching overall tooth surfaces, no matter which brushing technique is used. And the practitioners always have to realize that the shape of dental surfaces is not flat but curved.

This study reveals Buddhist right methods for oral health care. There are many concerning points, as explained as follows: 1) The proper tooth brushing techniques should be individually adjustable corresponding with the alignment of the teeth, the hand aptitude and the personal attitude. Thus, the practitioners should recognize and realize the alignment of their teeth before brushing. 2) The vertical scrub method can help remove more plaque from the interproximal of teeth than the horizontal scrub method (Mastroberardino et al. 2014). Likewise, long back and forth motion or vigorous horizontal scrubbing method for a long time relates to the occurrence of cervical abrasion of teeth. Definitely, the proper brushing techniques actually matter. 3) Flossing and the hygiene of oral cavity such as tongue cleaning should be considered as important as tooth brushing. 4) The unawareness of early warning signs of oral health problems and the neglect of finding out the exact causes could bring about severer illnesses. 5) Having decayed teeth and not replacing missing teeth affect long-term problems including occlusal balancing, masticatory system and temporomandibular joint disorder.

According to In-depth interviews, most of the key informants agreed that the integrative process by means of Buddhist mindfulness and oral health science, has a positive effect on individuals and the society. After the Focus Group Discussion, most of the experts accepted the appropriateness in choosing *Silā* and the Four Noble Truth in Buddhism to be integrated into the process of oral health care, and appropriateness of proposing mindful oral health care or an integrative process of Buddhist oral care for better oral health.

The concept of mindful oral health care by Buddhist oral science integration can be divided into two categories, the integrative process of prevention and the integrative process of providing care.

**The integrative process of prevention** consists of three points:



1) Mindful tooth brushing, flossing and tongue cleaning (*Sati-Sampajañña*).

2) Having good verbal behaviors or right speech for holistic oral hygiene (*Sammāvācā*): speak truthfully, politely, with goodwill, at the right time and right place, to help the listener get something beneficial.

3) Practicing 3 basic ways of making merit in Buddhism or Basic Buddhist Practice: *Dāna* practice, *Silā* practice, *Bhavana* practice (*Sammāsamādhi*).

### **Mindful Tooth Brushing**

The concept of mindful tooth brushing can be categorized into the three steps as follows:

**First step:** Being mindful and self- aware before starting tooth brushing

- Recalling the proper tooth brushing techniques and basic dental knowledge.
- Realizing that long back and forth motion of tooth brushing can cause dental abrasion.
- Recognizing the correct amount of toothpaste.
- Recalling the alignment of teeth.
- Recalling the shape and structure of the each tooth.
- Reminding the set schedule of flossing, at least once a day to remove interdental plaque which is hard for the bristles to reach.

**Second step:** Being mindful and self- aware while brushing

- The proper brushing techniques actually matter. Long back and forth motion or horizontal scrub technique with too much force significantly causes the occurrence of cervical abrasion of teeth.
- Making sure that most of the bristles touch the surfaces of teeth not on the gums.
- Adjusting the pressure of bristles on teeth not too hard and harm the gums and teeth.
- Making sure that 5 surfaces of every single tooth, buccal/labial, lingual/palatal, occlusal/incisal, mesial and distal parts, are completely cleaned.
- Focusing on each tooth one by one respectively while brushing, not 2 or 3 teeth at once.

**Third step:** Being mindful and self- aware after brushing

- After brushing and flossing, make sure that every surface of each tooth is clean. The cleanliness of teeth can be checked by the touch of tongue tip or breath odor.
- Check if there are any warning signs appearing in the mouth that may indicate big problems arising in future.

- Cleaning the tongue with a tongue scraper regularly because bacteria will accumulate greatly in the areas of the tongue between the taste buds and other tongue structures more than any other organs in the oral cavity.

- Rinsing the mouth with water or saline to clean overall related organs in the oral cavity.

The quality of tooth brushing depends on several factors including the time spent, hand movement skills, motivation, and dental knowledge. Normally, the basic guide of oral health care comprises tooth brushing twice a day, in the morning and before bedtime, as well as visiting the dentist regularly for a dental checkup.

**Mindful Flossing:** Flossing is an effective method of cleaning interdental or proximal areas of the teeth. It is as important as tooth brushing. As the floss gently reaches gums, curve the floss at the base of the tooth to form a C- shape which allows the floss to enter the space between gums and tooth. Then gently glide the floss up and down to rub against the dental surfaces on both sides of the adjacent teeth. Move to the next adjacent teeth and repeat those steps of flossing with an unused part of the floss.

**The integrative process of providing care for oral health consists of three points:**

(1) Visiting the dentist for finding out the exact causes of oral pathology and learning how to do the good oral hygiene applied with Buddhist mindfulness and self-awareness (*Sati-Sampajañña*). In severe cases, dental or medical specialists may offer some specific treatments or even clinical psychology investigation if needed.

