

Prevalence and associated factors of maternal anxiety and depression during COVID-19 pandemic in Thailand

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Background: The worldwide outbreak of COVID-19 causes a major change in the way of living of human being. In addition to physical problem, there are also mental health issues that are significant increase during COVID-19 pandemic especially in maternal group. According to the previous researches, they were found the increases in mental health problems in maternal group. We aimed to study the prevalence and associated factors of maternal anxiety and depression during late phase of COVID-19 pandemic in Thailand.

Objective: The primary is to evaluate the prevalence of anxiety and depression of mothers during COVID-19 pandemic in Thailand. The secondary objective is to find out the associated factors that impact mothers' mental health status.

Method: Participants were mothers of children who visited outpatient department or admitted inpatient department at Bhumibol Adulyadej Hospital, Royal Thai Air Force, Thailand. Mothers completed questionnaires assessing demographic data and Thai Hospital Anxiety and Depression Scale (HADS) scores for screening of anxiety and depression.

Result: Prevalence of maternal anxiety and maternal depression were 13.3% and 10.2%, respectively. Multiple logistic regressions indicated that one significant associated factors of maternal anxiety was recent COVID-19 infection of her child and associated factor of maternal depression was length of admission more than three days.

Conclusion: Maternal anxiety and depression were significant during COVID-19 pandemic in Thailand. Early screening for maternal anxiety and depression for early detection and provide intervention is advantage for quality of children well-being.

Keyword: Maternal anxiety, Maternal depression, Associated factors, COVID-19 pandemic

Introduction

COVID-19 was first reported in Wuhan, China, in December 2019. It was spread rapidly to all parts of the world. WHO officially classified the spread of the virus as pandemic in March 2020¹.

This pandemic had impacted children worldwide due to many factors including the closure of schools and daycare center, and limitation of outdoor activities². Parents, mothers in particular, were at risk of psychological distress from social issue and financial problems^{3,4}. There are research found that during stressful situations, females were at increased risk for anxiety and depression⁵. This bring the concerns as maternal mental health is associated with child maltreatment⁶ and poor maternal-child attachment⁷. Children might be at a high risk for negative outcomes related to maternal depression among COVID-19 pandemic.

Longitudinal cohort study of maternal anxiety and depression during the mid COVID-19 pandemic in Canada found that approximately 30% of mothers reported clinically significant symptoms of anxiety or depression. Associated factors with increased risk of maternal mental health problem included income disruptions, difficulty balancing home schooling with work responsibilities, and difficulty obtaining childcare⁸.

To our knowledge, the study of maternal anxiety and depression during COVID-19 pandemic in Thailand was sparse. This study was aimed to evaluate the prevalence and associated factors of maternal anxiety and depression during COVID-19 pandemic in maternal group in Thailand.

Materials and methods

A cross-sectional descriptive study was performed during COVID-19 pandemic in Thailand between January and September 2022. The study was performed at an outpatient or inpatient department at Bhumibol Aduyadej Hospital (BAH), Royal Thai Air Force, Bangkok, Thailand.

A convenience sampling of mothers whose children visited pediatric BAH outpatient or inpatient departments were enrolled. Only mothers who can communicate and read Thai language were eligible to participate. Mothers who were foreigners, refused to participate and had previous history of psychiatric problem were excluded. All participants were provided informed consent before completed self-filling questionnaires. Data collection for this study was approved by BAH ethic committee (IRB No.105/64).

The questionnaires that used to collect the data, were divided into two segments. The first part consisted of mother's general information such as age, previous underlying diseases, education, employment status, income, numbers of children, principal diagnosis of the children's illness, parenting status (living together with their child or separation), family support and learning method of their child (online learning or onsite learning). The second part consisted of Thai Hospital Anxiety and Depression Scale (HADS) scores for anxiety and depression. The completed questionnaires were collected in the sealed boxes placed in outpatient and inpatient departments.

Thai Hospital Anxiety and Depression Scale (HADS)

Thai HADS was used to screen maternal anxiety and depression in this study. It was a screening tool for anxiety and depression translated from Hospital Anxiety and Depression Scale (HADS)⁹ since 1996 that contained 14 items of questions (7 items for anxiety and 7 items for depression). This tool had a good reliability and validity for both anxiety and depression sub-scales, at the cut-off point of ≥ 11 . Sensitivity of anxiety and depression sub-scales of Thai HADS were 100% and 85.71% respectively, while the specificity was 86.0% for anxiety and 91.3% for depression¹⁰.

