

AWARENESS AND EXTENT OF SELF-CARE PRACTICE AMONG PREGNANT WOMEN TOWARDS PREVENTION OF PREGNANCY-INDUCED HYPERTENSION

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ABSTRACT

Pregnancy-induced hypertension (PIH) is among the leading causes of maternal and fetal morbidity and mortality worldwide. Despite the availability of antenatal care services, awareness and practice of self-care among pregnant women to prevent PIH remain inadequate. Using a descriptive-correlational quantitative design, data were collected through the administration of a survey questionnaire to 127 pregnant women selected through convenience sampling. Descriptive statistics, Likert scales, and Pearson correlation were used for data analysis. This study assessed the awareness and extent of self-care practice related to the prevention of PIH among pregnant women in Solano, Nueva Vizcaya, from February 2025 to April 2025. It also determined if a significant relationship exists between these variables. Findings show that pregnant women demonstrated high awareness of PIH (Mean = 2.58), with the highest awareness in prevention and management, but low understanding of signs, risk factors, and complications. Self-care practice was rated very high overall (Mean = 3.34), with strong adherence to health provider visits and avoidance of harmful substances. However, awareness and self-care practice showed no significant correlation ($r = 0.055$, $p = 0.548$), suggesting that behavior was not directly influenced by awareness. The findings indicate that while pregnant women practiced effective self-care, their actions may stem more from routine healthcare guidance than from an understanding of PIH. The gap between awareness of symptoms and complications and self-care highlights a need for targeted antenatal education. The study underscores the importance of strengthening health communication and support systems to improve maternal outcomes and reduce the risks associated with PIH.

Keywords: Pregnancy-induced Hypertension (PIH), Knowledge, Self-Care Practice

INTRODUCTION

Pregnancy is a complex journey filled with emotional and physical changes, showcasing the resilience of the female body but also highlighting a period of increased vulnerability. Physiologic changes occur in multiple organ systems due to hormonal shifts and the growing needs of the fetus, most of which normalize after childbirth. However, some of these changes can lead to serious complications, particularly in women with preexisting conditions. Major causes of maternal death include severe bleeding, infections, high blood pressure, delivery complications, and unsafe abortion, all of which have shown an increasing trend in recent years. In the Philippines, maternal mortality remains a concern, with Nueva Vizcaya reporting an MMR of 149.11 in 2022, along with rising perinatal and infant death rates. Pregnancy complications, which may arise due to pre-existing conditions or pregnancy-related complications, may affect the self-care of mothers and put both the mother and the fetus at greater risk during the pregnancy period. One of these complications is pregnancy-induced hypertension (PIH).

PIH is defined as a systolic pressure greater than or equal to 140 mmHg or a diastolic blood pressure greater than or equal to 90mmHg or both (Brown et al., 2018). PIH tends to put both the mother and fetus at increased risk and complications. According to Wu. et al (2023), complications of PIH include hematological complications such as disseminated intravascular coagulation, hemolysis, acute kidney injury, liver involvement, uteroplacental dysfunction (e.g., placental abruption, angiogenic imbalance, and fetal growth restriction), and in severe cases, it

can lead to intrauterine and maternal death. Therefore, awareness and practice of self-care for the management of PIH are important and should be included in the prenatal care of pregnant women. Maternal death could be prevented if women have adequate awareness and a positive attitude towards performing self-care, such as attending antenatal check-ups, utilizing good health services, and following preventive practices to prevent or manage PIH.

According to Afefy & Kamel (2019) and Zohora et al. (2022), most pregnant women have insufficient awareness regarding PIH. In the contrary, results of Hussain & AL-Saffar (2016) found that pregnant women have moderate awareness regarding PIH. These differences may be attributed to the availability of education programs and health services available to the locale where the studies were conducted. Moreover, there are only two studies that studied the correlation between knowledge and practice of self-care regarding PIH. One out of the two found no significant relationship between the extent of management practices and the level of awareness on PIH of the respondents (Bermio and Corpuz, 2021). However, in an international study conducted by Vijayalakshmi and Jaya (2017), results show that there is a significant correlation between knowledge and practice, such that when the knowledge on PIH increases, their level of practice also increases. There is no research on the correlation of awareness and practice in self-care in the prevention of PIH. There is only one existing study by Bermio and Corpuz (2021) in the Philippines, which focused on awareness and practice of self-care regarding PIH.

