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# Training early childhood teachers integrating project approach with multicultural education in the classroom

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#### **ABSTRACT**

This research aimed to examine the improvement of teachers' abilities to integrate the project approach with multicultural education. A total of three female teachers from a kindergarten in the northeastern region of Thailand participated in this research. The research procedure began with the three teachers developing lesson plans. This was followed by each teacher teaching the lesson to their peers who played the role of learners in an early childhood classroom. The researchers utilized field notes as an instrument to collect data during the lesson plan workshop and peer teaching. Finally, the researchers used a conservation guide as another instrument to collect verbal data through reflections upon the workshop and peer teaching. The results revealed that teachers faced challenges in developing lesson plans including defining objectives, creating content maps, designing learning activities, and finding materials and resources. On top of that, the results regarding peer teaching indicated that teachers are not familiar with project approach thus they are facing difficulties in facilitating learning activities and classroom management. The overall results have contributed to the field of early childhood teacher professional development.

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#### 1. INTRODUCTION

Teachers can benefit from ongoing professional development focused on cultural awareness, implicit bias, and diverse teaching strategies. This training enables them to better understand and respect students' cultural backgrounds and perspectives [1]. Therefore, integrating materials that can reflect diverse cultures, histories, and viewpoints allows students to see their identities represented and learn about others [2]. Following this line of reasoning, teachers can develop lessons that honor multiple perspectives and teach critical thinking about culture and identity [3].

Early childhood centers can integrate diverse cultural perspectives in the curriculum, covering histories, literature, traditions, and achievement from various cultural backgrounds. This approach normalizes diversity and helps early childhood children appreaciate different cultures [4]. Teachers can facilitate guided discussions around identity, culture, and belonging, allowing children to share personal experiences in a safe environment. This builds mutual understanding and reduces prejudice by addressing stereotypes directly [5]. An early childhood center culture should be built where children, regardless of background, feel valued and understood, fostering an environment that naturally reduces prejudice and discrimination. When children see diversity as normal and enriching, they are more likely to develop into respectful, inclusive individuals [6]. In other words, an educational structures encompass building inclusive environments whereby allowing early

childhood centers and teachers flexibility to include culturally relevant content that can support diverse learning experiences [7].

Early childhood education, with its emphasis on a holistic approach to child development, lays a strong foundation for children to become curious, confident, and capable learners, ready to take on the challenges of formal education and beyond [8]. As a result, early childhood education focuses on the critical development period from birth to around age 8. During these early years, children's brains undergo rapid growth, making this a crucial time for cognitive emotional, social, and physical development [9]. High-quality early childhood education can set a strong foundation for lifelong learning, behavior, and overall well-being [10]. Following this line of reasoning, incorporating multicultural education in early childhood educational setting is essential because it assists young children develop a positive sense of self, respect for diversity, and foundational skills in empathy and inclusion [11].

A multicultural curriculum in early childhood education promotes cultural awareness, empathy, and inclusivity while preparing children to navigate a diverse world with respect and understanding. Through this approach children learn to celebrate differences, build meaningful relationships across cultures, and develop a foundation for becoming empathetic, globally minded individuals [12]. Hence, a multicultural curriculum in early childhood education aims to introduce young children to the diverse cultures, perspectives, and experiences within their community and the broader world. Such a curriculum supports cultural awareness, respect, and understanding from an early age, helping children develop empathy and an appreciation for diversity [13].

Early childhood teachers should be trained to teach multicultural education which is essential for building inclusive respectful, and diverse learning environments. Such training including peer collaboration, workshops, and mentoring can equip teachers with the skills to embrace diversity, address biases, and provide children with a broad worldview from a young age [14]. Subsequently, the Ministry of Education should adjust educational structures so that teachers and children are involved in creating more inclusive, adaptive, and culturally responsive approaches in response to multiculturalism [15].

The above issues lead to the necessity of teacher training and reflection such as cultural awareness training and reflective teaching practices [16]. Teachers trained in multicultural education are better prepared to recognize and address cultural biases. Therefore, training helps teachers incorporate diverse cultural perspectives, use inclusive language, and approach teaching with a culturally sensitive mindset [17]. According to Smith [18], teachers can periodically reflect on their curriculum, teaching materials, and classroom dynamics to ensure inclusivity. This reflection includes seeking feedback from families, ensuring diverse representation, and staying updated on effective multicultural educational practices [19]. Following this line of reasoning, the current research aimed to find out how training can be used to enhance the ability of early childhood teachers to integrate project approach with multicultural education in the classroom.

