

The Impact of Contemplative Practice in Dental Education: A Qualitative Study in General Dentistry

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ABSTRACT **Aim:** This study explored perceptions of dental postgraduates regarding the impact of contemplative practice in a patient care aspect. **Materials and Methods:** The qualitative research approach using semi-structured interview was employed. Postgraduate students from the General Dentistry Residency Training Program were selected by purposive sampling by considering sex and working experience. The retrieved data were transcribed using a verbatim technique and analyzed using framework analysis. **Results:** There were 12 students participating in this research. The retrieved data were analyzed and categorized into two main themes, which were mindfulness and humanized patient-centered care paradigm. Mindfulness can be categorized into four subthemes to represent its required skills, including concentration, deep listening, emotional regulation, as well as critical thinking and problem-solving skill. There were six subthemes for humanized patient-centered care paradigm, which were understanding in patients' context, development of individualized comprehensive treatment planning, treatment with humanization and compassion, management with psychological integrated care, rapport establishment with patients, and good attitudes toward special care needs patients. These skills are considered necessary for patient-centered dental practice, which could be expected from the learning process through contemplative practice. **Conclusion:** This research supports the implementation of contemplative practice in dental education, as the data demonstrated the positive impact of contemplative practice in both personal and professional perspectives. These included the cultivation of mindfulness and other relevant skills, which were required for humanized patient-centered care in dental practice.

KEYWORDS: *Comprehensive dental care, contemplative practice, dental education, humanized care, patient-centered care*

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INTRODUCTION

Dental students and professionals appear to be struggled from various stressors such as examinations, workloads, harsh criticism, difficult clinical situations, deficient patient–dentist relationship, and personal problems. These could lead to physical, psychological, behavioral, and social problems, including burnout, lack of well-being, and impaired academic/job performances.^[1-3] These distresses are considered as key factors of empathy decline, so stress

management and empathy training should be integrated in any curricula. To achieve these objectives, several solutions have been implemented such as mindfulness training, creative art and writing, interpersonal skill, didactic content, patient interview, and role play.^[4,5] The execution of these strategies among healthcare students

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and professionals seems to have positive impacts on the reduction of stress and anxiety, as well as the improvement of self-examination, communication skill, and empathy level.

Empathy and interpersonal skills currently can be considered as necessary for healthcare professionals. These skills could support patients to explicitly describe their symptoms and concerns; accurate diagnoses and suitable treatment modalities were then constructed.^[6] Moreover, empathic communication can improve patient compliance and therefore positive treatment outcomes can be expected, resulting in the improvement of patient satisfaction and physician–patient relationship.^[5,7] Unfortunately, several studies demonstrated a decrease in empathy among undergraduate dental students.^[8] This issue should be taken into concerns, as there appears to be negative impact on a humanized care paradigm in dental profession. This leads to a rising trend in the implementation of contemplative practice in healthcare education and continuing studies^[9,10] where the focus is move to the quality of personal and professional life as well as the efficacy of patient care.

Contemplative practice allows learners to experience contemplation and introspection through sort of mindfulness based-interventions (MBIs); namely, meditation, journal writing, deep listening, and volunteering.^[11] There is evidence demonstrating positive impacts of the contemplative practice; including decrease of stress, improvement of mindfulness, concentration, cognition, emotional regulation, academic/job efficacy, and cultivation of empathy.^[12-15] Consequently, a dental program may consider to include contemplative practice to enhance cognitive function and interpersonal skills.

Despite the benefits of both personal and professional development, there are surprisingly few literatures of contemplative practice in dental education, compared with medicine and nursing.^[16] According to current evidence, most of the studies regarding impact of contemplative practice on stress reduction and empathy improvement were conducted using quantitative methods.^[9,12] However, there may be difficulties in constructing comprehensive explanations of association between contemplative practice and humanized care paradigm with a quantitative research design. Consequently, this research was conducted qualitatively to evaluate the impact of contemplative practice on dental practice in an aspect of patient care among dental postgraduates.

