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RESEARCH



Parent and interdisciplinary professional perceptions of family-centered care in Thai NICU: A qualitative study

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Abstract

Background: Family-centered care (FCC) has been successfully incorporated into daily practice in many neonatal intensive care units (NICUs) worldwide. However, the implementation of FCC in lower-resourced settings, such as Thailand, can be challenging and needs to be further explored.

Aims and objectives: To identify parents' and interdisciplinary professionals' perceptions of FCC and to describe the opportunities to improve FCC in a Thai NICU.

Design: An exploratory qualitative approach was used.

Methods: The data were collected through face-to-face, semi-structured, individual interviews based on an interview guide. This study was conducted before the outbreak of coronavirus disease 2019 (February 2020) in a hospital in southern Thailand. Inductive thematic analysis was used to analyse interview data.

Results: Participants were parents (n = 9) and interdisciplinary professionals (n = 8). The results revealed four key themes: (a) Recognizing and responding to individual families' different readiness and their rights and values, (b) working in a parent-interdisciplinary partnership to provide care, (c) lacking resources and motivation and (d) understanding of care requirements and providing help/sympathy.

Conclusions: The interdisciplinary professionals accepted that FCC is necessary for clinical practice, but there are some challenges in the Thai NICUs context because of the system of health care delivery. The findings highlighted that interdisciplinary professionals often viewed parents' involvement as an obstacle to providing neonatal care.

Relevance to clinical practice: Further research is recommended to investigate how FCC is operationalized by interdisciplinary professionals and how hospital administrators can be supported to implement the FCC approach into clinical practice in Thai NICUs.

KEYWORDS

 $family-centered\ care,\ interdisciplinary\ professionals,\ neonatal\ intensive\ care\ unit,\ parents,\ Thailand$

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1 | INTRODUCTION

The neonatal intensive care unit (NICU) is a high technology, specialist and critical care environment where families often find the experience of hospitalization of their infant shocking and challenging. Parents are often consigned to a supportive role as a visitor in this specialist health care environment and thus may miss chances to be involved in usual parental caregiving that can impact negatively on their feelings of parenthood and challenge early parental–neonate bond. Bonding is essential for the physical, emotional and social well-being of both the neonate and the parents.

Family-centered care (FCC) is an approach that promotes parents becoming true partners within the interdisciplinary professional team.⁶ Institute for Patient- and Family-Centered Care⁷ asserts FCC is a necessary component of dignity and respect, information sharing, participation and collaboration that build a partnership between interdisciplinary professionals and families. Galvin, Boyers⁸ and Hutchfield⁹ explored the critical elements of FCC from the perspective of both parents and staff and concluded that FCC consists of respect (individual, culture and value), collaboration (partnership) and support (family needs).¹⁰ These have become the main domains of the FCC approach in health care settings and provide the basis for the conceptual framework and subsequent research question for this current study.

Within the NICU environment, the components of FCC have been widely incorporated in NICUs around the world. FCC recognizes that parents are the primary caregivers and promotes physically active partnership with parents to provide supportive and nurturing care for their neonates in NICU. Lack of parental presence and involvement in neonatal care impacts the interactions and physical connections between parents and their neonates. These moments are critical steps to commence bonding between parents and neonates. Implementation of FCC in countries worldwide provides a great challenge, because of complex and diverse political, social, cultural and economic characteristics. Halthough not specific to hospitalized neonates, a Cochrane systematic review found very little evidence on how FCC is best practiced or the effects on clinical or family-centered outcomes of FCC on parents, staff and children 0–12 years old.

Differing health service delivery models internationally, around such issues as the scope of practice, organizational hierarchies and legislative requirements mean that FCC strategies need to be context-specific. ¹⁶ A recent integrative review of FCC in the NICU has highlighted significant gaps when considering an international focus on partnerships. ¹⁷ This includes limited parental inclusion in collaborative decision-making and limited understanding of how FCC has impacted dignity and respect, which are essential components in FCC. ¹⁷

The international context of FCC in NICUs has been inadequately explored, especially in low-resource countries. A previous study in Indonesia found that needs of parents are essential to integrate into FCC. ¹⁸ Moreover, further research in Indonesia and Turkey identified that the staff shortage ¹⁹ and lack of resources ^{19,20} were obstacles to implementing FCC. In Thailand, the FCC concept has been

WHAT IS KNOWN ABOUT THE TOPIC

- In NICUs around the world, the comprehensive components of FCC are incorporated and widely used.
- Health care professionals experience challenges implementing FCC principles into daily practice.