# 2. METHOD

# 2.1. Participants and research location

A total of three female kindergarten teachers who are not only earned a bachelor's degree in early childhood education but also have teaching experience within five to 10 years from a kindergarten center at That Phanom district, Nakhon Phanom Province, in the northeastern region of Thailand. The research location is at the Mekong River as the border between Thailand and the Lao People's Demoncratic Republic. These teachers were selected because they should be able to provide valuable insights, given their experience range and specialized education background [20]. Moreover, the research location was selected because this research location is a rich cultural diversity where communities are made up of different ethnic groups such as Thai, Lao, and Vietnamese, who live side by side in the same location. Hence, the researchers could gather specific qualitative data for a broader aspect of study.

#### 2.2. Data collection and research instruments

In this research, the data collection process involves two phases. In the first phase, the three kindergarten teachers were required to design lesson plans based on the study's objectives and curriculum guidelines. This was followed by the researchers reviewed and provided feedback on these lesson plans, likely to ensure alignment with study goals and teaching strategy by integrating project approach [21] with multicultural education.

In the second phase, the three kindergarten teachers conducted peer-teaching where they teach their lesson plans to each other in a practice setting. During this process, researchers took field notes to capture observations on teaching methods, engagement, and instructional practices. After teaching, teachers provided their oral reflections and feedback, sharing their perspectives on the lesson's effectiveness, challenges, and areas for improvement [22]. At the same time, the researchers recorded the reflections. This approach enables an iterative process where teachers can refine their practices based on feedback, while researchers gain a

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deeper understanding of teaching dynamics and instructional quality [23]. According to Creswell and Plano-Clark [20], a qualitative approach is ideal when seeking deep, nuanced insights, especially in studies on teaching practices, reflections, and instructional design.

The researchers used conversation as a reflective tool in capturing insights from workshops and peer teaching sessions [24]. This method is considered highly effective because conversation allows teachers to articulate their experiences, exchange ideas, and explore challenges or successes in a natural, open-ended manner [25]. Post workshop conversations were employed. The researchers held guided discussions with participants to explore their immediate reactions, what they found most valuable, and what concepts they may be uncertain about after the workshop. The researchers framed questions to encourage teachers to articulate their learning goals and connect workshop content to their practice [20].

Moreover, the researchers facilitated reflective conversations that prompt teachers to consider what worked well, what they might change, and how their peers' feedback aligns with or challenges their perspectives after each peer teaching session [26]. Teachers could discuss similar challenges they faced in their classrooms exploring strategies and ideas for improvement together. This type of open dialogue fostered a collaborative environment and mutual support [20].

The researchers used probing questions during reflective conversations. Such questions prompt deeper reflection and help teachers become more aware of their implicit beliefs or assumptions. The researchers took field notes during these conversations to identify recurring themes or unique insights. These notes become part of the reflective data, documenting how teachers' perspectives evolve through discussion [27]. Recording these conversations allows researchers to revisit the reflections later, adding a layer of analysis. Transcribing recordings could also highlight keywords recurring concerns and shifts in mindset over time.

#### 2.3. Research process

The research process consisted of two phases that provided the three kindergarten teachers with authentic learning experiences. In Phase 1, there were two-day workshop activities to train kindergarten teachers to integrate multicultural education into curriculum through project approach. The research process ended with peer teaching.

# 2.3.1. Phase 1: workshop activities

The first stage was a two-day workshop on multicultural education and project approach, followed by lesson plan development. This two-day workshop provided the three kindergarten teachers with knowledge and skills in multicultural education and how to integrate it into an early childhood curriculum through project approach lesson plans [16]. The workshop contents are listed in Table 1.

Table 1. Workshop contents

Day Topic

Day 1 Principles of multicultural education Social skills for early childhood Project approach
Classroom management

Day 2 Demonstration of multicultural education integration in early childhood curriculum through project approach.

