

Competencies in comprehensive dental care from advanced general dentists' perspective

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Objective: Advanced general dentistry has long been practiced in Thailand; however, crucial keys to accomplishing successful dental treatment are not explicitly discussed. This qualitative study aimed to examine common competencies of advanced general dentists who provide comprehensive healthcare in Thailand.

Material and Methods: We conducted an in-depth interview on twenty dentists who have been practicing general dentistry for more than one year after completing residency training. Six male and fourteen female dentists were selected based on the purposive sampling technique.

Result: We extracted five main themes representing five competencies necessary to perform quality comprehensive dental care. They were denoted as 5E skills (5Es), which are Empathy (being kind, patient, and open-minded), Embrace (understanding the patients through eyes and mind), Empty (being a good listener with an empty mind), Exchange (properly interacting with the patients), and Expertise (in dental skills). The 5Es are consistent with the current trend of patient-centered care.

Conclusion: A crucial key in comprehensive dental care is the ability to see and take care patients as an individual human being. It is the ability to appropriately apply multidisciplinary knowledge to take care patients with different backgrounds that advanced general dentists should have. Following the increasing trend of patient-centred healthcare, new general dentists can apply the 5E skills as a guideline to practice comprehensive dental care.

Keywords: advanced general dentistry, comprehensive dental care, holistic approach, patient-centred healthcare

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Introduction:

The advanced education in general dentistry (AEGD) program has been introduced in the USA since the 1980s [1]. The program initially aimed at mastering advanced skills in various fields of clinical dentistry necessary for taking comprehensive care of patients [1-3]. In Thailand, advanced general dentistry has been established for over two decades.

The royal college of dental surgeon of Thailand currently approves only 6 advanced general dentistry programs throughout the country [4]. The objective outcome of most programs includes comprehensive dental care and a holistic approach [4]. However, the meaning of comprehensive dental care is still widely under debate among the Thai dental society. On one hand, comprehensive dental care means a general dentist should be able to provide all kinds

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of specialized dental works such as endodontics, periodontics, oral surgery, restorative dentistry, preventive dentistry, orthodontics, and pedodontics. On the other hand, comprehensive care should focus on the entire well-being of the patient. In other words, the latter leans toward the idea of a holistic approach.

The office of higher education of Thailand defined the meaning of comprehensive dental care as dental care that provides treatment to improve and maintain the optimal oral health of a patient [5]. It is not necessarily suggested that an advanced general dentist must be able to do everything by him/herself. The dentist can advise, seek advice, or refer the patient to other dentists for any further treatments. According to this definition, comprehensive dental care uses the holistic health care concept in that a dentist should consider all aspects of the patient from biological and psychological background to socio-environmental factors (biopsychosocial model) [6]. The service should cover prevention, diagnosis, treatment, recovering, and maintaining oral health. Moreover, the dentist should have multidisciplinary knowledge such as Biology, Psychology, Epidemiology, and Behavioural Science. Wongnavee *et al.* 2020 similarly explained comprehensive dental care with four phrases: kindness care, holistic care, patient-centred care, and multidisciplinary treatment [7]. Likewise, the Thai Dental Society stated that ideally, an advanced general dentist has a responsibility to take care of a patient completely and continuously, aiming at the best benefits of the patient to improve and maintain the patient's long-term oral health [4].

Despite a clear definition of comprehensive dental care from various institutes in Thailand, whether or not the general dentist in Thailand is aware of those competencies remains unanswered. This study attempted to find the meaning of comprehensive dental care beyond just the theory or ideal concepts that appeared in the curriculum. Understanding the competencies will certainly

improve teaching concepts and develop an effective curriculum to systematically train dentists to provide efficient, comprehensive dental care in the future.

Materials and Methods

This qualitative study aimed to study essential competency in providing comprehensive dental care. An in-depth interview was employed to increase the chance of getting truthful information from participants. This study is approved by the Ethics Committee on Human Research, Mahidol University, Thailand under the process number MU-DT/PY-IRB 2018/032.0106.