WHAT THIS PAPER ADDS

- The interdisciplinary professionals accepted that the elements of FCC, in terms of respect, collaboration and support, should be implemented into clinical practice but that was difficult in the Thai NICUs context.
- Partnership remains challenging, as the health care delivery system and health care providers' attitudes towards parents' involvement in neonatal care being perceived as an 'obstacle' to providing neonatal care.
- The findings highlight the individuality of families' readiness and a health care delivery system challenged to implement FCC.

incorporated into the overarching model of care policy in neonatal care units;²¹ however, nurses have acknowledged they have difficulty incorporating the approach in clinical practice.²² Although FCC has emerged as important in guiding care services to provide optimal care in Thai neonatal care units, its application is unknown.²³

1.1 | Aims and objectives

This study aimed to identify parents' and interdisciplinary professionals' perceptions of FCC and to describe the opportunities to improve FCC, in a Thai NICU.

2 | METHODS

2.1 | Design

An exploratory qualitative approach was used.²⁴ Face-to-face, semistructured and individual interviews were conducted with parents and interdisciplinary professionals to glean rich and diverse information. The study is reported in accordance with the consolidated criteria for reporting qualitative research guidelines.²⁵

2.2 | Setting

This study was conducted before the outbreak of coronavirus disease 2019 (COVID-19) in Thailand, during the first half month of February 2020. In Thailand, the Ministry of Public Health of Thailand announced the first confirmed cases on February 6, 2020.²⁶ The study was

performed in a 20-bed, level IV NICU in a tertiary care hospital in southern Thailand. The NICU has approximately 500 admissions per year and approximately 32 nurses, two physicians (one professorial/senior medical specialist staff and one Resident) and one pharmacist. Before the COVID-19 pandemic influenced policy, the NICU's visiting policy was 1 hour, twice per day, restricted visitors (only parents), and was further reduced to 1 hour per day during the pandemic (April 2020 onwards).

2.3 | Sample

A purposive sampling approach was used. Purposeful sampling is commonly used in qualitative health care research to identify and select information-rich cases related to the phenomenon of interest.²⁷ For this study, this ensured a mix of clinical (interdisciplinary professionals) and personal experience (parents) to enable a broad perspective and to identify a wide range of strategies to improve respect, collaboration and support, to facilitate an FCC approach.²⁴ The sample size was not defined a priori and was determined when data saturation was identified.²⁸ That is, interviews were analysed as they were completed, and data saturation was determined when no new concepts or information were apparent.²⁸ Parents and interdisciplinary professionals were recruited from the research site and were required to satisfy the following inclusion criteria:

- Parents of infants who had an expected NICU stay of at least
 72 hours and who visit the study NICU at least once.
- Interdisciplinary professionals (nurses, physicians, pharmacist), with a permanent position, who had been responsible for developing and providing care activities for at least 1 year in the study unit.
- Thai speaking and reading participants.

2.4 | Ethical approvals

Ethics approval was obtained from the Research Ethics Committee of Hatyai hospital (Protocol number 14/2563; approval date December 16, 2019) and the Griffith University Human Research Ethics committee (GU Ref No: 2020/018; approval date January 20, 2020). Participants were provided with verbal and written information detailing the purpose of the study, right to withdraw consent, assurance of confidentiality and chief investigator's contact details and the details of the study team that did not include anyone in the clinical care of neonates in the NICU. Written consent was obtained. The confidentiality and anonymity of all participants were maintained throughout the study by using a unique number for each participant and ensuring any identifying characteristics were removed.²⁹

2.5 | Data collection

The individuals who fulfilled the inclusion criteria and were available were approached by the researcher (SV) and invited to participate

in the interviews at a mutually convenient time during work hours for the interdisciplinary professionals or after the visiting time period for the parents. The face-to-face interviews were conducted by the researcher (SV) in the private NICU parents' support room or meeting room for the interdisciplinary professionals.