Despite the growing body of literature on PIH, there are still minimal interventions to address the inadequacy of awareness and practice of self-care activities in the prevention of PIH. The high occurrence of awareness gaps and misconceptions suggests that the delivery of antenatal education could be more effective and cover common misconceptions about PIH. Antenatal education about PIH can facilitate earlier recognition of signs and symptoms and encourage consultation at health facilities on time for early intervention. Allowing partners and support persons to receive information about a healthy pregnancy and possible complications can also provide women with increased emotional support, shared understanding, and a greater sense of confidence and security throughout their pregnancy journey.

METHODOLOGY

This quantitative research utilized a descriptive-correlation approach. Descriptive statistical techniques, such as tables, means, percentages, frequencies, and standard deviations, were used to analyze the data. A correlational design was then used to explain the relationship between the variables of awareness and self-care. The study was conducted in the Municipality of Solano, Nueva Vizcaya. It has a total population of 65,287 as determined by the 2022 Census. Based on the data collected by the Provincial Integrated Health Office of Nueva Vizcaya (PIHO), the municipality of Solano has the highest recorded number of hypertension cases (1,119 recorded cases) from January to September 2023. Given that a history of hypertension and a family history of hypertension are major risk factors for having PIH, the researchers took this into consideration for the feasibility of respondents.

The data collection was conducted from February to April 2025. The researchers formally sent a letter of request to MHO Solano for permission to conduct the study and for the administration of the survey questionnaires. The researchers then asked for the assistance of the barangay health workers in the barangay health stations and requested a list of pregnant women who are currently availing the maternity care services in the BHUs. This was done to identify and locate the prospective respondents of the study. During the data collection period, the researchers attended prenatal check-ups and/or Buntis Congress assemblies scheduled by the barangays and did home visitations to identified respondents to personally hand out the

survey questionnaires. Respondents were approached personally during their visit to the healthcare unit and during the researcher's visitation to their homes. The researchers explained the purpose of the study and obtained consent from the respondents. Upon obtaining the consent from the respondents, the survey questionnaire was administered to them. The survey questionnaire was administered by the researchers, such that assistance was provided to the respondents when they encountered difficulties in answering the questionnaire. The survey lasted for about 10-20 minutes. The questionnaires were then collected, reviewed for completion, and sealed in an envelope. Recorded data was transcribed and analyzed. The researchers acquired about 15 respondents from attending the PuroKalusugan Programs and Buntis Congress. The majority of the respondents were recruited via home visitations.

The data gathered was recorded in tables, analyzed, and interpreted accordingly based on the results of the statistical treatment. All statistical analyses were performed using SPSS version 20.0. Independent variables are described using descriptive statistics by use of mean/average, standard deviation, and interpreted based on the Likert Scale interval and corresponding remarks.

To determine the level of awareness and the extent of self-care practice among pregnant women towards the prevention of pregnancy-induced hypertension (PIH), a Likert scale was utilized by the researchers. Moreover, Pearson correlation was used to describe the relationship between awareness and self-care practice.

RESULTS AND DISCUSSION

Section 1. Awareness of PIH

The level of awareness is rated as high (Mean = 2.58, SD = 0.25). This suggests that pregnant women possess an adequate understanding of pregnancy-induced hypertension. The highest scores were in prevention (Mean = 3.43, SD = 0.31) and management (Mean = 2.93, SD = 0.32), while the lowest score was in complications (Mean = 1.76, SD = 0.68).