Participants

An inclusion criterion for participants was being a dentist who graduated from the residency training program in advanced general dentistry and are currently working in Thailand for more than one year since graduation. The purposive sampling was performed by considering the participants' working experience as an advanced general dentist. Twenty advanced general dentists participated in this study voluntarily and anonymously. The descriptive information of participants is summarized in Table 1.

Procedures and data analysis

An in-depth interview was selected as it has a flexible structure allowing deep exploration of participants' attitudes and perspectives [8]. The data collection was conducted during October 2018 till March 2019. Although there were no predetermined questions, the interview kept focusing on the participants' experiences, including problems and solutions in treating the patients in the context of comprehensive dental care. Voice recording was conducted during the interview with consent from participants. Data was then transcribed by a researcher (KW). Data collection was conducted until reaching

Table 1 Descriptive demographics of participants

Demographics	Number of participants (n=20)
Sex	
Male	6
Female	14
Working experience in advanced general dentistry	
1-3 years	4
4-6 years	4
7-9 years	6
>10 years	6
Working place	
University	4
Private clinic	4
Private hospital	1
Community hospital with 10-120 hospital beds	8
Community hospital with 120-500 hospital beds	1
Community hospital with >500 hospital beds	2

saturation, where new data do not lead to new development of information [9]. Data from each participant were analyzed independently using the content and thematic analyses by two researchers (SM and KW) to ensure the validity and reliability of interpreted results.

Results

Common competencies of advanced general dentists

We discovered that the participants who are currently providing comprehensive dental care services in Thailand showed five common competencies (Figure 1). All competencies have been named with simple words to make them easy to remember as 5E skills (5Es): empathy, embrace, empty, exchange, and expertise. Table 2 shows the number and example of quote statements in each competency.

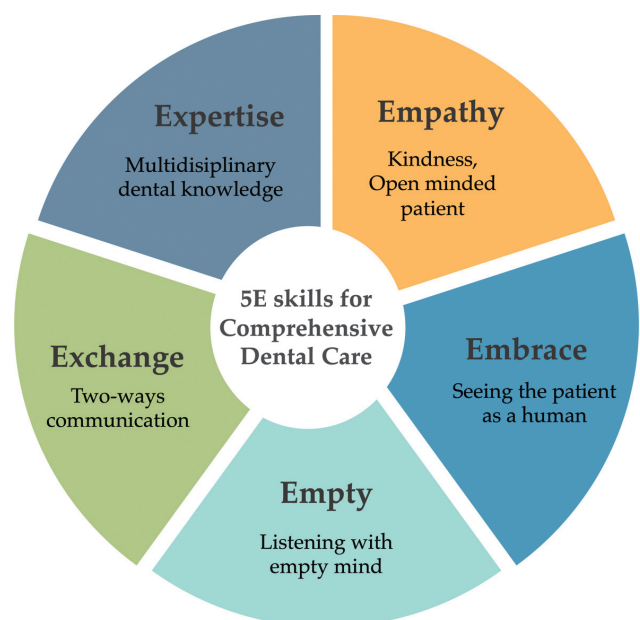


Figure 1 Summary of 5E skills necessary for accomplishing comprehensive dental care.

Table 2 Number and example of quote statements in each thematic category

Thematic category	Number of quote statements	Participant annotations
1. Empathy (Kindness, patient, and open-minded)	14	<ul style="list-style-type: none"> • In the past, I treated my family members worse than my patients. Sometimes I yelled and raised my voices against my family members or even unknowingly said bad things that hurt their feelings. Maybe because of both Vipassana meditation and work, I have been better. Whenever someone at home has a problem, we will help find the best solution without judging them. • Open-mindedness can create trust between you and your patient. • There was a patient who was sent to me because of his chronic periodontal disease. His gum was endlessly inflamed, not because of either poor maintenance or tartar but because it was overdone. I asked him to carefully think about it. In fact, he has a very little oral problem, but so many disturbances in mind. I talked to him as I normally talk to other patients. He said to me that he felt like I understand him. Honestly, I did not talk that much to make him trust me. He said that he was very happy to meet me. I wish to help him get better physically and mentally.
2. Embrace (Seeing patients as who they really are)	11	<ul style="list-style-type: none"> • A patient has poor oral health. We should not jump to conclusions and blame him for not taking care of this own teeth. We have to look at the bigger picture that he has to work until late at night, taking care of his family, so he does not have time to take care of himself. • I have been trying to balance the patients' needs, budgets, and appropriate treatments. Every single patient has his/her best suitable solution, though it might not be our best solution.