Individual semi-structured interviews with parents and interdisciplinary professionals were conducted, guided by questions designed to explore their perceptions of the key elements of FCC (respect, collaboration and support). Participants were provided with a verbal explanation of the definition of FCC including these key elements before the interview commenced. The interview guide (see Table S1) was adapted from the Institute for Patient-and Family-Centred Care Interview Methodology and Questions³⁰ and other tools³¹⁻³⁵ and translated into Thai by researchers (SV and WW). Moreover, demographic details were collected including neonates', parents' and interdisciplinary professionals' characteristics. The interviews were audio-recorded and later transcribed in full.³⁶ The interviews were undertaken in the Thai language. There was no prior relationship between the interviewer and participants.

2.6 | Data analysis

Thematic analysis was used to analyse the transcribed Thai language interviews.³⁷ All interview transcripts were analysed independently by two members of the research team (SV and WW) using inductive qualitative, thematic analysis.³⁸ The two researchers are nurse academics with a clinical background in neonatal intensive care but not working in the research NICU setting allowing them to have a deep understanding of the participants' situation without bias.³⁹ The thematic analysis was guided by Braun³⁸ six phases: (a) Familiarization, (b) generating codes, (c) constructing themes, (d) revising themes, (e) defining themes and (f) producing the report. After reading and rereading transcripts, each researcher created preliminary themes and information to support themes (ie, generated codes and categories of data). The two researchers then discussed their understanding of the themes and ensured the consistency between coders. This process was performed for data analysis of parent and interdisciplinary professionals separately. Data relevant to broad themes were grouped together and combined between parents and interdisciplinary professionals, and overarching themes that formed a comprehensive picture of participants' perceptions were identified.³⁷ The quotes used to support findings were translated into English by two members of the research team (SV and WW) who are fluent in both languages. Each theme was checking against the whole dataset to ensure a clear sense of how each theme relates to the others.³⁷ Any discrepancies were resolved by discussion and consensus with the research team (SV, AU, HP, WW and MC).

The trustworthiness of the analysis and robust interpretations are demonstrated by our strategies to achieve credibility (eg, recognized methods, checking with participants the accuracy of the main issues that arose from the interviews, description of researchers, extensive engagement with interview transcripts); transferability (eg,

background to provide context of this study, sample description, detailed description of findings); dependability (methodological discussion to allow repetition of study and use of appropriate method to answer the research question to explore the phenomenon) and conformability (eg, detailed participant quotes for each theme, description of researchers).⁴⁰

3 | FINDINGS

Nine face-to-face interviews lasting 20–45 minutes were conducted with parents. Mothers participated in six interviews. Most parents were aged between 21 and 30 years (n = 5, 56%) and around half had completed their education at high school (n = 5; 56%). Four parents (44%) spent less than 30 minutes traveling to the hospital. Four parents (44%) had no children other than the admitted child. Most families (n = 8; 89%) had no prior hospitalization experiences of NICU. All parents were living together.

Eight interdisciplinary professionals participated in face-to-face interviews. All were female, mainly nurses (n = 7; 88%), aged between 41 and 50 years (n = 4; 50%), and working with infants between 16 and 20 years (n = 3; 38%). Their interview duration varied from 20–30 minutes.

Four themes arising from parents' and interdisciplinary professionals' interviews are summarized to identify the current practices and potential strategies to improve respect, collaboration and support to facilitate FCC in a Thai NICU: Recognizing and responding to individual families' different readiness and their rights and values, working in a parent-interdisciplinary partnership to provide care, lacking resources and motivation, and understanding of care requirements and providing help/sympathy. These themes were apparent in both participant groups (detailed quotes from both groups for each theme are shown in Table S2).

3.1 | Respect

3.1.1 | Recognizing and responding to individual families' different readiness and their rights and values

All interdisciplinary professionals perceived respect as an acceptance of the individuality of each family. They mentioned family differences in terms of maturity, family needs (social, living, financial situation, religion and culture), the level of health literacy and coping methods. They recognized that the individuality of each family often impacted on their readiness to participate in neonatal care, and they respected these differences before incorporating parents into participating in their neonate's care. The interdisciplinary professionals suggested that information about the family's background as well as their preferences surrounding participating in care must be gathered to understand each family's readiness.

We meet both the parents who are ready and are not ready to participate in providing neonatal care. Because they are different in the level of education, social, and living problems,...these differences influence their readiness to participate. Moreover, parents' readiness in providing neonatal care depends on parents' maturity and other factors. (ICP5)

The interdisciplinary professionals recognized the family's rights in the hospital. They reported that respect included shared decision-making, the need to participate in neonatal care and family visitation in NICU. However, the NICU did have limited visiting hours, and family members could not be present in the NICU except when allowed.