Results show that the respondents have good awareness of the prevention and management of PIH. This is in the sense that the majority of pregnant women are aware of the kind of lifestyle and health habits that are behind the prevention of PIH. The information could have been gathered either from antenatal sessions or clinic visits. However, they were not aware of the signs and symptoms, risk factors, and complications of PIH. These findings suggest that the majority of pregnant women may not fully appreciate the manifestations and detrimental impact of PIH, and so may not adequately prioritize regular checks and report symptoms at an initial stage.

This low awareness of signs and symptoms, risk factors, and complications is similar to the findings of the study by Tamma et al. (2023), where it was found that some pregnant women, even though they had signs and symptoms of pregnancy-induced hypertension, were unaware of what was happening to them and, in most instances did not report these to healthcare providers. This highlights that even when symptoms are felt, unawareness prevents early detection and treatment. Moreover, findings of Karikari et al. (2023) show that many of the study participants (52.2%) had inadequate knowledge of PIH regarding the causes, risk factors, and clinical manifestations. This reflects a huge awareness gap and the need to give special attention to teaching women the entire list of PIH symptoms, the risk factors, and the associated complications.

Overall, the findings of this study indicate that while respondents exhibit good awareness of the prevention and management of PIH, they lack sufficient knowledge regarding

its signs and symptoms, risk factors, and potential complications. This gap in understanding is critical, as it may hinder early recognition of the condition and timely health-seeking behavior, which are factors essential to ensure the safety of both the mother and fetus.

Section 2. Extent of Self-Care Practice in the Prevention of Pregnancy-induced Hypertension (PIH)

The self-care activity is very high (Mean = 3.34, SD = 0.20). Access to healthcare (Mean = 3.82, SD = 0.30) and avoidance of harmful substances (Mean = 3.58, SD = 0.45) were the most significant, followed by nutrition (Mean = 3.21, SD = 0.25) and rest/exercise (Mean = 3.24, SD = 0.40).

Overall, the level of self-care activity among pregnant women with PIH is high. The exceptionally high score in access to healthcare (Mean = 3.82, SD = 0.30) is particularly noteworthy. It implies not only physical access to services but also a strong trust in the healthcare system and its providers. This is supported by a study by Nicoloro-Santa Barbara et al. (2017), where it was found that positive relationships with midwives predicted better self-care among pregnant women. Effective communication and trust in healthcare providers were associated with enhanced self-care practices. This trust may play a pivotal role in guiding other health-related behaviors, even potentially compensating for gaps in knowledge or resources in other domains. In this sense, healthcare professionals are not merely service providers but influential agents of behavioral reinforcement and accountability.

Section 3. Correlation Between Awareness and Extent of Self-care Practice in the Prevention of PIH.

The overall correlation between awareness of Pregnancy-Induced Hypertension and self-care practice. The above table shows a weak correlation and is not statistically significant ($r = 0.055$, $p = 0.548$), suggesting a weak but positive relationship between what women know and what they actually do in self-care practice. This would indicate that women are possibly practicing good self-care activities not so much because of awareness, but rather through health provider recommendation or habitual health activity. This is supported by the findings of Bermio and Corpuz (2021) where no correlation was found between the level of knowledge on PIH and self-care practice among pregnant women.

This implies that awareness itself does not appear to be sufficient to ensure change in behavior, but creating a stronger connection between awareness and practice would possibly impact consistency and conceptualization of self-care activities. The lack of association suggests that self-care actions are not primarily awareness-driven but may stem from other influences, such as routine behaviors or guidance from healthcare professionals. It implies that in this context, behavioral determinants such as external factors (e.g., clinician instructions), social norms, or ingrained habits may play a more substantial role than cognitive awareness alone.