(2) Abstaining from delivering bad speech including lying, cursing, gossiping and having nonsensical speech; but speak truthfully, speak politely, speak to help the listener get something beneficial, and speak with goodwill, at the right time and right place (*Sammāvācā*) instead.

(3) Practicing tranquil meditation to purify the mind by means of concentration (*Sammāsamādhi*) resulting in mental well-being.

## The new body of Knowledge

According to oral health science, the goal of oral health care is only physical cleanliness or good oral hygiene. But the mindful oral health care is aimed for three dimensions including physical, verbal and mental cleanliness. Thus, the new body of Knowledge: the integrative process for oral health care or mindful oral health care means an effective mindful manual tooth brushing and the hygiene of oral related organs as well as the



spiritual hygiene or the purification of verbal and mental actions. Significantly, a new way to educate people to apply the practices of mindfulness and self-awareness in Buddhism (*Sati and Sampajañña*) should be enhanced for individual holistic well-being and social peace.

For the cleanliness of verbal actions, speaking mindfully with goodwill or right speech (*Sammāvācā*) is good because all words will be considered before coming out of the mouth. Good wording could uplift speaker's mental quality (Wongpiromsarn, 2021). Right speech is a Buddhist practice help the practitioners speak only effective content at the right time and the place with good feelings, and be able to keep good relationship with their audience. Therefore, right speech and basic Buddhist practices are the correct methods of cultivating mindfulness and peacefulness. Thus, People should practice mindfulness and self-awareness (*Sati-Sampajañña*) along with every regular activity in their lives in order to enhance physical and mental health.

## Discussion of research results

The research result of the 1<sup>st</sup> objective found that the right methods or good taking care of oral health is significant and needed to be developed and advised to achieve holistic oral hygiene and well-being, as well as social peace. Meanwhile, peaceful verbal and physical actions also support a peaceful mind or mental actions. All of them, bring about both individual and social peace. That is consistent with the concept of holistic well-being in the research work of Mahatthanadull, and Mahatthanadull (2016). The research points that holistic well-being, according to Buddhist studies, refers to the pleasure of life in two types, bodily pleasure and mental pleasure. In addition, it can be further subdivided into four aspects: (1) Physical body, (2) Morality in society and the environment, (3) Mind, and (4) Wisdom.

The research result of the 2<sup>nd</sup> objective found that an integrative process for oral health care means the integration of Buddhist mindfulness and oral health science in order to attain both bodily and mental pleasure simultaneously through holistic oral hygiene. According to *Tipiṭaka*, the Buddha taught his disciples about mindfulness meditation in *Mahāsatipaṭṭhana Sutta* or the four foundations of mindfulness (Davids, and Rhys, 1910). That is necessary to achieve the balance of body and mind in any movements. It is consistent with Phradhamvajrabundit (2021) point of view that mindful tooth brushing should be practiced as the effective way to cultivate the practitioners' mind to come a standstill with *Sati* and *Sampajañña*, and then wisdom will be arisen. Due to the fact that each person has his own

teeth alignment, some teeth may not be orderly aligned as they should. So, each one needs to choose his own one or more techniques suitable for his uniqueness.

The research result of the 3<sup>rd</sup> objective found that it was clear that the integrative process of oral health care is aimed for three dimensions including physical, verbal and mental cleanliness, known as *Sati-Sampajañña*, *Sammāvācā* and *Sammāsamādhi* in *Pāli*. Obviously, every teaching of the Buddha relates to doing good deeds and avoiding evils by physical, verbal and mental actions (Norman, 1997). Self-awareness or clear comprehension (*Sampajañña*) should come along with mindfulness (*Sati*). Only mindfulness is not enough to achieve the objectives or goals of any activities efficiently. It works well with clear comprehension (*Sati-Sampajañña*) (Bannaruj, 2021). *Sati-Sampajañña* can be practiced by applying into every activity or movement in daily life, anywhere, anytime, and even while brushing teeth. The integrative study of mindful oral health care can help people improve their oral and dental hygiene as well as cultivate the mind to overcome sufferings for holistic well-being.

## Conclusion

Tooth brushing twice a day is considered as a fundamental self-care behavior. The integrative process for oral health care is the basic guide to oral health education and prevention in modern dentistry. Mindful oral health care is the fundamentally personal oral health care of all mankind resulting in efficient mastication, smiling, speaking, and good personalities with healthy teeth and gums. Furthermore, the new knowledge about gums and dental health care, mindful tooth brushing, is applying the practice of mindfulness and self-awareness (*Sati-Sampajañña*) into 3 stages of brushing, before, during, and after, in order to make sure that all teeth are completely and thoroughly cleaned. The integrative process of oral health care comprises two categories, prevention and providing care. Both of the processes are important for oral health care and holistic well-being. Thus, mindful oral health care is not only mentioned about how to take care of oral health for everyone to be able to chew food efficiently, pronounced clearly, no bad breath and have a good personality but also the spiritual hygiene or the purification of verbal and mental actions. It brings about individual happiness leading to peaceful cohabitation in the society and the world.