Day 2-3 Project approach lesson plan development

Each kindergarten teacher developed a lesson plan by aligning multicultural education with early childhood curriculum through project approach. Meanwhile, the researchers facilitated, gave support, and evaluated their lessons. This activity was aimed at providing them with the opportunity and experience to integrate multicultural education with the project approach [16].

The following steps were taken for developing lesson plans, namely learning objectives and learning activities. The kindergarten teachers developed learning objectives based on the Thailand Early Childhood Curriculum 2017, focusing on social skills. The learning objectives are as follows: early childhood children should be able to i) play and do activities together with their friends themselves; ii) play and work in cooperation with others by having a common goal; iii) appropriately smile, greet, or talk to adults and people who they are familiar with; iv) participate in setting the rules and follow them by themselves; v) practice as a leader and follower appropriately in different scenarios, and vi) compromise in disagreements with non-aggression or peaceful ways by themselves [18].

On the other hand, the kindergarten teachers designed project approach activities which consisted of three steps: i) step 1: starting the project; ii) step 2: developing the project, and iii) step 3: concluding the project [10]. After each step, the researchers and kindergarten teachers had conservations focusing on sharing the experience that they gained from the workshop. Incorporating conversational reflection can significantly enhance teachers' engagement in the reflective process, helping them analyze their teaching and apply workshop insights in meaningful ways [9].

#### 2.3.2. Phase 2: peer teaching

In the second phase, peer teaching was implemented where the three kindergarten teachers taught each other in structured settings rather than being instructed solely by a teacher, so-called a collaborative learning approach [19]. In this peer teaching setting, these three kindergarten teachers with varying levels of understanding of multicultural education could share their knowledge, reinforce their own learning and gain new perspectives by explaining concepts to others. The key benefits of peer teaching include active learning, increased confidence, improved retention, and development of communication skills [14]. Active learning refers to teaching others and requires learners to actively engage with the material reinforcing their understanding. Increased confidence means learners often feel more comfortable asking questions in a peer-led setting. Improved retention is defined as teaching peers helps with long-term retention of the material. Development of communication skills in peer teaching can foster the ability to explain ideas clearly, a skill useful beyond academics [27].

#### 3. RESULTS AND DISCUSSION

The results of the first phase about lesson plan development are presented in two aspects, namely learning objectives and learning activities. The first results are mainly answering how teachers' lesson plans can be used to improve multicultural education by integrating project approach. The results of the second phase are related to peer teaching, mainly used to explore how teachers can improve their teaching skills in multicultural education using peer teaching. The three participating teachers are labeled as T1, T2, and T3 in reporting the results.

# 3.1. Results of first phase: lesson plan development

# 3.1.1. Learning objectives

The results revealed that teachers have difficulty to develop learning objectives. Two teachers (T1 and T2) showed that they found difficult to define learning objectives which have to be aligned with the National Early Childhood Curriculum, 2017. Besides, results also indicated that the learning objectives were not specific and not observable as well as not being aligned with multicultural education and social skills. The learning objectives were found unclear in terms of performance indicators thus failed to determine the learning standard. Only T3 teacher were able to define learning objectives appropriately and aligned with the National Early Childhood Curriculum, 2017 and learners' social skills but the learning objectives did not align with multicultural education and project approach.

## 3.1.2. Learning activities

The project approach activities consisted of three steps, namely starting, developing, and concluding the project. During the step of starting the project, the researchers and teachers discussed the topics that related to multicultural education and early childhood curriculum. T1 and T3 chose the topic 'local animals' which was not favorable for multicultural education while T2 chose the topic 'clothes' which was not related to any topics required at early childhood education. For example, the researchers suggested to T1 and T3 to change their topic from 'local animals' to 'Lao food' and 'Vietnam food' respectively. The researchers advised the participating teachers to consider those topics that can provide the integration of multicultural education as well as integration of the topics. As the result, T2 was suggested to change her topic from 'clothes' to 'Lao dance' which was related to the content for learning in early childhood curriculum.

Once the topics had been selected, the participating teachers started to design concept maps, using brainstorming with their peers. The results revealed that they encountered some problems in developing content maps. T1 and T2 could not link content map ideas to their topics, moreover words, and phrases were not linked to others. Only T3 could create a concept map illustrating the brainstorming process linking to the topics. T3 also could create the topic related to the branches with branch classified into other concepts associated with the respective concepts.

