

The Effectiveness Of PC6 Point Acupressure In Overcoming First Trimester Degree Ii Hyperemesis Gravidarum

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Abstract

Hyperemesis gravidarum is a severe complication in early pregnancy marked by excessive nausea and vomiting, often leading to dehydration, weight loss, and reduced maternal quality of life. Despite being frequently underestimated, this condition requires timely and effective management. One non-pharmacological intervention that has gained attention is acupressure at the PC6 (Nei Guan) point. This study aimed to evaluate the effectiveness of PC6 acupressure in reducing the frequency and intensity of hyperemesis gravidarum among first-trimester pregnant women. A quasi-experimental pretest-posttest design without a control group was conducted on 20 respondents at the Rahmawati Midwifery Clinic, Pangkalpinang. Participants performed acupressure therapy for five minutes, three times daily for seven consecutive days. Data on nausea intensity and vomiting frequency were collected before and after the intervention using a standardized scale and logbook. Results showed a significant decrease in nausea and vomiting symptoms, with the average score dropping from 8 (range 7–9) before therapy to 3 (range 2–4) after therapy. Statistical analysis using paired t-test yielded a p-value of 0.000, indicating a highly significant difference. These findings suggest that PC6 acupressure is an effective, simple, and low-cost complementary therapy for managing hyperemesis gravidarum in antenatal care services, particularly at the community level.

INTRODUCTION

Hyperemesis gravidarum is a condition of severe nausea and vomiting that exceeds the physiological state of the emesis gravidarum. This condition can cause dehydration, electrolyte imbalance, weight loss, and interfere with daily activities and the overall quality of life of pregnant women (London et al., 2017). According to Syamsuddin et al. (2018), About 40–50% of pregnant women experience mild nausea and vomiting in the first trimester, but about 20–30% of them develop into more severe hyperemesis gravidarum and require medical intervention. The perception of people who consider nausea and vomiting during pregnancy to be normal often causes the symptoms of hyperemesis gravidarum to be ignored. In fact, symptoms such as fatigue, loss of appetite, and sleep disturbances due to excessive nausea and vomiting can worsen the health condition of the mother and fetus (MacGibbon, 2020).

Pregnant women's knowledge and attitude towards the symptoms of hyperemesis gravidarum plays an important role in preventing further complications. Studies show that a good understanding of this condition encourages pregnant women to be proactive in seeking treatment and following appropriate interventions (Butu et al., 2019; Mutia & Harahap, 2024). Globally, the prevalence of hyperemesis gravidarum varies, ranging from 0.3% in Sweden, 0.8% in Canada, to 10.8% in China

(Mohammed Seid et al., 2024). In Indonesia, prevalence is estimated to be around 1–3% of all pregnancies, with a general incidence of about 4 per 1,000 pregnancies (Bidary et al., 2022). The 2018 Basic Health Research Report (Riskesdas) also noted that 20% of pregnant women experience prolonged vomiting and diarrhea, which is one of the main symptoms of hyperemesis gravidarum. According to Aprilasari et al. (2021), As many as 14.8% of pregnant women experience hyperemesis gravidarum, where most cases occur in primigravida (60–80%) compared to multigravida.

In recent years, non-pharmacological therapies have been increasingly used to reduce the side effects of conventional treatment. One alternative therapy that has received attention is acupressure at the PC6 point (Nei Guan), which is related to the regulation of the central nervous system (Hoo, 1997; Mansour et al., n.d.; Mohd Nafiah et al., 2022). Research at Pratama Afiyah Clinic showed that acupressure at the PC6 point significantly reduced the frequency of nausea and vomiting in pregnant women ($p = 0.001$) (Megasari & Sari, 2024). Similar results were also found at the UPTD Mengwi III Health Center and Hermina Bekasi Hospital, which reported a decrease in the frequency of hyperemesis gravidarum after PC6 point acupressure intervention (Sulistiani, 2024).

This effectiveness confirms that acupressure is a safe, simple, and cost-effective complementary approach in treating hyperemesis gravidarum. However, until now, there has been no specific research that assesses the effectiveness of PC6 point acupressure in the context of the Pangkalpinang area. In fact, socio-cultural factors and access to health services can greatly influence the success of non-pharmacological interventions. Therefore, this study was conducted to evaluate the effectiveness of PC6 point acupressure in reducing the frequency and intensity of nausea and vomiting in pregnant women in the first trimester with moderate hyperemesis gravidarum (Grade II) in Pangkalpinang City. The results of this study are expected to provide scientific evidence that supports the implementation of acupressure therapy in community-based midwifery practice and contribute to the development of more holistic and evidence-based maternal health services.