Table 2 (continued.) Number and example of quote statements in each thematic category

Thematic category	Number of quote statements	Participant annotations
3. Empty (Being a good listener with an empty mind)	7	<ul style="list-style-type: none"> I had a teacher patient who had dentophobia. During the first visit, I did not do any treatment but spent most of the time talking and listening to him. We talked a lot until he started to feel that he would like to give it a try. Then we started the treatment. I did everything he needed. Afterward, he called me on the phone to thank and told me that he loved the way I asked whether or not he is in pain during the operation. Nobody had never asked him. Some patients chose to visit us every three months even though they already have good oral condition. They just wanted to speak with us. They were looking for someone who can spend time listening to them. They just came to talk and go back home happily
4. Exchange (Two-way communication)	14	<ul style="list-style-type: none"> A dentist must be willing to open mind and speak frankly with the patients. We can design an appropriate treatment plan only after obtaining details from each patient. I usually refer the patient to specialists if the scope of care exceeds my capabilities. I then continue to take care of the patient after the specialized treatment. Advanced general dentists are in a good position to collaborate with other practitioners in order to support patients. For example, in dental school, welfare social workers can help patients get to the root of their problems. As a result, the patient can access more advanced treatment options without concerning much about the expense. This allows them to enjoy sustainable oral health without any financial worries.
5. Expertise (In making a decision and dental treatment skills)	10	<ul style="list-style-type: none"> Dental treatment is both science and arts. Libero is a fast and smart player who plays an important role in defensive games. See it wider, listening instead of hearing, and treat the patient with heart

1. Empathy (Kindness, patient, and open-minded)

It can be implied from the interview that participants have shown their kindness, compassion, and mental stability in providing dental service. Dental care would be completely successful if dentists express their strong compassion toward patients while being calm and diligent. Dentists should be understanding people appreciating patients as who they are. Being an understanding person helps the participants keep calm and improves their problem-solving skills. Listening without judging and jumping to conclusions is another criterion for being successful in comprehensive dental care.

“Open your mind; information will flow to you,”
Dentist Y.

Open-mindedness also helps dentists truly understand the overall context of patients. Being able to truly feel themselves and their patients without any bias is one of the common competencies we found among the participants. This is actually the continuation of being open-minded. Being patient and having an open mind long enough, the dentists would feel and understand the true nature of their patients. It developed trust and relaxation on both sides. The dentist does not only take good care of the physical health but also the mental conditions of the patients.

2. Embrace (Seeing the patients as who they really are)

Embrace comes from experiences, thoughts, and beliefs that a dentist has throughout his/her life. Patients also have their own embrace, which is not necessarily similar to that of the dentist. Therefore, the dentist should expand his/her embrace to be able to see and understand the patient from the patient's perspective and provide the most suitable treatment.

Embrace expansion in this context means expanding the visual perception from just the oral cavity to include the whole package of the patient. In other words, the embrace should be expanded from seeing only the disease to a person who carries the disease, from focusing only on the treatment to finding the root of the disease to be able to prevent the disease from reoccurring, and from just one best treatment to provide alternative treatments for the patient to choose for his/her best.

Embrace in this sense is thus seeing and understanding the patients as who they really are. Illness and treatment are not the only things we should concern about, but we as a dentist should understand each patient's context, physical, mental, and socioeconomic conditions. Noticing patients' facial expressions, body, and other non-verbal languages, the dentist would be able to give the most suitable and timely treatment plan for the patient that may not necessarily be the best solution for the dentist.