During the second step that was developing the project, the participating teachers were required to develop activities, materials, and resources to help children by conducting the project that help the children to find answers independently. After a topic emerged, the researchers found that T1 and T2 created the learning activities that failed to be in line with the learning activities. They had difficulty choosing learner-oriented

activities and their lesson plans seemed to emphasize teacher-oriented activities. In addition, the researchers also found that materials and resources were not appropriate and did not match the chosen topics. The researchers also suggested that lesson plans of project approach should emphasize learning activities which give children more autonomy, so that children can solve problems, answer questions, and formulate questions by themselves. On top of that, the researchers found in the lesson plans of T1 and T3 showed that they were planning to invite Lao and Vietnam food experts to teach cooking to the children.

Only T2 was able to create learning activities that supported the chosen topics. She chose active learning techniques that included short demonstrations followed by a class discussion. In addition, her lesson plan included activities that allowed children to have the opportunities to practice their roles. Additionally, in her lesson plan, she chose authentic materials such as costumes traditional clothing, along with Lao songs. She also arranged to invite dance experts to teach Lao dance.

Concluding the project was the final step whereby teachers should provide resources to celebrate accomplishments and bring closure to the project which was a culminating event through which children shared their feelings and experiences of what they have learned with others such as telling the story of their project by featuring its highlights to others. T1 and T3 were able to create activities that were aligned with the topics to conclude the project. For example, the teacher distributed the children into three groups in their lesson plans. Each group has to cook in front of the class. When they finished cooking, they shared the food with their friends. Similarly to T1 and T3's lesson plans. T2 also distributed their children into groups. Each group performed Lao dancing. T2 was responsible for preparing costumes and dance accessories for children. When they finished the performance, T2 asked the children to engage in self-reflection and discussion.

On top of that, the researchers found that the rubric, which was used as an assessment, but its criteria were not aligned with social skills and early childhood curriculum. The researchers suggested that the teachers need to address the six social skills of assessing children's achievement in lesson plans including playing and doing activities with friends who have different cultural backgrounds, playing in cooperation with others by having a common goal, appropriately smile, greet or talk to adults and people who they are familiar with, participate in setting the rules and follow them, practice as a leader and follower appropriately in given situations, and compromise in conflicts with nonaggressive or in peaceful ways by themselves.

After the workshop, conversations with the teachers were conducted as informal meetings between the researchers and teachers. During the conversations, the researchers observed that T3 was more eager to participate in conversations and asked more questions than the other two teachers. This was a significant piece of evidence that the three participating teachers asked similar questions. Nevertheless, all of them agreed that having this conversation time with the researchers and their peers helped them to enhance their lesson plans, as illustrated from these excerpts taken from conversations with the participating teachers. The following verbatim transcriptions are the teacher's reflection results:

"In the workshop, we take turns presenting what we created in the lesson plans, and I also learned new techniques from other teachers. I will adapt these activities for my children. We felt comfortable sharing activities and materials. It was very helpful," highlighted by T1.

"We have a lot of discussions particularly about our lesson plans. We read our lesson plans and explained to our team what we did. It is good for the teachers to share opinions about their lesson plans," mentioned by T2.

"After having a discussion last time, I felt very comfortable about having the meetings. Everybody has a different style to display in the lesson plans. We spent most of the time talking about the activities we used in our project. I think it is a good idea to talk and discuss about what we have done," stated by T3.

# 3.2. Results of second phase: peer teaching

The results of the second phase revealed that there is a wealth of evidence that peer teaching is extremely effective for a wide range of goals, contents, and children of different cultural backgrounds and personalities. Peer teaching is found can enhance learning by enabling children to take responsibility for reviewing organizing and consolidating existing knowledge and material, and reformulating knowledge into new conceptual framework [26].

In the second phase of this research, each participating teacher taught in class to her peers who played the role as learners in an early childhood classroom. After teaching, each teacher received verbal feedback from the the other two peers who acted as learners and also the researchers as well [12]. The researchers wrote the field notes during the peer teaching. The data from the written field notes were coded. This coding was aimed at breaking the data into related categories. The researchers then generated the categories based on emerging themes [20]. Furthermore, the researchers used conversation to reflect upon peer teaching. The followings are

the two themes that emerged from analyzing the data, namely teachers as facilitators and teacher and children support.

