

Oral Health and Well-being of Elderly During and Post COVID-19 Outbreak

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Abstract

This article investigates factors affected to oral health and well-being among elderly in rural community of Thailand, during COVID-19 pandemic and post COVID-19, March 2020 to June 2022. With a mix-method approach, 3,560 questionnaire, and we in-depth interviewed 58 of key informants. Data were analyzed by descriptive statistic and multiple regression, content analysis for qualitative data. Results shown that most (57%) of elderly were unable to eat normal food. They had a oral health of as poor for 47%, and only 28.5 % of them had access to dental health services, and not improve their well-being. Especially, functional limitations dominated followed by psychosocial and pain/discomfort-related limitations. In addition, Internal factors such as poor oral health, positive emotion, negative emotion, and external factors, social support, socio-economic, access to services factors were a significant predictor of subjective well-being ($p < 0.01$).

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Introduction

The World Health Organization defined health as a multidimensional construct: "a state of complete physical, psychological, and social well-being and not merely the absence of disease or infirmity". Despite great improvements in oral health in the past decades, oral disease remains a major public health problem worldwide.¹ Elderly could not maintain their oral health by themselves. Especially, the dental health behaviour about ability to rinse their mouths, ability to manage dentures. That are strongest association to self-feeding ability was marked by inability to rinse their own mouth, followed by inability to manage dentures, and less frequency of toothbrushing.² Previous studies on adult have indicated that their level of knowledge and attitudes toward dental health might be a potential barrier to effective oral preventive efforts.³ In addition, the main oral problems of this population were missing teeth, dry mouth and limitations in chewing ability, experiencing one or more functional or psychosocial problems 'very often' or 'all the

time'. All dental health indicators were significantly associated with the quality of life measures, indicating that those with poor self-perceived oral health had lower morale, more life stress and lower levels of life satisfaction. These associations remained after controlling for other potential influences on quality of life such as general health, income and marital status. These data suggests that oral disorders have a significant effect on the well-being and life satisfaction of the individuals in the study even though they are characterised by high rates of chronic physical and mental conditions and physical disabilities. Consequently, access to appropriate oral health care is likely to improve overall quality of life.^{4,5} The patients required assistance while performing oral hygiene tasks or had poor oral health at baseline. Because, most elderly dementia patients had poor oral health, mild oral dryness and types of dementia was significantly related to oral dryness.^{6,7} So, a basic care plan for patients should, at the minimum, match prevention strategies recommended for healthy elderly patients. Oral health care professionals should promote oral hygiene education for caregivers for elderly.⁸

Currently, the Covid-19 pandemic continues to rage in parts of the world include Thailand, the World Health Organization (WHO) declared a Public Health emergency of international concern, followed by the confirmation of a global pandemic.⁹ Worldwide

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pandemic coronavirus disease 2019 (COVID-19) is spreading including Thailand making affect foreigners. Many countries should take public health.^{10,11} The impact of the coronavirus pandemic on negative emotional symptoms has been serious with studies reporting high prevalence rates for these. Isolation, reduced social contact, duration of quarantine and restrictions, which are the characteristics of a lockdown, played an important role in increased negative emotional symptoms for peoples.¹² The COVID-19 crisis including suicidal behavior are likely to be present for a long time and peak later than the actual pandemic. it is imperative to decrease stress, anxiety, fears and loneliness in the general population.¹³

In addition, the post COVID-19 pandemic have increased the challenges related to the provision of health services to the elderly population, considering these services are institutionalized or not. The need of stronger public policies, more economic resources and qualified personnel became evident in order to attend the complex necessities of this age group that require greater attention with emphasis in oral health.¹⁴ The literature reports that mechanical, chemical and educational strategies have some efficacy in dental plaque control in the elderly population. The results should be viewed with caution, considering the type of intervention (isolated or combined) and the maintenance of the results obtained.¹⁵