“A patient came to me with a broken tooth. He had no problem paying the treatment fee. However, after I talked to him and saw his facial expressions, I found that he had troubles at home and was not mentally ready to receive the treatment. So, I changed the treatment plans by giving him only pain-relief pills and asking him to come back when ready. He was very happy without any treatment at all.”
Dentist N.

3. Empty (Being a good listener with an empty mind)

Every single dentist has his/her own unique experience, knowledge, skills, and attitude. They cannot and should not be used as a base for judging the patient who may experience things in life differently. Dentists are trained to analyse the situation, examine the oral condition, and

diagnose the disease. These processes cannot be accomplished accurately and efficiently without having unbiased, correct, and complete information from the patient. The word “empty” in this sense thus means free from prejudice and biases during the communication and treatment. The emptiness of the dentist helps establish trust with the patient, which in turn results in obtaining more information that the patient might be afraid to tell a stranger. Getting insight into the patient’s situation will later help the dentist design the most suitable treatment and prevention plan for the individual patient.

Just listening to the exact words that the patients say makes the treatment more satisfying to the patients.

“Listen to what the patients want to say first. Listen to their opinion. What would they really like us to help?” Dentist T.

A patient who has dentophobia can be more relaxed and gain trust after a good conversation with the dentist who is a good listener (Table 2). Listening without bias helps the dentist see the patient as who he/she exactly is and makes the dentist fully understand the patient without any distortion. This listening skill is of importance not only in dental treatment but also in life. Being a good listener will help the dentist listen more to others including those in the family and understand more. The dentist with an empty-mind listening skill will be able to fully respect the different opinions and start communicating with others faithfully.

4. Exchange (Two-way communication)

A dentist is an expert in oral disease, but to treat the patient and prevent recurrence effectively, it is necessary to know the patient’s situation, in which the patient is an expert. On the other hand, although the patient is an expert in his/her own life, the patient may not have sufficient oral knowledge. The patient needs to gain correct knowledge

concerning the oral disease and treatment from the dentist to be able to select the treatment plan most suitable to the lifestyle and conditions. The exchange between the dentist and the patient is thus one of the most important competencies for the dentist who desires to help the patients take care of their own oral health.

A dentist with good communication skills can easily build a good relationship and trust with the patient. He/she will consequently be able to explain the treatment plan to the patient smoothly. The participants explained that a good relationship with patients affects the treatment explanation and recommendation. It helps coordinate with the patients.

“When we want patients to change their habits, it would work better if we have a good relationship with them. It does not mean that the patients have to listen to everything the dentist said, but it is more like the dentist and patient working together for the better oral health.”

Dentist N.

Exchange is not crucial only between the dentist and the patient, but also between the general dentist and the specialized dentist as well. When the case becomes complicated, the general dentist may need to consult or even refer the case to a specialized dentist. Communication and information exchange between both dentists should be carefully and thoroughly conducted in order to reach the common treatment direction that is perfectly suitable for the individual patient.

Moreover, the meaning of exchange is extended to cover the exchange among people in the multidisciplinary team (Table 2). For example, the dentist is one of the multidisciplinary team members to take good care of elderly people. Medical doctors, dentists, nurses, nutritionists, physiotherapists, social welfare workers, etc., need to communicate/exchange with each other to obtain the refined knowledge that will improve

the welfare of elderly people. Therefore, the dentist is not a person who only takes care of oral disease, but also a member of the healthcare team performing holistic care to people in the country.

The purpose of the exchange is to collect all information from experts in various fields with different points of view that would be most beneficial to the patient. The exchange is based on respect to different opinions and the realization of our narrow expert field. There are many other pieces of knowledge of which we have never heard. Keeping this in mind will help the dentists communicate naturally well with patients, other dentists, and people from different disciplines and eventually expand the perspective from the oral cavity to the whole human being.