In my opinion, it is their right to decide on their neonatal care. I think they do their best for the infant. We must respect their right because they are the parents. (ICP1)

Normally, it was their right. We claim that parents can be involved in neonatal care, but it was impossible because of the limitation of the visiting hours meaning that parents could not present in NICU when they were available or during a procedure. And family members could not present in NICU except if staff needed their opinion. (ICP7)

Correspondingly, a broad theme evident across the interviews was that respect for parents means listening to them and acceptance. Parents identified that interdisciplinary professionals understood the individual family's needs and honored their dignity and then provided flexible practice to incorporate individual family's needs.

The staff recognized my dignity and listened to my concern. (P3)

Parents reported that interdisciplinary professionals accepted and respected their decision when they were asked to decide on participating in neonatal care and were given important information to support their decision-making.

When the staff let me make decisions about neonatal care, then they accept my decision. (P7)

3.2 | Collaboration

3.2.1 | Working in a parent-interdisciplinary partnership to provide care

From the interdisciplinary professionals' perspective, collaboration was necessary to encourage parental participation in neonatal care. This included assessing parent's needs and readiness in providing neonatal care, assessing the level of ability of the parents and encouraging parents to be involved in neonatal care. The interdisciplinary professionals worked with parents to provide care depending on the parents' ability and the condition of the infant. Sharing ideas, planning

care, shared decision-making and providing information in a timely way were included in involving parents to participate in neonatal care. These were the basis of building the relationship between parents and the interdisciplinary professionals; consequently, parents were confident in participating in care and had trust in the interdisciplinary professionals.

If the infant is in the stable condition, and I have assessed that parents can take care of their infant. I would include them with us to provide care. (ICP1) In terms of making a decision, we provided information to parents to ensure that they have got important information such as illness, treatment, progress, and care plan. Before asking them to make a decision, they also could ask any question and discuss if they did not understand or need to be clear. (ICP6)

On the other hand, interdisciplinary professionals viewed parents' involvement at times as an obstacle to providing neonatal care:

We have a lot of things to do, and we take care of the infants in more than one case. Consequently, the parent's involvement in neonatal care is the obstacle for nursing care. When parents participated in care, they would complicate the situation and induce workload for us. (ICP5)

Comparatively, parents, in general, reported that interdisciplinary professionals offered them opportunities to participate in their neonate's care by providing information and assessing their readiness and ability to care for their infant. However, the majority of parents stated that they felt afraid to provide care for their infant for many reasons.

The first day, I only stood beside the incubator. I did not want to touch the infant. I felt like I was afraid to bring her infection. But the nurse asked me to touch her and used the antiseptic first. After that, I felt free to touch, her. (P5)

Additionally, some parents reported that the interdisciplinary professionals involved them in discussions and decision-making, and they were able to gain the required information and communicate directly with the paediatrician in charge or the bedside nurse taking care of their infant.

Last night, the pediatrician called me to provide the infant condition and gave me the choice of treatment. Then, they asked me to decide my infant treatment. (P5)

3.3 | Lacking resources and motivation

The interdisciplinary professionals recognized the value of FCC and wanted to incorporate FCC into their daily practice. However, they

viewed a partnership as impractical in the Thai NICU and perceived many barriers to implementation. In particular, obstacles from the health care delivery system included heavy workload because of staff shortages, lack of resources (budget, equipment and space), unclear job description, a limited visitation, and lack of motivation to change behaviour.

It was hard to provide FCC nursing care in NICU because the design of the health care delivery system did not match and was not ready for FCC such as staff shortages, lack budget, heavy workload. (ICP7)

With a sense of being overwhelmed with heavy workload due to staff shortages, we had to focus on helping patients to improve the acute health condition rather than pay attention to their parents. We did not have time to even talk with them. (ICP3)

Some parents perceived that there were delays or incomplete information being provided during the admission process, which caused worry. Some parents expressed the complexity of medical terminology used by paediatricians. However, some parents perceived that paediatricians provided more detailed and insightful information than nurses.

When I visited my infant in NICU, I needed to know the infant's information. Even though I waited for the staff to come to me, no staff came to talk or did anything with me. I did not know who the person was to take care of my infant. I thought that they should have someone who could give me an infant's information. (P7)

Some parents expressed that family members could not collaborate with staff in neonatal care because of the limitation of visitation. Similarly, some parents stated that limited visiting time was an obstacle to being with their neonate in the NICU.