METHOD

This study used a quasi-experimental design with a pretest and posttest approach without a control group to evaluate the effectiveness of acupressure therapy at the PC6 point (Nei Guan) in reducing the frequency and intensity of hyperemesis gravidarum degree II in pregnant women in the first trimester. The research was carried out in several health centers and midwifery clinics in Pangkalpinang from April to June 2025. The study population was pregnant women in the first trimester (gestational age 6–12 weeks) who experienced moderate nausea and vomiting according to the criteria of hyperemesis gravidarum degree II and conducted antenatal visits at the study site. A total of 20 respondents were selected using purposive sampling techniques with inclusion criteria including 6-12 weeks of gestation, moderate nausea and vomiting, and willingness to undergo acupressure therapy and follow the entire series of studies.

The independent variable in this study was acupressure therapy at the PC6 point, while the dependent variable was the frequency and intensity of hyperemesis gravidarum symptoms, which included the number of vomiting episodes, nausea rate, dehydration, weight loss, dizziness, and headache. The instruments used were PC6 point acupressure therapy guides, diaries to record vomiting episodes and daily nausea levels, and nausea intensity scale (0–10). All participants were given an explanation, signed an informed consent, and then a pretest was carried out before the intervention. Acupressure therapy is carried out independently or with the help of a midwife for five minutes, three times a day, for seven consecutive days, then a posttest is carried out to evaluate changes in symptoms. Data were collected through brief interviews and structured observation sheets by midwives, including the number of vomiting episodes per day and the respondents' reported nausea intensity scores, then analyzed descriptively univariate and bivariate and presented in the form of tables and bar charts to support the interpretation of the results.

RESULTS AND DISCUSSION

This study involved 20 pregnant women in the first trimester who experienced moderate hyperemesis gravidarum. The majority of respondents were in the age range of 26–35 years old (60%), had an educational background from elementary to high school (75%), and were not employed (75%). The distribution of respondent characteristics is presented in Table 1.

Table 1. Respondent Characteristics

No	Variable	Category	f	%
1	Age	20 – 25 Year	8	40
		26 – 35 Year	12	60
2	Education	Primary school	15	75
		High School	5	25
3	Work	Work	5	25
		Not Working	15	75

After undergoing PC6 point acupressure therapy for seven days, there was a significant decrease in the frequency and intensity of nausea and vomiting. The average score of nausea and vomiting complaints before therapy (pretest) was 8 with a range of 7–9, while after therapy (posttest) decreased to an average of 3 with a range of 2–4. The comparison of these scores is presented in Table 2 and illustrated in Figure 1.

Tabel 2. Comparison of Pretest and Posttest Scores for Nausea and Vomiting Complaints

	Average Score	Score Range
Pretest	8	7 – 9
Posttest	3	2 - 4

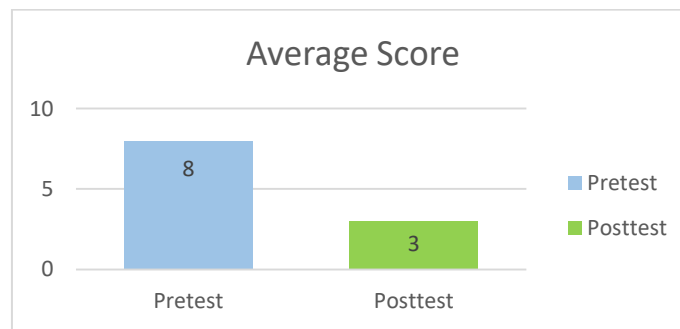


Figure 1. Average Pretest and Posttest Scores

Statistical tests using paired t-tests showed a p-value of 0.000 ($p < 0.05$), indicating a significant difference between scores before and after PC6 point acupressure intervention.

DISCUSSION

This study aims to evaluate the effectiveness of acupressure at the PC6 point (Nei Guan) in reducing the frequency and intensity of moderate degree hyperemesis gravidarum in first trimester pregnant women. Based on data obtained from 20 respondents at PMB Rahmawati, Pangkalpinang in 2025, a significant reduction in nausea and vomiting symptoms was found after seven days of acupressure intervention. The average score of nausea and vomiting complaints decreased from 8 (range 7–9) before therapy to 3 (range 2–4) after therapy. The results of the paired t-test showed a p-value of 0.000 (< 0.05), which showed a statistically significant difference between the scores before and after the intervention.