#### 3.2.1. Teachers as facilitators

Project approach is one of the most effective methods of teaching and learning which require the availability of teachers who encourage children to involved actively in their learning through active interaction individually or with individuals and meaningful objects [22]. The teacher's role moves from content-deliver to content-guide, from lecturer to facilitator [26]. In project-based learning, traditional teacher roles can be challenged as learners make choices on how to choose a topic, create content maps and do fieldwork [10]. The results of this research revealed that teachers acted as authoritarian rather than guidance in terms of teachers as facilitators. They rarely gave their children the time needed to build their skills. The participating teachers were not familiar with the project approach and did not recognize to allow children in exploring the learning concepts independently and follow their interests as much as they can fueled by their natural curiosity and motivation. The following are the results of classroom observation in each step of the project approach.

In step 1, T1 chose Lao food for her children without engaging them in analyzing and reasoning to start the project. T1 did not use open-ended questions to explore children's experiences and what they already known about this topic. On the other hand, T2 neglected to do a brainstorming session on Lao dance, which was an essential part that was encouraged and responded to each child's ideas [28]. Moreover, the researchers observed that T2 did not facilitate in strengthening work plans which would have enabled T2 to understand and gauge each child's thinking skills and interest developmental level. On top of that, children did not receive any reinforcement, so they felt like they had not ready to begin the project. T3 could not make assumptions from open-ended questions and could not identify the children's interests and level of knowledge.

In step 2, T1 developed the project by asking her children to pair up and discuss what they knew about Lao food then she wrote down what children shared with each other on sticky notes. This was followed by inviting an expert to the class to teach how to cook Lao food. Firstly, the expert introduced ingredients and demonstrated how to cook the Lao food step by step. Secondly, the children helped each other to do their cooking under the expert's guidance. The researchers observed that T1 spent a lot of time controlling her children's behaviour. T1 moved among pairs but she did not provide any scaffolding. T2 introduced Lao dance and taught the children how to clap hands in different rhythmic patterns. Then, she invited an expert to teach Lao dance to her children. The expert danced in front of the class facing the children, so that she could observe, adapt, give encouragement, and physically and verbally instruct them. The class mirrored her exact movements. The expert broke down movement, through slow and scaffolded steps, so children learned the skills and strengths to master them appropriately. The researchers noticed that T2 was moving among the children and helped the expert in making suggestions and providing support. T2 acted as the audience, to do this T2 stood back and observed nearby thus offering brief suggestions and comments. T3 began telling a story about Vietnamese food to children after which she asked the children to share their cooking experiences at home with their families. Then T3 invited an expert to teach how to cook Vietnamese food. At first, the expert introduced ingredients and demonstrated how to cook step by step. The children helped each other to do the cooking under the expert's guidance. While the children were cooking, T3 was standing at the back of the class to observe children do their cooking independently without offering any help for them.

In step 3, T1 and T3 had a similar plan. Both T1 and T3 asked each pair of children to be in front of the class after T1 and T3 had eaten the food that their children prepared. Then they allowed the children to share their opinions about the taste of the food, whether they liked or disliked concluding the project. For T1, the researchers observed that the space for cooking was quite small as a learning environment. T1 did not teach the children about safety precautions such as being careful with hot surfaces and sharp utensils. The researchers recommended raising the awareness of multicultural education with an emphasis on understanding and awareness of culture when the children shared their opinions in step 3. For T3, the researchers suggested to T3 that she should allow the children to discuss nutrition that they can get from their food and healthy eating habits instead of asking them to share their opinion about taste of the Vietnamese food. After step 3, the researchers suggested to T3 choosing topics related to multicultural education topics such as dancing, art, music, occupation, and language.

T2 let the children performed Lao dance. When the children finished dancing, they engaged in self-reflection and discussed what they perceived Lao dance. The researchers observed that T2 did not give adequate time for children to practice dance. If they were given sufficient time, this would allow them to make positive progress and improvement. After step 3, the researchers would like to suggest to T2 to incorporate cooperative group instead of pair work. Cooperative learning can be provided so that children can share common tasks in groups that are not possible as pairs. Children will benefit from such inter-group relations and develop a host of interpersonal competencies including respect, empathy, and perspective-taking [29].