MATERIALS AND METHODS

RESEARCH DESIGN

This research employed a qualitative research design to comprehend social phenomena, human behavior, and transformative processes. A semi-structured interview was selected, as flexibility of open-ended questions allowing for discussion and deep exploration from participants' perspectives.^[17] Topic guide was constructed by reviewing and adapting of literatures,^[13,18,19] followed by the discussion among the researchers and experts. Voice recordings and field notes were conducted in each interview with a consent from participants. Data were transcribed using a verbatim technique by a researcher (PJ). The formal analysis was performed using a framework analysis by a researcher (PJ). The choice of framework analysis was chosen, as it offers transparency of the analytic process,^[20] allowing two researchers (NB and KS) to validate the analytic process to ensure that the research is valid and reliable.

A SETTING OF CONTEMPLATIVE PRACTICE IN THIS RESEARCH

The concept of contemplative practice has been applied into the “Dental Management for Geriatric and Special Care Needs Patients” course since 2018, with purposes to enhance self-insight and empathy and to introduce humanized patient-care paradigm. This course has been conducted every 2 years, so there had been two batches of enrolled students (academic year 2018 and 2020). Fifteen 3-h classes (twice a week) were arranged to deliver learning content covering basic knowledge about aging processes, systemic diseases, patient disabilities and managements, mindfulness training, as well as personal and interpersonal skill development.

A variety of teaching and learning approaches was designed to assure that all students could achieve the learning outcomes. Mindfulness-based interventions performed in the course were body scan, open-meditation, journal writing about pleasant and unpleasant events, drawing, games/cards application, and dialog participation with colleagues and patients. These activities help clarifying unaware thoughts and emotions and then eventually developed self-insight. After every class, they were asked to share learning experiences and write reflexive journals.

PARTICIPANT SELECTION

There were 26 postgraduate students from the General Dentistry Residency Training Program who completed the course (12 and 14 attendants in academic year 2018 and 2020, respectively). A purposive sampling was performed by considering sex and working experience in dental profession. These two factors were taken into the emphasis of participant selection, as there is evidence of sex-related empathy differences, where female tended to

be more empathic than male^[21] and previous experiences appeared to have impacts on learning processes.^[11]

RESULTS

There were 12 students who participated in this study. The demographic data of the participants are demonstrated in Table 1. Following the qualitative data analysis, two main themes emerged, which were mindfulness as a basis of personal development and humanized patient-centered care paradigm.

MINDFULNESS AS A BASIS OF PERSONAL DEVELOPMENT

Mindfulness appeared to be the most important skill, achieved from contemplative practice, which allowed the participants to stay in the present moment. The body scan sessions allowed students to focus and feel throughout the body in several postures. Moreover, they were guided to be aware of surrounding objects or sounds in open-meditation sessions. They were getting more delicate on physical sensations, thoughts, emotions, and needs, resulting in physical and mental relaxation. “Staying in the present moment” could be trained in everyday activities such as walking, eating, talking, and sleeping. Following the analysis, several mindfulness-based skills were cultivated among participants, which could be divided into four subthemes, which were (1) concentration, (2) deep listening skill, (3) emotional regulation, and (4) critical thinking and problem-solving skills.

Concentration

Concentration is an ability to emphasize on task at hand in a particular amount of time. It was considered as a necessary skill for having intentionally disregard any distractions in order to have an attentive and active mind. Therefore, it could improve job or academic efficacy.

“While I was working, I was interrupted by games on smart phone. And it wasted abundant of my time. Recently, I can keep concentrating on my task...”

Participant 1, male, 4 years of experiences

Deep listening skill

Deep listening was perceived as important in strengthening communication skills. This level of listening could foster empathy and compassionate behaviors. Non-judgmental environment allowed students to learn from differences, which could lead to understanding and respecting diversities. Furthermore, participants reported that they had better comprehension of verbal and non-verbal messages.

“Recently, I’ve thoroughly looked at my mom, noticed her body language, and her facial expression. Then I knew she needed my help and support.”