Trust and guidance from healthcare providers, particularly nurses, play a significant role, such that even if women do not fully understand PIH itself, nurses often provide clear, practical instructions and encouragement on key behaviors such as maintaining a balanced diet, attending regular prenatal checkups, managing stress, and avoiding harmful habits that indirectly contribute to PIH prevention. A study by Shishehgar et al. (2019) found that pregnant women who received structured prenatal education and continuous nurse support exhibited improved adherence to self-care behaviors, despite limited baseline knowledge about hypertensive disorders of pregnancy. This greatly aligns with Orem's nursing methods, where guiding, teaching, and supporting compensate for gaps in patient knowledge (Orem, 2001).

Additionally, cultural beliefs and community practices may encourage behaviors aligned with PIH prevention, such as dietary restrictions or rest during pregnancy, which women follow out of tradition rather than medical understanding. This can lead to effective self-care even

when awareness of PIH itself is low. While awareness about specific areas on PIH (signs & symptoms, risk factors, and complications) may be limited, high self-care practice can still occur through trusted nursing support, culturally reinforced behaviors, and structured health system interventions. These elements work together to empower pregnant women to engage in preventive practices effectively, highlighting the vital role of nurses in bridging knowledge gaps and reinforcing health behaviors.

CONCLUSION AND RECOMMENDATIONS

Conclusion

Based on the results, pregnant women in Solano, Nueva Vizcaya generally had a high level of knowledge about pregnancy-induced hypertension (PIH), especially when it came to how to prevent and manage it. However, many of them were not fully aware of its warning signs, possible complications, and risk factors. Even with these gaps in knowledge, most of the women practiced very good self-care, particularly in regularly visiting health facilities and avoiding harmful substances.

The study also found that there was no strong connection between what they knew and what they practiced, which suggests that their actions may be guided more by advice from health workers than by their own understanding. This shows a need to improve prenatal education, especially in helping women recognize symptoms and understand the risks. Better health education and clearer communication can help women make more informed choices and lead to healthier pregnancies.

Recommendations

To Pregnant Women, Mothers, and Women in General

It is highly encouraged that pregnant women be gently supported and empowered to take an active role in their antenatal education—not only in learning how to prevent and manage PIH, but also in gaining a deeper understanding of its warning signs, possible complications, and risk factors. It is also suggested that involving partners or family members in health discussions can help build a supportive environment, where shared understanding leads to better decisions and outcomes during pregnancy.

To the Local Government Units (LGUs)

LGUs have an important role in making sure that antenatal education is accessible, relevant, and truly helpful for pregnant women in their communities. It is suggested that LGUs continue to support and invest in maternal health education, especially in areas where women are at higher risk. These efforts shouldn't just focus on encouraging checkups, but also on helping women understand the warning signs of complications and when to seek medical care. Also, future policies can include support for local health education campaigns and training for community health workers, so they can reach more women and provide better care and guidance.

To the Barangay Health Offices and Health Practitioners

Barangay health workers and rural health practitioners are key to making sure health education really connects with pregnant women and their families. Instead of just telling women what healthy habits to follow, we gently suggest that they focus more on how they communicate making health teaching more practical, engaging, and easy to understand. Thus, it is important

to involve close family members or caregivers during health sessions. When the people around a pregnant woman also understand the risks and warning signs, it builds a stronger support system and helps make sure that care decisions are shared and informed.

To the Future Researchers

It is encouraged to look more closely into why there seems to be a gap between what pregnant women know about self-care and what they actually do. While this study identified that such a disconnect exists, it did not explore the deeper reasons behind it. To better understand the situation, future studies might benefit from using qualitative methods like interviews or focus group discussions that can provide more insight into the behavioral, social, and cultural influences that shape how pregnant women care for themselves. It may also be helpful to consider other possible factors that could be affecting their self-care, such as income level, education, family support, access to healthcare, and cultural or traditional beliefs. These elements might be playing a bigger role than expected. Also, the researchers suggest that future studies involve larger and more diverse groups of participants, possibly from different communities or provinces. This can help make the results more meaningful and relevant to a wider population. Exploring how healthcare workers, long-standing habits, or community expectations influence behavior may also offer valuable perspectives on what truly helps or hinders pregnant women in taking care of their health.