Normally, humans need well-being in life, and everywhere they live. Well-being is comprised of life satisfaction, positive affect, negative affect, and psychological well-being. Conceptualizations of mental health and well-being were a 6-factor structure consisting of the following subscales: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance.¹⁶ In addition, the factors that mediate the emotional well-being of humans are burnout, job dissatisfaction, and intentions to leave a job. Predictor variables included individual factors, measures of workload, attributes of role stress, and sources of social support.¹⁷ Therefore, social support was viewed both as a variable exerting a direct influence on professional well-being and as a moderating variable. Results indicated that role stress (especially role ambiguity) was the best predictor of burnout and job dissatisfaction. Lack of supervisor support was found to be the best

predictor for job dissatisfaction and intentions to leave a job. Implications for practices in the workplace are discussed, past negative, past positive, present hedonism, present fatalism, and future time perspectives.¹⁸ So, countries have to be aware of this situation and develop mental support strategies to mitigate the impact. Research studies are needed of how dental and mental health consequences can be mitigated during and after the COVID-19 pandemic.¹⁹ Therefore, The aim of this study investigates the main goal and life style, factors effected to oral and mental health and subjective well-being among elderly of Thailand, during and post COVID-19 pandemic.

Materials and methods

This mix-method was qualitative and quantitative research, for quantitative segment of the study, as convenient sampling method 2 major destinations were staying on Local Quarantine(LQ) and Home Isolation (HI) Quarantine Guidelines, in area of the Northeast, Thailand. The total filled questionnaires number of 3,560 persons, recipients were responded the online survey. For the data collection tools, "Subjective Well-Being Scale".²⁰ In Qualitative segment of the study, unstructured interviews were conducted in LQ & HI, as purposive sampling technique for in-dept interviews. Theses 58 persons were major host locations, during March 2020 to June 2022. Qualitative data were analyzed by content analysis. In addition, quantitative data was analyzed by descriptive statistics and evaluated in subjective well-being, whit conducted a set of multiple regression.

This study was conducted in accordance with the Declaration of Helsinki. All the participant provided informed consent before participating in the study. In addition, this study was approved by Mahasarakham University ethics committee for research involving human subjects (Approval number: 217-208/2021).

Results

The main goal and life style of elderly in Thailand were 1) The elderlys were depressed because they were left alone. 2) They were disturbed by health problem, so they want to controversy and protect to community disease. 3) They want to rest from hard work after

retirement, and want to a great caregiver.

Quality of living of elderly in Thailand

We have found that elderly have a good quality of life while in Thailand, during and post COVID-19 outbreak on LQ and HI, with evident database to support as follows: 1) living in area of the Northeast, Thailand so comfortable, 2) having business partnership, 3) living peacefully in community of Thailand, 4) less complicated with the law, 5) having housing permanently, 6) 24-hour food service, 7) good travelling network, 8) modern acknowledge, and 9) disseminate the Northeast, Thailand culture.

The oral health problem of elderly during and post COVID-19 outbreak

The most of oral health problems were loss of attachment of 88.30%, denture wearing of 78.45%, pocket depth of 78.20%, and a number of extracted teeth, gum bleeding, pathological teeth mobility, and oral dryness, respectively (Table 1)

impact issues	percentage (%)
Number of extracted teeth	64.48
Gum bleeding	54.42
Pocket depth	78.20
Loss of attachment	88.30
Pathological teeth mobility	52.10
Denture wearing	78.45
Oral dryness	56.58

Table 1. The oral health problem of elderly during Covid-19 pandemic.

The well-being of elderly during and post COVID-19 outbreak.