5. Expertise (in making a decision and dental treatment skills)

Among five common competencies, expertise might be the only skill that is closely related to the dental profession. Ideally, general dentists should have multidisciplinary knowledge in order to see through the entire treatment process that connects many fields of dentistry. Expertise does not only refer to the professional dental skill but also refers to the capability to apply all of the above skills to use practically in the treatment. In other words, the participants suggested that the dentists should be able to create a complete treatment plan from scratch and have enough skill set to provide dental treatment in various fields while understanding the overall context of the patients.

The treatment was not always ended at one dentist. The dentist should be able to make a clear decision if the patient needs to be referred to other experts. If the case exceeds the capability of the dentist, he/she would refer the patient to the other specialists accordingly for the patient's benefit.

"In a complicated case, for example, cavities that require root planing, some dentists have troubles talking to patients or patients who have very poor oral health. In some difficult cases that require multidisciplinary treatment, I could still provide good care to the patients even though there was no specialist in various dental fields at my small community hospital. My patients do not need to travel far to get their treatments at the provincial hospital."

Dentist T.

The participant also said that an advanced general dentist who provides comprehensive dental care services is like a libero in a volleyball team (Table 2). It is implied that the advanced general dentist, the first checkpoint that the patient meets, can provide multidisciplinary treatment and can also be a good supporter that refers the patient to other specialists when needed.

Discussion

This research found that patients can sense empathy, care, and support from the dentists, resulting in more trust and a better relationship between the patients and the dentists. In addition, it will create good coordination leading to successful treatment [9,10]. The first important characteristic that helps a dentist understand and realize the actual needs of a patient is empathy [11,12]. If the dentist keeps his/her mind open, he/she will be able to listen to what the patient really tries to communicate. This is well in agreement with the I-in-You (Empathic) level in the theory of deep listening [12, 13]. I-in-You is the listening level that creates understanding in others without prejudice and bias [12]. It can be achieved by observing the facial expressions, eyes, and body language of the patients during examination [14]. The patients will sense the good intention of the

dentist who creates a free space allowing them to speak up freely to their needs. Jawale *et al.*, 2011 [15] and Dalaya *et al.*, 2015 [16] stated that, in modern education, soft skills such as the interaction between the dentist and the patient become increasingly important to succeed in the dental business. Although hard skills like knowledge in dental treatment are undeniably crucial, a good dentist should be able to comply with both competence and care for the patients [17]. This will make the dentist realize and clearly understand the requirements, problems, conditions, restrictions of each patient, leading to a suitable and successful treatment which is an ultimate goal of comprehensive dental care [15].

Our result of the 5Es is summarized for simplicity in Figure 1. In fact, the 5Es are similar to patient-centeredness, which is the trend of the 21st-century health care system [18]. The idea of patient-centred care is to take the patient's individual needs or preferences into account of medical treatment [19]. Patient-centred care is composed of seven dimensions: 1) respecting patients' values, preferences, and needs, 2) coordinating and integrating care, 3) continuity and transition among different health experts, 4) information, communication, and education between patient and care providers, 5) physical care, 6) emotional support, and 7) family-and-friend involvement [18, 20]. Each dimension of patient-centred care needs different skills to achieve. Figure 2 shows