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After peer teaching, the researchers conducted informal meetings to have conversations with the participating teachers. The topic of conversation was the difficulties that teachers encountered during the integration of multicultural education with the project approach. The results revealed that teachers were not familiar with the project, so they did not recognize children can be given opportunities to explore concepts independently to do the project. Moreover, teachers had difficulties in using open-ended questions to find out what experiences children had with the topic. Only one teacher mentioned that she learned how to facilitate learning. In addition, all teachers realized that they lacked experience and knowledge about multicultural education is one of the key constraints [30].

Nevertheless, all participating teachers agreed that having conservations with the researchers and their peers helped them to enhance their teaching skills, as illustrated from these excerpts taken from teachers' conversations as follow:

"I am not used to open-ended questions to find out what experiences children have had with the topic," said T1.

"I used a project approach for peer teaching. This changed my teaching from being traditional to being a facilitator, guiding knowledge construction for children," emphasized by T3.

"This is the first time, I learned to integrate multicultural education into my lesson plans for teaching skills. I should incorporate cooperative learning in my classroom," stated by T2.

#### 3.2.2. Classroom management

Classroom management refers to the variety of skills and techniques that teachers use to keep children organized orderly, focused on tasks during a class. In this research, the researchers noted body language and rapport between teacher and children as the themes to identify classroom management. The teachers need to use body language more efficiently in terms of where to stand in the classroom, how frequently to move around, how to use arm and hand gestures, and how to use facial expressions. The researchers observed that all participating teachers considered teacher talking time, eye contact, expressions, proximity, scaffolding, and group work management as the key problems in classroom management. The results showed that all teachers rarely smiled, got nervous when handling children's behavioural issues, and managed the whole school setting with their presence only. T1 and T2 exhibited poor posture which indicated a lack of self-assurance and a sign of weak leadership, both of which are very important in teacher-student relationships.

Another theme of classroom management is rapport between teachers and children that being identified as friendly, insightful, and sincere relationships between the two parties. Therefore, rapport is viewed as a trusting relationship that yields a mutually respectful understanding of each other for both teacher and children. The results revealed that teachers did not build rapport such as supportive, friendly, non-verbal behaviour, smiling and nodding for acknowledging students' answers, acting as motivators for children and fostering their active participation in the classroom.

# 4. CONCLUSION

This research investigated training early childhood teachers integrating project approach with multicultural education in the classroom. While past studies have explored framework for teachers' professional development tailored to early childhood teachers. There is a gap in examining professional development programs to train teachers in blending the project appraoch with multicultural education principles. Studies could explore how to structure training that emphasizes experiental learning, cultural responsiveness, and critical reflection. The researchers found that teachers faced challenges in developing lesson plans, finding materials and resources. Teachers also have difficulties in facilitating learning and teaching activities while they are having peer teaching and had problems with classroom management. Our results suggest that teachers should be trained in designing learner-centered learning activities. The proposed learning activities may benefit the needs of a diverse cultural backgrounds of children. This research explored a comprehensive training to integrate project approach with multicultural education. However, further and in-depth studies may be needed to investigate the impacts of integrated approaches on child outcomes. This implies that future research could investigate how this integration impacts social-emotional, cognitive, and cultural understanding outcomes in young children, particularly for children from diverse cultural backgrounds. Our results provide conclusive evidence that this proposed training should focus on tight coherence and integration among courses and between course work and practicum in early childhood centers. using pedagogies linking theory and practice, and closer relationships with early childhood centers that serves diverse children effectively and develop and model good teaching.

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#### CONFLICT OF INTEREST STATEMENT

No conflict of interest.

# INFORMED CONSENT

We have obtained informed consent from all individuals included in this study.

# ETHICAL APPROVAL

The research related to human use has been complied with all the relevant national regulations and institutional policies in accordance with the tenets of the Helsinki Declaration and has been approved by the authors' institutional review board or equivalent committee.

#### DATA AVAILABILITY

- The data that support the findings of this study are available on request from the corresponding author, [VH]. The data, which contain information that could compromise the privacy of research participants, are not publicly available due to certain restrictions.
- Derived data supporting the findings of this study are available from the corresponding author [VH] on request.
- The data that support the findings of this study are available from the corresponding author, [VH], upon reasonable request.

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