Statistical analysis

The data were analyzed by using the Statistics Package for Social Sciences (SPSS) statistic version 27 (IBM Corp, NY, USA). Normality was assessed by using the Kolmogorov-Smirnov test. Continuous or ordinal data were presented as mean and SD. Nominal data were presented as median and percentile. Univariate analysis was performed by using logistic regression modeling. P-value ≤ 0.05 was considered statistically significant. Multivariate analysis was performed via a multiple logistic regression modeling with all significant factors from the univariate analysis. All odds ratio were reported along with 95% confident interval.

Results

Participant characteristics

285 out of 300 questionnaires were completed. 15 participants refused to participate. Total response rate was 95%.

General socio-demographic information is shown in Table 1. The average age of the participants was 34 years old. 41 mothers (14.4%) had presence of underlying disease. 138 participants (48.9%) were the mothers of inpatient children. Among the inpatient children, there were 39 cases diagnosed with recent COVID-19 infection (infection within recent 2 weeks) (13.8%).

Prevalence of maternal anxiety and depression

The prevalence of maternal anxiety and maternal depression during COVID-19 pandemic were 13.3% and 10.2%, respectively.

Associated factors

As shown in Table 2 and Table 3, multivariate analysis was done, after adjusting for the confounding factors. Factor that significantly associated with maternal anxiety was COVID-19 infection of their children (adjusted odds ratio {aOR}, 4.69; 95% CI, 1.95-11.29; $P < 0.01$). In regard to factor associated to maternal depression, it was a length of hospitalization of their child

more than three days (adjusted odds ratio {aOR}, 3.01; 95% CI, 1.21-7.45; $P = 0.01$).

Discussion

To our knowledge, this study was one of few studies to evaluate maternal mental health problems during the COVID-19 pandemic in Thailand. Prevalence of maternal anxiety and depression in this study were 13.3% and 10.2%, respectively.

From our study, it was a significant high prevalence of anxiety and depression in mothers who had a recent COVID-19 infection child during COVID-19 pandemic. Although, the mother group was not a representation of general population, the data may reflect the increase in prevalence of anxiety and depression during COVID-19 pandemic compare to Thai mental health survey¹¹ in 2013 which found prevalence of anxiety and depression in general population at only 0.3% and 1.8%, respectively.

As shown in Table 4, Dennis et al (2017) meta-analysis studied the populations from America, Europe, Asia and Africa in non-pandemic era found 4.2% mothers had clinically generalized anxiety disorder with 95% CIs ranging from 1.5% to 6.9%¹². In this study, the maternal anxiety increase during COVID-19 pandemic. Moreover, this study showed that the maternal depression rate in COVID-19 pandemic appeared to minimally increase about 1% from non-pandemic era¹³. Compare to our study which the prevalence is higher, it seems that the mothers of our study had higher risk of mental health issues from the child's illness and hospitalization.

During COVID-19 pandemic, the 2 Canadian studies by Cameron and Racine revealed that the prevalence of maternal anxiety were 32.69 and 31.39%, and maternal depression were 41.51 and 35.21%, respectively^{4,8}. It could be assumed that the difference of prevalence from this study might be from two reasons. First, Canada (North America) was experienced COVID-19 outbreak more severe than Thailand (Asia). Second, those two studies were done in early and mid COVID-19 pandemic (2020, 2021 respectively)

but this study was executed during late phase of COVID-19 pandemic (2022). So the prevalence of each might refer to their geographical location and phase of COVID-19 era.

Cameron et al (2020) revealed that an associated factor of maternal anxiety was financial strain while lower income, wage less than 10,000 THB, were not a significant risk factor for anxiety in this study. Family support is the possibility of lessening the risk from financial strain in Thai mother as Thai families are often extended families, it might be a family members to help deal with financial burdens during the COVID-19 pandemic while North America families were usually a nuclear family which may limited financial support from family.

It was found that mothers who had children that suffered from COVID-19 infection were at higher risk of anxiety disorder. We suspected that from COVID-19 was a new disease that can cause many serious complications (Severe pneumonia, Long COVID syndrome, MIS-C, etc.). Furthermore, mothers whose children had length of hospital admission of more than three days were at an increased risk of depression. That might be cause from the increase of hospital cost and more severe disease.

The result in this study suggested that mothers of children diagnosed with COVID-19 infection and whose children had a length of hospital stay more than three days are at risk of anxiety and depression. Anxiety and depression screening tests should be performed for risk group mothers, and early mental evaluation and intervention by consultant psychiatrist should be done to protect the childhood well-being.