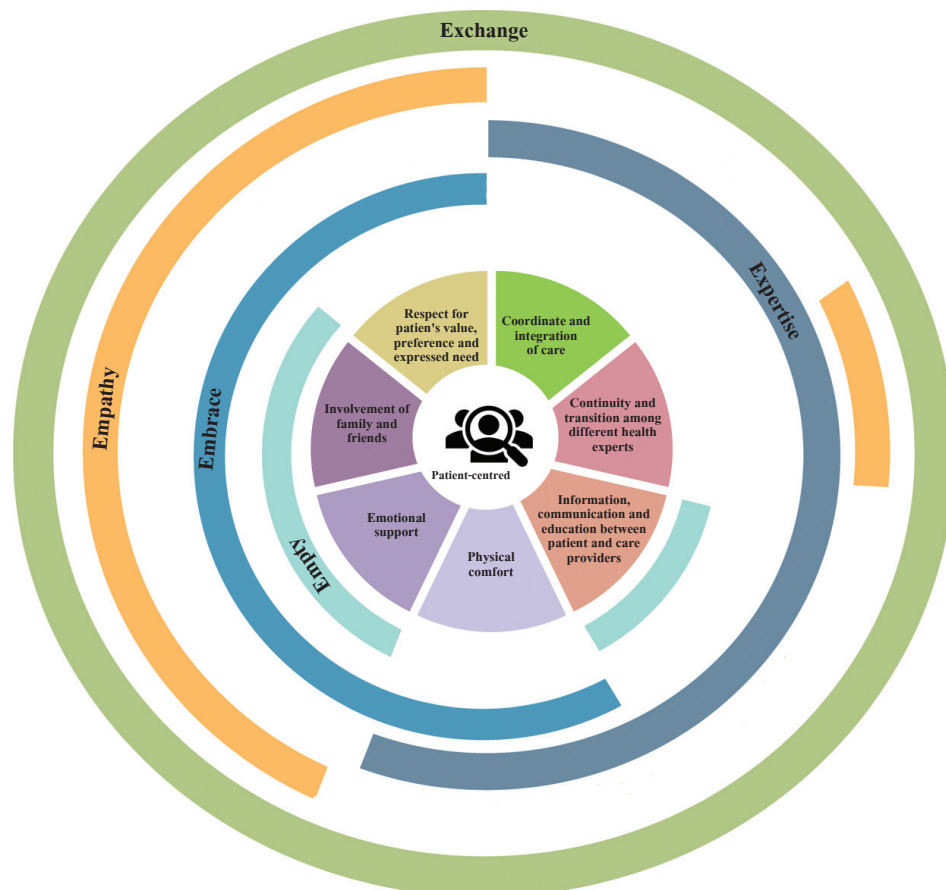


Figure 2 5E skills involvement in the 21st-century patient-centred care system.

the plausible correlation between the 5Es and the related patient-centred care. Exchange both between the patient and dentist and among the dentists and physicians with different fields of expertise is required in all dimensions. Empathy and embrace are responsible for the dimensions that involve the personal space of the patient; i.e., needs, emotional support, and family-and-friends relation. In contrast, expertise can be related to integrating care, communication, physical comfort, and transition of care from one to another. Lastly, an empty mind is of importance in extracting truthful information from the patients and their friends and family. Following the 5Es to develop the patient-centred care system will lead to patient satisfaction, patient satisfaction depends on emotional care, skill and treatment providing, treatment according to patient needs, and communication with the patient [19].

It is, however, noteworthy that the 5Es are solely scrutinized from the experiences and points of view of dentists. It will be of great interest to learn about comprehensive dental care from the patients' perspective and the reason behind the patients' decision to receive dental services. Moreover, there should be further studies on developing these five common competencies among advanced general dentists who provide comprehensive dental care so that we can teach and help dental students to develop these competencies in a dental school.

Conclusion

An advanced general dentist who provides comprehensive dental care requires more than multidisciplinary knowledge in dentistry. Human skills including human relation is also an important requirement. All essential competencies are categorized as 5Es: empathy, embrace, empty, expertise, and exchange. Listening to the patient with open-minded is a key of comprehensive dental care. Considering the overall situation of the patient rather than focusing on the dental disease will lead to a clear treatment procedure that makes the successful treatment and the happy patient simultaneously.

There are a small number of dentists in the rural areas of developing countries, especially the specialist ones. Advanced general dentists, who can take care dental patients holistically, are thus important. The essential competencies of advanced general dentists we reported in this work are those extracted from experienced advanced general dentists. It would be very beneficial to develop the curriculum or training courses that can embed these competencies into the dentists.

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Conflicting Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Authors' Contribution

Conceptualization, C.T. and N.B.; Methodology, K.W. and N.B.; Validation, S.Y. and N.B.; Investigation, S.M. and K.W.; Formal analysis, S.M., K.W. and S.S.; Writing-Original draft preparation, S.M. and S.S.; Writing-review and editing, S.Y., C.T. and N.B.; Visualization, S.S.

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