Participant 2, male, 5 years of experiences

Emotional regulation

Participants reported that they gained abilities to be aware and to accept different emotions such as sadness, guilt, anger, anxiety, stress, or happiness. They were likely to understand the impermanence of positive and negative events; therefore, they tended to not immediately discard the negative ones. In contrast, they tried to introspect and self-reflect themselves, which could lead to the promotion of an emotional balance and diminishing misbehaviors.

“I could instantly detect my sorrow and I realized that was because of what the others said to me, then I could manage my emotion better.”

Participant 3, female, 6 years of experiences

Critical thinking and problem-solving skill

Journal writing about pleasant/unpleasant events and dialog sessions appeared to be the key interventions to encourage the ability to investigate themselves, other people, and problems from different perspectives without prejudice. It could enhance not only empathy but also rationally systematical thinking processes, resulting in an increase of competence in designing suitable problem solutions.

“Rather than argument with my dad, I came up with the solutions to cope with his memory impairment.”

Participant 4, male, 6 years of experiences

Table 1: Demographic data of the research participants

Demographics	Academic year	Academic year
	2018 (n=6)	2020 (n=6)
Time period between course completion and interview	2 years	1 month
Age (in years)	29–31	27–29
Sex		
Male	2	2
Female	4	4
Hometown		
Bangkok	1	3
Others	5	3
Working experience		
3 years	0	1
4 years	0	3
5 years	2	2
6 years	3	0
7 years	1	0
Workplace		
Bangkok	0	1
Community hospital ≤ 90 hospital beds	5	5
Community hospital > 90 hospital beds	1	0
Having direct experience on special care needed patients	6	5

HUMANIZED PATIENT-CENTERED CARE PARADIGM

Continuity of practice could make impacts on personal and professional circumstances. The latter was illustrated as a humanized patient-centered care paradigm that could be explained through the following six subthemes.

Understanding in patients' context

Patient interviews conducted either in dialog session as learning activities of the course or clinical practice provided essential information about symptoms, expectations, cultural factors, belief, financial status, and other contextual limitations. It is vital for dentists to create a non-judgmental space and motivate patients to share their experiences, because it might affect the extent, depth, or reliability of the acquired information.

"I realized that each patient was individual. I changed the way I talked to them, then they were likely to be more conversational and relax."

Participant 5, female, 6 years of experiences

Development of individualized comprehensive treatment planning

An idealistic treatment plan was likely not to be a final plan since a lack of correspondences with patient's needs, context, and limitations. Therefore, a concept of patient-centeredness and ability to modify theoretical knowledge to individuals were inevitably employed to establish individualized comprehensive planning and agreeable treatment approaches.

"Issue of concern about severe Alzheimer's patients is prevention of aspiration and infection which is life-threatening condition. Leave around esthetic or functional aspect."

Participant 4, male, 6 years of experiences

Treatment with humanization and compassion

The monitoring of distinct/indistinct signs of fear, anxiety, or any discomfort might help dentists appropriately responding to patients' emotions. Having first-hand experiences of being a patient seemed to have significant roles in empathy nurture. Participants reported that they tended to treat patients as human beings (neither diseases nor workpieces) with intentions to help and to give comfort to their patients.

"I noticed his shaking eyes, he was nervous and uncomfortable, so I allowed him to wear earphones... Moreover, previous experiences as a patient made me more careful."

Participant 5, female, 6 years of experiences

However, participants reported that thoughts, concerns, and idealistic expectations appeared to induce distractions during dental procedures, especially the use of requirement system in the faculty, where students were required to at least complete a designated amount of work for graduation. The students might focus on the minimum requirements rather than having an emphasis on patient care.

"I hoped to do my best on supervisor's commands, but I overlooked the patients...Recently, I kept an eye on my patients because I do care if they needed some rest or not."