While the Covid-19 pandemic continues to rage in parts of the world. Elderly realized that they were not safe. Especially, despite this, 43.3% felt that COVID-19 had a significant negative impact on their dental and mental health; issues identified included changes in policies and practice, workload and inadequate senior support. During the pandemic, 84.1% of respondents reported feeling anxious to some extent, with 48.1% identifying as moderately or severely anxious. Furthermore, the impact of the coronavirus pandemic on well-being has been negative emotional symptoms, serious with studies reporting high prevalence rates for these. Isolation, reduced social contact, duration of quarantine, and restrictions. Which are the characteristics of a lockdown, played an important role in the well-being of foreigners in law. Countries have to be aware of this situation

and developmental support strategies to mitigate theirs (Table 2).

impact issues	percentage (%)
1) uncomfortable duration of quarantine	54.20
2) negative impact on their physical and mental health	43.30
3) uncertainty in policies and practice	67.90
4) inadequate support	84.10
5) feeling anxious	48.10
6) negative emotional symptoms,	75.20
7) isolation and reduced social contact	45.50

Table 2. The impact of Covid-19 pandemic to elderly.

The predictor variables	Unstandardized Coefficients		Standardized Coefficients	t	p<value
	B	Std. Error	Beta		
(Constant)	57.367	3.394		16.902	.000**
Oral health	-.024	.035	-.020	-.707	.048*
physical and environment	.000	.000	-.071	-2.633	.009*
negative emotion	-.840	.037	-.665	-22.981	.000**
social support	.253	.034	.222	7.498	.000**
socio-economic	.126	.025	.149	4.980	.000**

R=0.769, Adjusted R²=0.588, Mean Square=10794.4751049431, F= 167.189

Note. *(p<0.05) ***(p<0.01)

Table 3. The factors effected to SWB of elderly among Covid-19 Outbreak.

The factors effected to subjective well-being (SWB) of elderly among Covid-19 Outbreak.

Summary of a linear model for predicting SWB based on whether the age, socio-economic, environment (physical factors), and social support, together they were predicted SWB of 58.8% (Adjusted R²=0.588, F= 167.189, p< 0.01). Including internal factors were oral health, negative emotion, and external factor was social support, they were a significant predictor of subjective well-being. Furthermore, we found that age and negative emotion were negatively correlated with SWB ($\beta = -.020$, p< 0.05; $\beta = -.665$, p< 0.05). Therefore, The external factors were socio-economic factors affecting subjective well-being, such factors are associated with the place of the person in society ($\beta = .149$, p< 0.01). In short, these are the factors that depend on individual reputation in the community. It can directly affect the health of an individual. In addition, some environment and physical factors, it includes various conditions, diseases, and illness, was affected to SWB, ($\beta = -0.071$, p< .05). Then, we used adjusted R² describes the strength of a model fit, and it was a useful tool for evaluating which predictors were added value to this model (Table 3). The multiple regression equation can be used to estimate SWB as a oral

health, socio-economic, environment and amount for SWB as follows:

$$Z_{(SWB)} = 57.367 \text{ (oral health)} - 0.020 \text{ (negative emotion)} + 1.149 \text{ (socio-economic)} - 0.071 \text{ (environment)}$$

Discussion

The results of the study can be summarized as the link of the reason for the elderly problem, living conditions, the benefits, and the need for support from the Thai government with details as follows:

Need and Suggestion of elderly in Thailand for support from Thai government.

- The body of organizations supports the information on legal services because they are uncomfortable and feel insecure.

Problems of elderly in Thailand among Covid-19 Outbreak.

-The government does not update the data of elderly and not cover health insurance.

-They did not comfortable from the law on the lockdown, and there is no organization to support them.

-Communication is not comfortable and facilities for old men are not good.

-Agent will take advantages from the elderly.

-Unable to take activity on the Thai culture and understanding about risk of COVID-19.

-There were more senile elderly in rural, but low service on the dental health.

The suggestion of elderly in Thailand

1. Government should take care of more safety for the elderly.

2. Government should have measures of legal that protect the equality of the elderly.

3. Government should have measures for protecting data systems that they can check and assure them the accurate and fastest when they have an unsafe situation and risk of COVID19.