The demographic characteristics of respondents showed that most were aged 26–35 (60%), had an education level from elementary school to high school (75%), and were not employed (75%). This characteristic is important, because women with low levels of education and those who are not employed are generally more prone to experiencing anxiety related to pregnancy symptoms, including hyperemesis gravidarum. Therefore, education and support during the intervention play an important role in the success of therapy.

These findings are in line with previous research supporting the effectiveness of PC6 point acupressure in relieving nausea and vomiting during pregnancy. Solt Kirca, A., & Kanza Gul, D. (2020) showed that acupressure at the P6 point significantly reduced the frequency of nausea and vomiting compared to the control group. Lee et al., (2015) It is also explained that stimulation at the PC6 point

can affect the vagus nerve, which plays a role in controlling the vomiting center in the brain. Pressure at this point can reduce sympathetic nerve activity and improve digestive tract function, thereby relieving symptoms of nausea and vomiting (Li et al., 2012). Support for these findings also comes from national studies, such as Rorrong et al., (2021) which proves the effectiveness of PC6 point acupressure in reducing nausea and vomiting in pregnant women. This therapy has several advantages: it is non-invasive, easy to perform independently, does not cause serious side effects, and does not require special medical equipment making it ideal for use in primary health care (Yılmaz et al., 2023).

In addition to physiological factors, the attitude of pregnant women also affects the effectiveness of therapy. Bulut & Özdemir (2019) found that women with positive attitudes were more receptive to interventions and tended to experience milder symptoms. On the contrary, negative attitudes can worsen perceptions of symptoms, increase emotional burden, and hinder the recovery process. Elmas et al. (2021) emphasizing that positive attitudes arise from a good understanding of pregnancy conditions, including complications such as hyperemesis. In this context, the theory of attitude structure which includes cognitive, affective, and conative components supports the importance of educational approaches in pregnancy management (Abbasi et al., 2022). Tan et al., (2014) It was also noted that women who view hyperemesis as a natural part of pregnancy tend to be more psychologically adaptive and less emotionally burdened. Therefore, informational support and guidance are essential in forming a positive perception of non-pharmacological therapies such as acupressure.

Overall, this study confirms that PC6 point acupressure is a safe, effective, and affordable complementary therapy. This intervention empowers pregnant women to actively manage their health during pregnancy independently. In midwifery practice, the application of acupressure can also increase maternal empowerment and improve the quality of antenatal services as a whole.

However, this study has some limitations. First, quasi-experimental designs without control groups have the potential to create bias in the interpretation of results. Second, the small sample size (n = 20) and the limited study location of one clinic limited the generalization of the findings. Third, the short duration of the intervention has not made it possible to evaluate the long-term impact on maternal nutritional status or fetal development.

Therefore, further research with randomized controlled trials (RCTs) designs, wider geographical coverage, and longer durations is needed. Further research should also explore psychosocial aspects such as knowledge, compliance, and maternal readiness to perform acupressure independently as part of a promotive and preventive approach in maternal health services.

CONCLUSIONS AND RECOMMENDATIONS

This study shows that PC6 (Nei Guan) point acupressure therapy is significantly effective in reducing the frequency and intensity of symptoms of hyperemesis gravidarum degree II in pregnant women in the first trimester. After the seven-day intervention, the mean score of nausea and vomiting decreased from 8 to 3, with a statistically significant p-value of 0.000. These findings confirm that PC6 spot acupressure is a safe, simple, and side effect-free complementary therapy. Therefore, this technique can be considered as a viable non-pharmacological intervention in antenatal services, particularly at the primary and community-based health service levels.

The suggestion in this study is to improve the management of hyperemesis gravidarum in the first trimester of pregnancy, it is recommended that midwives and health workers receive training on PC6 point acupressure techniques, so that they can apply and teach this method effectively to pregnant women. Public health centers also need to integrate acupressure into antenatal service protocols as a non-pharmacological intervention. Further research with larger sample counts and with control groups is needed to validate these findings in different regions and populations. Educational programs also need to be implemented to increase the awareness of pregnant women about the benefits of acupressure in overcoming pregnancy symptoms. Overall, acupressure should be integrated into clinical practice as a complementary therapy to improve comfort for pregnant women and reduce dependence on pharmacological treatments, particularly in the treatment of nausea and vomiting in early pregnancy.

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