Participant 6, female, 7 years of experiences

Management with psychological integrated care

Participants appeared to be concerned with a psychophysical interrelationship. Stress can impair general health and then oral conditions. Instead of providing stressful oral hygiene motivation, positive reinforcement and empowerment were likely to be more helpful. Similarly, caregivers' psychological status should not be taken for granted due to possibly negative effects on quality of patient care.

"I thought that self-esteem might enhance her to do something better. I've psychologically supported her. Then, her mouth is getting better."

Participant 3, female, experience 6 years

Rapport establishment with patients

Apparently, good listening, open-mindedness, attempt to help, and compassionate manners could be positive personality traits to attract and assure patients. Once rapport was established, it indicated patients' readiness to not only openly report their problems and concerns but also to willingly comply with their definite treatment plans. This could positively affect the treatment outcomes, resulting in the improvement of patients' satisfaction and patient-dentist relationship.

"I actively responded to patients' chief complaints. Let them know that we are in the same team, then they trusted me and were more cooperative."

Participant 7, male, experience 4 years

Good attitudes toward special care needs patients

Inadequacy of patient's cooperation, complicated underlying conditions, and a variety of distresses might lead to negative attitudes toward patients with special needs. However, basic knowledges, as well as empathic and well-experienced teachers as role models, were likely to improve morals and attitudes toward these particular patients. Moreover, self-awareness and unbiased acknowledgment of patients seemed to

consecutively nourish the positive attitudes as well as empathy.

“When I worked at community hospital, I had little tolerance to this kind of patients. Nowadays, I took more time to get familiar with them.”

Participant 5, female, 6 years of experiences

DISCUSSION

The implementation of contemplative practice mainly cultivated mindfulness, which appeared to be a foundation for other skills including concentration, deep listening, emotional regulation, critical thinking, and problem-solving skills. Continuous practice of aforementioned skills can foster self-insight and empathy, which are supposed to be the core skills to achieve humanized patient-centered care paradigm. This concept is graphically explained in the conceptual framework constructed from the data retrieved in this study [Figure 1].

Regarding the mindfulness interventions, students were guided to stay in the present moment with physical sensations, acknowledgment and detachment of feelings, and thoughts, which could lead to relaxation and stress reduction.^[13,18,22] Self-regulation and congruent behaviors were consequently promoted.^[14]

According to the interview, the deeper topics of self-examination, the more non-judgmental discussion, were required. For this reason, topic guide and interviewing skill should be repeatedly revised during ongoing data collections. However, the overall outcomes in personal aspect showed improvement of cognitive function, interpersonal relationship, and well-being.

The findings in this study were concurrent with the research of Ahmad *et al.* in 2020,^[23] in which interpersonal skills, empathy, and positive attitudes toward special care needs patients were cultivated, and therefore comprehensive and compassionate treatments were promoted. Moreover, the outcomes demonstrated both cognitive and affective domains of empathy, whereas the affective one was predominantly presented in feminine traits, similar to the research of Vonk *et al.* in 2016.^[24] Therefore, the consideration of individual personalities is necessary to determine teaching and learning approaches as well as methods for outcome evaluations in a course arrangement.

Humanized patient-centered care paradigm can be developed in the participants and apparently seems to be beneficial for both professional and personal aspects. First, there were establishments of trustworthiness, dentist–patient–caregiver connectedness, as well as patients’ assurance and compliance, resulting in preferable treatment outcomes. Consequence of receiving of empathy can reduce patient’s anxiety, enhance good communication, support agreement in a treatment plan, and encourage patients’ adherence to dental visits.^[5] Secondly, most of the participants reported less personal and occupational stress. Self-care in healthcare professionals can positively impact their well-beings and therefore they can provide patient care with high efficacy.^[2,25]

The evidence from the participants revealed a couple of implications to design a pedagogical approach in contemplative practice. As learner background and experiences seemed to have effect on self-examination and empathy cultivation, non-judgmental environment