4. Government should help and build understanding about the legal for the elderly.

6. Using benefits from the culture, modern acknowledge of elderly to change and have a more modern life.

7. Supporting information from a network of elderly for the relatives of the elderly.

8. The government should legislate the law for more security and good quality of life for the elderly among Covid-19.

The important data of this study present that have multipoint in oral health problem and manney impacts. Such as, number of extracted

teeth, gum bleeding, pocket depth, loss of attachment, pathological teeth mobility, denture wearing, and oral dryness. In addition, it effect to subjective well-being (SWB) of elderly among Covid-19 Outbreak. Similar results were effected to the high cost of dental treatments, lack of knowledge related to oral care, mobility difficulties and the fear of dental interventions could be factors associated with lower access to dental care. Besides that, the lack of interest of dentists and dental practitioners in providing dental services may further aggravate the oral status of institutionalized elders.^{21,22,23}

Oral health can influence mental health in a similar way mental health has an impact on oral health and the results of treatment. Assessing depression and oral health condition. Because, the researchers demonstrated a correlation between poor health condition and depression.^{24,25} Similar results were obtained by Dahl et al who demonstrated that higher levels of psychological distress can influence the oral health of the elderly independently of other factors, such as smoking and having reduced number of teeth.^{26,27} Therefore, numerous oral manifestations of COVID-19 have been reported in the literature. Common oral lesions in COVID-19 patients included ulcerations, xerostomia, dysgeusia, gingival inflammation, and erythema. Among them, oral ulceration is the most frequent finding and is present as various but distinct patterns. Widespread ulcerations accompanied by necrosis were observed in the more severe and immunosuppressed older patients.^{28,29}

The important data of this study present that multipoint in emotion and intersection of cultural diversity and mental health has differences in cultures have a range of implications for mental health have to work with clients that are often from cultures other than their own. practice, ranging from the ways that people view health and illness, to treatment-seeking patterns.^{30,31} It is perhaps useful to separate the notion of one's subjective well-being from objective or external factors that drive or influence well-being such as material (e.g. housing) and financial (e.g. income) factors. Subjective well-being concerns peoples' self-reported assessment of their own well-being;- an individual's appraisal of a person's environmental circumstances, a person's behavioral response and the subjective consequences of that process.³²

The important finding of this study is COVID-19 negative impact on their physical and mental health, and negative emotional symptoms. That is in accordance with,²⁸ it was discovered that perceived social support predicted of subjective well-being. In addition to this, it was determined that perceived family support predicted subjective well-being, and on the other hand the support which was perceived towards a special person and perceived friend support did not predicted subjective well-being. Individuals differ in their use of emotion regulation strategies such as reappraisal and suppression, and these individual differences have implications for affect, well-being, and social relationships.³³

Policy implications: While the Covid-19 pandemic continues to rage in parts of the world. Thai ladies and foreigners realized that they were not safe. Especially foreigners traveled to and from international.³⁴ So, the government should legislate the law for more security and a good quality of life for Thai ladies and foreigners among Covid-19. Because, the COVID-19 pandemic is having far reaching effects into the mental well-being of individuals in society. Therefore, authorities must take into account not only the economic effects of social isolation, but the mental impact on the community also, implementing appropriate measures such as expansion of the "safe spaces" model, to help those suffering domestic abuse and the most vulnerable, preventing further detriment.³⁵ During the period of the COVID-19 outbreak and post the COVID-19. It is a crisis for the elderly, due to less access to services. Therefore, oral health education is consistent with the most important oral problems in elderly.^{36,37} Because, it can help create warmth and mental health support for them.

Conclusions

This study showed that the oral health problems of the elderly were loss of attachment, denture wearing, pocket depth, number of extracted teeth, gum bleeding, pathological teeth mobility, and oral dryness, respectively. In addition, oral health, socio-economic, and environmental factors predict subjective well-being elderly's among Covid-19 Outbreak, and post Covid-19.

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Declaration of Interest

The authors report no conflict of interest.

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