Sometimes the staff needed the opinion and decision making from the family member, but they had never come in the unit because they did not allow visiting in NICU. (P2)

Sometimes I could not come to see my baby, because it was not the duration of visiting hour. (P5)

3.4 | Support

3.4.1 | Understanding of care requirements and providing help/sympathy

Interdisciplinary professionals reported providing FCC via support through assistance, promoting the parental role, empathy, coordination of family care, providing encouragement to the family and allowing the parents to follow their beliefs, spirituality and culture regarding understanding their feelings and needs. They used verbal and non-verbal communication to show warmth and welcoming to support parents and family. This support ensured that parents felt satisfied, built trust, confidence and enabled parents to feel comfortable and willing to participate more in the care of their infant.

For preterm case, I would talk with the parents that your infant was small because of preterm labour. You should be patient because the infant needed more time to grow up. But you could do your best by stocking your breast milk and to visit the infant in NICU every day. (ICP2)

I made an appointment for parents to meet with the paediatrician in charge who takes care of their infant. After parents talked with the paediatricians, I found that the parents did not understand the medical terms. Then, I gave information to parents with easier language and described some points that they did not understand. (ICP6)

Similarly, parents identified that the interdisciplinary professionals provided help to them and used kind language. As previously described, help included introducing and assisting them to play a parental role in providing care for their infant and providing accurate and honest information about their infant. Thus, they felt comfortable and had trust in the treatment their infants received.

I was satisfied with the care and treatment that the staff gave to my infant. When I asked them, they always gave me a good conversation. (P9)

4 | DISCUSSION

This study was based on the elements of the FCC and aimed to explore parents' and interdisciplinary professionals' perceptions of current practices and ways to improve respect, collaboration and support to facilitate FCC in a Thai NICU. This study was conducted before the outbreak of COVID-19 in an NICU that had a usual visiting policy that limited 1 hour, twice per day and restricted the number of visitors (only parents). Although, the sample size was small, the demographic data of the parents are similar to the characteristics of parents in Thai NICUs⁴¹ and the interdisciplinary professionals' characteristics are comparable to the health care professional group working in Thai NICUs, generally.²² The findings of this study identified four themes: (a) Recognizing and responding to individual families' different readiness and their rights and values, (b) working in a parent-interdisciplinary partnership to provide care, (c) lacking resources and motivation and (d) understanding of care requirements and providing help/sympathy. Interestingly, these findings highlight the individual differences in families' readiness to be involved in FCC, health care delivery system and health care providers' attitudes challenged the implementation of FCC.

The interdisciplinary professionals considered the importance of optimizing FCC practice in NICU but reported many barriers to implementation within the Thai NICU context. The findings of this current study were similar to the previous published on the perception and practice of paediatric nurses in Thailand.²² Nurses in this study also experienced difficulty incorporating the FCC principles into daily practice because of a powerless attitude toward their role and staff shortage and inappropriate FCC model for the Thai clinical context.²² Conversely, a previously published Greek study indicated that paediatric nurses realized using FCC in daily practice was appropriate, but it was not necessary to implement all aspects of FCC into their daily practice.⁴²

The interdisciplinary professionals in this study perceived a lack of active partnership between families and the interdisciplinary professionals to participate in neonatal care. Ideally, to implement FCC in daily practice, the family must be an equal partner with the interdisciplinary professionals and must actively participate in decision-making and provide care for their infant whilst the interdisciplinary professionals must be a facilitator of care. In practice, this study found that implementing FCC in partnership with parents remains challenging as a result of health care delivery system such as heavy workloads, staff shortages, lack of resources (budget, equipment and space), unclear job descriptions, limited visitation, lack of motivation and health care providers' attitudes towards FCC. To enable a focus on a partnership between families and health care providers, health care delivery system factors and provider attitudes must be incorporated into FCC implementation approaches.