Concludingly, the integrative process for oral health care means the integration of Buddhist mindfulness and oral health science in order to attain both bodily and mental

pleasure simultaneously with holistic well-being. Moreover, it should be considered as a tool for individual happiness and peace for all people.

## Suggestion

### 1. Suggestion for Educating People to Take Care of Their Oral health by means of mindful oral health care

The findings of this study can be publicly proposed and contained in the curriculum for elementary, undergraduate and graduate students in every school, university and educational institutes, and even for dental students and dental teams in hospitals. It can be used as a tool to cultivate peace for individuals and the society. As a result of it, those the students and practitioners would get good oral health and holistic well-being before they finish their education and start working life. Therefore, the integrative process for oral health care with Buddhist mindfulness and self-awareness (*Sati-Sampajañña*) should be considered as a good instruction to motivate all people to start learning about this approach to achieve perfect oral health or holistic oral hygiene and individual happiness as well.

### 2. Suggestions for Further Researches

The further researches should involve in the following issues:

2.1 The role of self-efficacy in mindful eating for holistic well-being in the elderly.

2.2 An analytical study of mindful oral health care for peacefulness according to *Theravāda* Buddhism.

2.3 A guideline for developing the quality of life with mindful oral health care for secondary school students.

## References

- Aeeza, S. M. et al. (2014). Comparative Effectiveness of Chewing Stick and Toothbrush: A Randomized Clinical Trial. *North American Journal Medical Science*, 6(7), 333–337.
- Albabbain, R. et al. (2018). Chemical effects of chewing sticks made of *Salvadora persica*, *International Journal of Dental Hygiene*, 16(4), 535-554.
- Bannarui, B. (2021). Fellow of the Royal Society of Thailand. *Focus Group*. November, 25.
- Kaveri, B. et al. (2017). A Review on Toothbrushes and Tooth Brushing Methods. *International Journal of Pharmaceutical Science Invention*, 6(5), 29-38.

- Bowen, D. M., & Pieren, J. A. (2020). *Darby and Walsh Dental hygiene: theory and practice*. fifth edition. Maryland Heights: Elsevier, Inc.
- Burlingame, E. W. (trans.). (2009). *Buddhist Legends part 3 (Dhammapada Commentary)*. Oxford: Pali Text Society.
- Dauids T.W., & C.A.F. Rhys (trans.). (1910). *Dialogues of the Buddha Translated from the Pali of the Dīgha Nikāya*. Part II. Oxford: Pali Text Society.
- Duncan, B., Teresa, & Bowen, M. D. (2020). In Denise M. Bowen & Jennifer A. Pieren (eds.), *Darby and Walsh Dental hygiene: theory and practice fifth edition* (pp. 368-376). Maryland Heights: Elsevier, Inc.
- Hare, E. M. (trans.). (1973). *The Gradual Sayings (Anguttara-Nikāya) Vol. III (The Books of the Fives and Sixes)*. London: Pali Text Society.
- Horner, I. B. (1976). *Papañcasūdanī Majjhimanikāyaṭṭhakathā of Buddhaghosacariya* part III. London: Pali Text Society.
- Lockhart, P. B. et al. (2009). Poor oral hygiene as a risk factor for infective endocarditis-related bacteremia. *The Journal of the American Dental Association*, 140(10), 1238-1244.
- Mahatthanadull, S., & Mahatthanadull, S. (2016). Holistic Well-being Promotion for Balanced Way of Life according to Buddhist Psychology (*Research Report*). Ayutthaya: Buddhist Research Institute of MCU.
- Masefield, P. (trans.). (2000). *The Itivuttaka*. Oxford: Pali Text Society.
- Mastroberardino, S. et al. (2014). Vertical brushing versus horizontal brushing: A randomized split-mouth clinical trial. *Quintessence international*, 45(8), 653-661.
- Norman, K. R. (1997). *The Word of the Doctrine (Dhammapada)*. Oxford: Pali Text Society.
- Oldenberg, H. (1995). *The Vinaya Piṭakam: The Sutavibhaṅge*. Oxford: Pali Text Society
- Phradhamvajrabundit (Somjin Sammapanyo). (2021). Rector of Mahachulalongkornrajavidyalaya University. *Interview*. August 17.
- Wongpiromsarn, Y. (2021). Chief Advisor of Department of Mental Health, Ministry of Public Health. *Focus Group*. November, 25.
- Yotnuengnit P. (2021). Special Lecturer & Clinical Instructor of Department of Oral Medicine and Periodontology, Faculty of Dentistry, Mahidol University. *Interview*. August, 1.