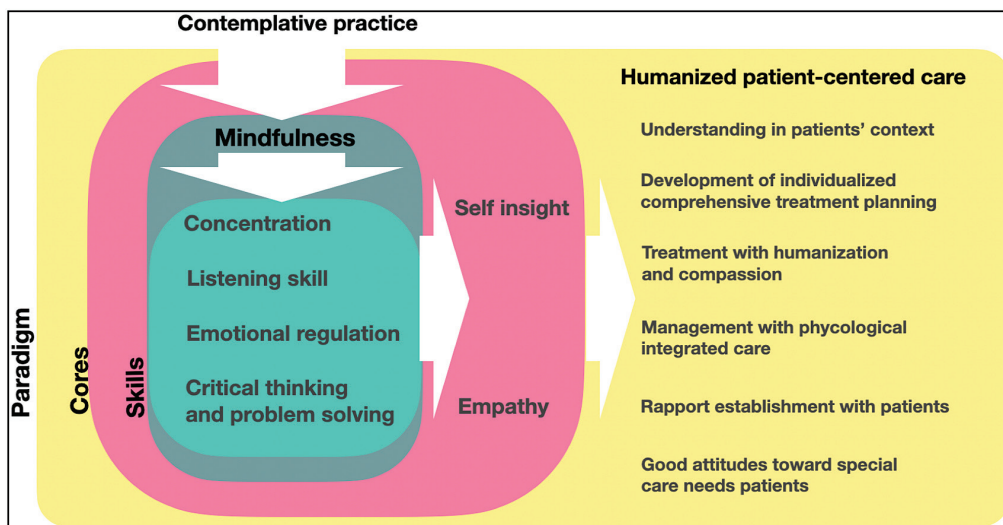


Figure 1: Conceptual framework of contemplative practice retrieved from the data in this study

and listening skill should be prepared for students before participation in contemplative practice. These skills can be considered necessary in the classes and clinical circumstances.^[16] In addition, a role model should be considered as one of the key learning strategies in contemplative practice. Empathic teachers or instructors can be a role model, allowing students to experience, understand, and practice true empathy.^[4,19] Finally, well-practice facilitators and instructors should be required to conduct learning activities of contemplative practice as it can affect the depth of learning.^[15] These requirements will support learners to achieve the learning outcomes of contemplative education.

A performance of semi-structured interview elucidated participants' perspectives, as well as detail and process of skill cultivation, which would be beneficial for the future course development. Due to the nature of qualitative study, a statistical significance of the educational impact of contemplative practice cannot be evaluated. However, different characteristics of participants were purposed to maximize the extent of retrieved data until data saturation was reached. Thus, the outcomes of this research might be transferred to another population in a similar context.

CONCLUSION

This research supports the implementation of contemplative practice in dental education. The evidence demonstrated that the cultivation of mindfulness and its relevant skills, achieved from contemplative practice, had positive impacts on the competence development in both personal and professional perspectives among dental postgraduates. In addition, students can be exposed to the concept of humanized patient-centered care paradigm. These competencies will support dental professionals to effectively provide a holistic approach in comprehensive dental care.

FUTURE SCOPE

A quantitative approach may be considered for further research of contemplative practice to enhance the capability of generalization in dental education. The long-term investigation of educational impact of contemplative practice should also be taken into consideration.

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CONFLICTS OF INTEREST

All authors declare no conflict of interest.

AUTHORS CONTRIBUTIONS

Conceptualization: K.S. and N.B.; research design: P.J., K.S. and N.B.; data collection and analysis: P.J.; validation: K.S. and N.B.; manuscript writing: P.J. and K.S.; manuscript review and editing: N.B. All authors have read and agreed to the published version of the manuscript.

ETHICAL POLICY AND INSTITUTIONAL REVIEW BOARD STATEMENT

This research was approved by the Faculty of Dentistry and the Faculty of Pharmacy, Mahidol University, Institutional Review Board (MU-DT/PY-IRB), reference number: MU-DT/PY-IRB 2019/039.2806 on 28 June 2019.

PATIENT DECLARATION OF CONSENT

The authors declare that they have obtained consent forms from the research participants.

DATA AVAILABILITY STATEMENT

The data are available on request from the corresponding author.

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