REFERENCES

- Afey, N. A. E. & Kamel, A. D. (2019). Effect of an Educational Module on the Knowledge and Self-Care of Women suffering from Pre-eclampsia. *IOSR Journal of Nursing and Health Science (IOSR-JNHS)*, 8(2), e33-42.
- Bermio, J. & Corpuz, V. (2021). Correlates on awareness and management practices on pregnancy-induced hypertension (PIH) among women in Northern Philippines. *Journal of Preventive Medicine & Public Health*.
- Bermio, J. B. (2021). Correlates on the Knowledge and Management Practices on Pregnancy Induced Hypertension (PIH) Among Women in Northern Philippines.
- Brown, M., Magee, L. A., Kenny, L. C., Karumanchi, S. A., McCarthy, F. P., Saito, S., Hall, D., Warren, C. E., Adoyi, G., & Ishaku, S. M. (2018). The hypertensive disorders of pregnancy: ISSHP classification, diagnosis & management recommendations for international practice. *Pregnancy Hypertension*, 13, 291–310. <https://doi.org/10.1016/j.preghy.2018.05.004>
- Hussian, M.H. & AL- Saffar, F.A.A. (2016). Self-Care Management of Pregnancy Induced Hypertension for Pregnant Women Attending Primary Health Care Centers at Kirkuk City. *KUFA Journal for Nursing Sciences*, 6 (2).
- Karikari, M., Pwavra, J. B. P., Adeleke, V., Akunna, J. O., & Antwi, E. O. (2023). Exploring the Knowledge, Attitudes and Practices of Perinatal Women Towards Hypertensive Disorders in Pregnancy (HDP) and Its Implication for the Implementation of Maternal Mental Health Services (MMHS): a Quantitative Descriptive Study. *J Clin Res Bioeth*, 14, 473. <https://doi.org/10.35248/2155-9627.23.14.473>
- Nicoloro-SantaBarbara, J., Rosenthal, L., Auerbach, M. V., Kocis, C., Busso, C., & Lobel, M. (2017). *Patient-provider communication, maternal anxiety, and self-care in pregnancy. Social Science & Medicine*, 190, 133–140. <https://doi.org/10.1016/j.socscimed.2017.08.007>
- Orem, D. (2001). *Nursing: Concepts of practice*. (6th ed.) In McEwen, M. & Wills, E. (Ed.) *Theoretical Basis for nursing*. USA: Lippincott Williams & Wilkins.
- Shishehgar, S., Dolatian, M., Majd, H. A., & Bakhtiari, M. (2019). Effect of self-care before and during pregnancy to prevention and control of preeclampsia in high-risk women. *International Journal of Preventive Medicine*, 10(1), 18.

- https://doi.org/10.4103/ijpvm.IJPVM_300_17
- Tamma, E., Adu-Bonsaffoh, K., Nwameme, A., Dako-Gyeke, P., Srofenyoh, E., & Browne, J. (2023). Maternal hypertensive mother's awareness, attitudes and misconceptions on hypertension in pregnancy: a multi-center qualitative study in Ghana. *PLoS Global Public Health*, 3(1), e0001456. <https://doi.org/10.1371/journal.pgph.0001456>
- Vijayalakshmi, M. V., & Jaya, N. (2017). Assessment of awareness and practice regarding Pregnancy Induced Hypertension (PIH) among the primigravid mothers with PIH. *TNNMC Journal of Nursing Education and Administration*, 5(2), 8-13.
- Wu X., Gu H., Wang J. (2023) "Impact of hypertensive disorders of pregnancy on maternal and neonatal outcomes of twin gestation: a systematic review and meta-analysis" (Frontiers in Pediatrics, 2023).
- Zohora, F. T., Aktar, S., & Hossain, M. I. (2022). Evaluation of awareness, awareness, treatment and prevention towards pregnancy induced hypertension among the pregnant women in Bangladesh: a hospital based cross-sectional study. *Int J Community Med Public Health*, 9, 1671.