Hospital administrators and organizational factors affect the success of FCC practice that requires appropriate policies, facilities and resources, ongoing interdisciplinary educational support and a positive mind-set to support the needs of the family and interdisciplinary professionals. There must be support from hospital administrators and policymakers. This was consistent with studies in the NICU context in Italy and Canada indicating that health care professionals accepted the necessity of FCC in NICU; however, the quality of FCC practice needed improvement through the overarching health care delivery system and the organization. 46,47

Our study highlights acknowledging family individuality that challenges implementation of FCC principles into daily practice. These findings reinforce the importance of acknowledging the uniqueness of individual families, in particular to the readiness for the provision of care for the infant. According to the interviews, both parents and interdisciplinary professionals in this study identified the issue of providing flexible practice to incorporate individual family's needs. This was consistent with a study in Thailand indicating that the design of the health care delivery system requires flexibility, accessibility and responsiveness concerning family strengths and individuality.²² In addition, individuals have different spiritual/cultural backgrounds representing a culturally diverse population. One previous study supported that future partnership should consider geographical, cultural and economic diversity.⁴⁸

Parents in the current study took a more passive role and preferred minor involvement in neonatal care and decision-making. Parents perceived that limited visitation and delays/incomplete information sharing were obstacles to collaborative working with the health care provider. Previous studies supported that parents experienced difficulty in their anticipated primary caregiver role to be truly involved in the care of their infant in the NICU. 49-51 Involvement was viewed as an obstacle to providing neonatal care by the interdisciplinary professionals in this study. The findings were consistent with a previous study in Thailand that indicated parents' involvement as an obstacle to nursing care.²² Health care professionals' view of parents as a primary caregiver was the most important factor influencing successful implementation of FCC.52 A previous concept synthesis of FCC indicated an unclear role between parents and interdisciplinary professionals as a barrier to a partnership approach in FCC. 53 Improving health care professionals and parents' relationships and facilitating the opportunities for parents to be the primary caregivers could help parents to actively partner with health care professionals in NICUs.44,49

4.1 | Limitation

A limitation of the study was that the data analysed were based on self-reported perceptions that may or may not reflect actual clinical practice. This study was based at a hospital located in Southern Thailand, thus, the result of this study cannot be transferable outside of the direct setting; however, the wide, clear inclusion criteria facilitate further studies in additional settings.

4.2 | Implication for practice

To be effective and sustainable, FCC approaches need to ensure that the local health contexts are considered. This includes systems, hospital and family resources, culture, attitudes and health literacy. Additionally, at a policy level, FCC concepts should be integrated into interdisciplinary education programs, practice policies and guidelines. Further research is needed on how to implement FCC successfully in NICUs to meet the needs of families and staff.

5 | CONCLUSION

The findings highlighted the interdisciplinary professionals' in this study accepted that the elements of respect, collaboration and support were necessary to implement FCC in clinical practice; however, they expressed concern about the individual family's readiness to be active partners in their infant's care. They also viewed parents' involvement as an obstacle to providing neonatal care. Parents identified that they were primarily perceived as visitors, and interdisciplinary professionals should focus on individual families' needs. This study identified that the significant challenges to achieving active partnership between families and interdisciplinary professionals in a Thai NICU context were because of organizational barriers and health care

providers' attitudes towards FCC. Interestingly, this current study was conducted before the outbreak of COVID-19 in Thailand. The findings identified that the limitation on visiting time duration and the number of visitors is a significant barrier to implementing FCC. Further research is needed on implementing FCC successfully, particularly on how more parent-friendly visiting and promotion of active partnership to meet the needs of families, staff and organization can be incorporated.

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CONFLICT OF INTEREST

There are no conflicts of interest associated with this manuscript.

AUTHORS' CONTRIBUTIONS

All authors (Siriporn Vetcho, Amanda J Ullman, Helen Petsky, Wantanee Wiroonpanich and Marie Cooke) cited on the title page have made substantial contributions to the article and agree with the content. This includes contributions in terms of 1. the conception and design of the study, acquisition of data or analysis or interpretation of data, 2. drafting the article or revising critically for important intellectual content and 3. final approval of the version to be submitted.

ETHICS STATEMENT

Ethics approval was obtained from the Research Ethics Committee of Hatyai hospital (Protocol number 14/2563) and the Griffith University Human Research Ethics committee (GU Ref No: 2020/018).

INFORMED CONSENT

Participants were provided with verbal and written information detailing the purpose of the study, right to withdraw consent, assurance of confidentiality and chief investigator's contact details. Signed informed consent was received from all participants. The confidentiality and anonymity of all participants were maintained throughout the study.

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SUPPORTING INFORMATION

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