Limitation

The results of this study based on cross-sectional data that can determine only one time point. The different of phase COVID-19 pandemic and study area which might affected prevalence of maternal anxiety and depression. Lastly the incomplete of some variation might affected the result of this study too.

Conclusion

The COVID-19 pandemic affected everyone in the world especially parents. This study revealed an increase in both maternal anxiety and depression during COVID-19. The associated factors of maternal anxiety was mothers who had children with COVID-19 infection. And mothers whose children had length of admission of more than three days were also an associated factor for maternal depression.

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ความชุกและปัจจัยที่มีผลต่อภาวะวิตกกังวล และภาวะซึมเศร้าของมารดาในช่วงการระบาดของโรคติดเชื้อไวรัสโคโรนา 2019

วุฒิภัทร ภูษณสุวรรณศรี, เอกสิทธา จูฑามาตย์, จักจิตกอร์ สัจจเดวี

ความเป็นมา: การระบาดของเชื้อไวรัสโคโรนา 2019 ส่งผลกระทบต่ออย่างมากกับประชากรทั่วโลก โดยนอกจากผลกระทบด้านสุขภาพร่างกายแล้ว ผลกระทบต่อสุขภาพจิตก็เป็นสิ่งสำคัญไม่แพ้กัน โดยเฉพาะในกลุ่มมารดาที่ต้องเผชิญกับความกดดันและภาระที่มากขึ้นในการดูแลบุตรหลานในช่วงสถานการณ์การระบาด จากการศึกษาที่ผ่านมาพบว่าปัญหาด้านสุขภาพจิตของมารดาในช่วงการระบาดมีเพิ่มมากขึ้นอย่างมีนัยสำคัญ และอาจส่งผลกระทบถึงการเลี้ยงดูบุตรอย่างไม่มีประสิทธิภาพ

วัตถุประสงค์: ความชุกและปัจจัยที่มีผลต่อภาวะวิตกกังวลและภาวะซึมเศร้าของมารดาในช่วงการระบาดของโรคติดเชื้อไวรัสโคโรนา 2019

วิธีการศึกษา: การศึกษานี้เป็นการศึกษาเชิงพรรณนาแบบตัดขวาง ทำการศึกษา ณ กองตรวจโรคผู้ป่วยนอกและหอผู้ป่วยใน โรงพยาบาลภูมิพลอดุลยเดช ระหว่างเดือนมกราคม - กันยายน พ.ศ. 2565 ผู้เข้าร่วมการศึกษาคือมารดาที่พานบุตรมาเข้ารับการรักษาที่โรงพยาบาลภูมิพลอดุลยเดช โดยผู้ร่วมวิจัยจะทำการตอบแบบสอบถามที่ประกอบไปด้วยข้อมูลพื้นฐานและแบบคัดกรองภาวะวิตกกังวลและซึมเศร้า

ผลการศึกษา: ความชุกของภาวะวิตกกังวลและซึมเศร้าของมารดาในช่วงการระบาดของโรคติดเชื้อไวรัสโคโรนา 2019 มีค่าเท่ากับ 13.3% และ 10.2% ตามลำดับ โดยปัจจัยที่เกี่ยวข้องกับภาวะวิตกกังวลในมารดา คือมารดาที่มีบุตรที่เข้ารับการรักษาในโรงพยาบาลด้วยการติดเชื้อไวรัสโคโรนา 2019 และปัจจัยที่เกี่ยวข้องกับภาวะซึมเศร้าคือ การที่บุตรเข้ารับการรักษาในโรงพยาบาลมากกว่าหรือเท่ากับ 3 วัน

สรุป: ความชุกของภาวะวิตกกังวลและซึมเศร้าของมารดาในช่วงการระบาดของโรคติดเชื้อไวรัสโคโรนา 2019 มีค่าที่มากอย่างมีนัยสำคัญ การตรวจคัดกรองเพื่อตรวจพบและให้การจัดการอย่างเหมาะสมเป็นสิ่งสำคัญที่ควรทำในกลุ่มมารดาที่มีความเสี่ยงเพื่อการเลี้ยงดูบุตรอย่างมีประสิทธิภาพ

คำสำคัญ: ภาวะวิตกกังวลของมารดา, ภาวะซึมเศร้าของมารดา, การระบาดของโรคติดเชื้อไวรัสโคโรนา 2019